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WHAT WORKS TO IMPROVE THE QUALITY OF PARENT-CHILD INTERACTIONS FROM CONCEPTION TO AGE 5 YEARS? A RAPID REVIEW OF INTERVENTIONS

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Foreword

The Early Intervention Foundation (EIF) works to make a shift from late to targeted early intervention to tackle the root causes of social and emotional problems among children and young people, from conception to adulthood. To achieve this, the EIF focuses on the flow of evidence between research and practice, assessing what interventions work and advising local commissioners and service providers on practical measures to support families and children.

This report is the first review commissioned by the Early Intervention Foundation on UK-based early interventions for children from conception to the start of primary school. The report was written by researchers at the Dartington Social Research Unit, University of Warwick and Coventry University. It considers the types of interventions that enhance parent-child interaction with a view to improving three important outcomes: attachment and parental sensitivity; social and emotional development; and language and communication.

Chapter 1 makes the case that early life matters in terms of reducing later health and social inequalities. This evidence clearly shows that early experience and development creates foundations for wellbeing which last into later childhood and on into adulthood, and that parent-child interaction is the most influential aspect of such early experience on later outcomes. A focus on supporting parents reinforces the EIF view that early intervention and prevention is about empowering parents not State interference in family life.

The aim of this review was to identify which types of interventions are effective in improving early interaction between parents and young children, and to assess the quality of the available evidence of UK-based programmes. Given the scope for innovation and development in this sector we have also described promising or formative approaches. We found over 500 interventions and programmes that potentially met the scope of the review, and have focused on 100 that are or could operate in the UK and have information available regarding their effectiveness. For the purpose of this report we have selected 32 programmes that illustrate the different types of interventions.

As the report highlights, there is a wide range of UK evidence-based interventions available which improve the quality of interaction between the primary caregiver and children, and that can be delivered across a range of settings, and by a range of practitioners, both professionals and volunteers. Some of these programmes are well-tested in the sense that they have been evaluated as programmes and are based on approaches that are well-established in evidence. Others are formative in the sense that they do not have evidence of effectiveness as programmes but are based on well-established evidence which indicates that the approach might work. It would be wrong to assume that lack of evidence necessarily means programmes don't work and there must be scope for innovation and development. As ever, even the best-evidenced approaches will be ineffective if commissioned or implemented poorly so good appraisal in advance of commissioning and monitoring once underway is always important. Nonetheless investing in untested approaches incurs more risk than investing in well proven approaches, of which there are many.

This review is a first examination of the evidence. Although we identified a wide range of programmes and interventions, it was not possible to hold an open call for evidence. We have drawn mainly on the published evidence we have found through rapid review of peer-reviewed literature. Following the publication of this report we will call for further information from providers on their theory of change and delivery model.

The EIF Evidence Panel of experts on evaluation and early intervention and prevention is reviewing 100 of these programmes and a second report will provide more detailed data about the costs of the programmes

and advice about which programmes might be commissioned in specific circumstances. The EIF website includes an online Library of Programmes as part of our Guidebook on early intervention (www.eif.org.uk). This provides information about the strength of evidence of programmes and the nature of their impact and costs. Once the Evidence panel has completed its work on the programmes identified in this report we will add a further tranche of programmes to the library.

In the meantime, we hope this information will be useful for practitioners, local and national government, the voluntary sector and communities themselves in providing a comprehensive scoping of what kinds of interventions work for whom, and how programmes can improve parent-child interaction in the early years.

Leon Feinstein
Head of Evidence, Early Intervention Foundation

The aim of this report is to support policy-makers, practitioners and commissioners to make informed choices. We have reviewed evidence from authoritative sources and provide examples of promising and innovative approaches. These suggestions must be seen as supplement to rather than a substitute for professional judgement. None of these examples of promising approaches provide guaranteed solutions or quick fixes.

The report includes reference to research and publications of third parties: the What Works centre is not responsible for, and cannot guarantee the accuracy of, those third party materials or any related material.

Chapter 1 Introduction

1.1 Aims of the review

This review is concerned with interventions that promote parent-child interaction from conception through to when children are aged five years. More specifically, the aim of this review was to identify practices that encourage positive parent and child interaction in order to promote:

i. attachment and parental sensitivity;
ii. social, emotional and behavioural development, from early childhood;
iii. children's language and communication skills.

The focus was on prevention and early intervention but not treatment. We include universal and targeted interventions, including targeted interventions nested within universal services. The review set out to identify the range of interventions available or potentially available in the UK and thereby to describe the key methods of working in order to help commissioners and others to understand what works, for whom, and when, in terms of improving parent-child interactions and associated outcomes.

In order to do this, the review team, from Dartington Social Research Unit, the University of Warwick and Coventry University, examined over 100 interventions that were deemed to meet the inclusion criteria (specified in Chapter 2), and that are diverse in terms of their (i) focus (i.e. outcome area), (ii) style or method of intervention, (iii) level of intervention (i.e. aim and the level of need of recipients), and (iv) the strength of the evidence supporting them. The aim was to include interventions that span a continuum of need from universal to targeted. The variation in terms of strength of evidence reflects in part the stage of gestation of different interventions. Thus, some are supported by what may be considered to be 'strong' evidence of impact, in the form of robust randomised controlled trials (RCTs) or quasi-experimental design (QED) studies (involving comparison groups not arrived at via randomisation), whereas some have formative evidence of impact only, for example from a before-and-after study. Because the aim was to describe the existing market it was considered important that the review did not only identify the better-known interventions that have been tested rigorously through multiple trials in different contexts, but that it also identified interventions that may have received less research scrutiny and publicity but which are in use in the UK. In that sense, while not comprehensive the review offers new insight into the nature of existing provision.

This report does not make recommendations about any specific interventions because more detailed scrutiny of the evidence underpinning each intervention is currently being undertaken by the Early Intervention Foundation (EIF), building on this review to undertake due diligence on costs and to peer-review in more detail the evidence on the interventions identified here. This follow-up work will generate information that will help commissioners and practitioners decide whether or not to implement specific interventions. The EIF Evidence Panel will assess the majority of the interventions against the EIF standards of evidence, and developers and providers will be asked to provide detailed information on costs and basic requirements for implementation. The results will appear later in 2015 on the EIF Guidebook and in a subsequent report providing information also on what the evidence says is not effective.

Although it is important to identify interventions that have been found to work using comparison group studies, notably RCTs and QED studies, we also identified innovations that have been tested already but can be tested further in the future because they fill a gap in the evidence or are in wide use. This fits with the EIF standards of evidence (see Table 1 below and http://guidebook.eif.org.uk/the-eif-standards-of-evidence). The lower levels focus on issues concerning intervention design whereas higher levels focus on evidence of impact, including from comparison group studies. Further work with the EIF Evidence Panel will lead to formal ratings

of the programmes described here and others identified through the review process. At this stage, for the purposes of this report we classify programmes as:

- Those with 'formative' evidence, meaning that there is a well-specified approach with supporting but preliminary evidence of an impact on outcomes that may be small-scale and does not include a comparison group. This corresponds to EIF level 2 (see Table 1 below);
- Those with one or more comparison group studies, whether RCTs or QEDs, showing an impact on one or more outcomes. This corresponds to EIF levels 3 and 4.

Table 1 Summary of EIF standards of evidence

Evidence or rationale for programme	**Description of evidence**	**Description of programme**	**EIF rating**
Multiple high-quality evaluations (RCT/QED) with consistently positive impact across populations and environments	Established	Consistently Effective	4
Single high-quality evaluation (RCT/QED) with positive impact	Initial	Effective	3
Lower-quality evaluation (not RCT or QED) showing better outcomes for programme participants	Formative	Potentially Effective	2
Logic model and testable features, but not current evidence of outcomes or impact	Non-existent	Theory-Based	1
No logic model, testable features, or current evidence of outcomes or impact		Unspecified	0
Evidence from at least one high-quality evaluation (RCT/QED) indicating null or negative impact	Negative	Ineffective / Harmful	-

Outcomes relate primarily to children. However, given the focus of the report on interventions that seek to improve outcomes by enhancing parent-child interaction, Chapter 3 also includes interventions that enhance parental sensitivity or responsiveness or other aspects of the parent-child relationship without necessarily showing a direct impact on child attachment security[1]. Thus, chapters focus respectively on: attachment and parental sensitivity (Chapter 3); children's social, emotional and behavioural development (Chapter 4); and children's language and communication skills (Chapter 5).

It is also important to note that in addition to an understanding of evidence of intervention effectiveness, effective commissioning requires an understanding of (i) community needs to determine whether a given intervention is a good fit for the community and target population in question, and (ii) an intervention's costs and the systems required to implement it successfully (see http://guidebook.eif.org.uk/about-the-guidebook).

1.2 Policy context

Over the past decade a number of key policy documents have emphasised the importance of the early years. Four government-commissioned reviews are particularly salient. Field (2010) examined how to address child poverty, concluding that the first five years are critical to children's life chances, and that family background, parental education, good parenting, and opportunities for learning and development together matter more than money in terms of increasing life chances and preventing poverty in adulthood. The review identified the need to enable parents to bond securely with their child, to be responsive while applying clear boundaries, and to provide opportunities for their child's cognitive, language and social and emotional development. Allen (2011) made the scientific and economic case for early intervention to prevent longer-term social and health difficulties for children and families and reduce expenditure on late intervention. Tickell's (2011) review of the Early Years Foundation Stage (EYFS), which was designed to improve early years provision by setting standards for children's learning and development from birth to age five, provided evidence for the importance of early learning and care. It argued that parents/primary caregivers have the largest influence on children's development, and that the home learning environment is more important for a child's intellectual and social development than parental occupation, education or economic circumstances. It emphasised the fact that a good quality early years setting can compensate where the home learning environment is not strong. Lastly, Munro's (2011) review of child protection emphasised the importance of early intervention, arguing that preventive services could do more to reduce abuse and neglect than reactive services. It recommended that the Government should place a duty on local authorities and statutory partners to secure the sufficient provision of local early help services for children, young people and families.

Other important documents have provided recognition of significant problems in terms of the numbers of children being failed by the current system (Ofsted, 2010; Cuthbert et al., 2011). Fair Society, Healthy Lives (Marmot, 2010) highlighted the importance of both pregnancy and the first two years of life in terms of equalising the life chances of children. Our Health and Wellbeing Today (DH, 2010) similarly pointed to the importance of 'starting well' with the health of mothers during pregnancy, and parenting during the early years, being highlighted.

[1] The EIF standards are concerned with impact on child outcomes only.

A number of significant national initiatives have followed, including a government commitment to reducing child poverty, increasing the number of Health Visitors by 2015, doubling the numbers accessing the Family Nurse Partnership, and a refocusing of Sure Start Children's Centres on disadvantaged children. Most recently, the Big Lottery Fund (BIG) has committed to investing £215 million over the period 2015-2025 in the Fulfilling Lives: A Better Start (ABS) programme. This investment is facilitating the implementation and testing of different models of early intervention in five disadvantaged areas across England. These areas will be enabled to make structural changes to the way in which they identify and work with families at risk of poor outcomes, and to introduce a range of preventive interventions focusing on pregnancy and the first three years of life, with the aim of improving children's nutritional, socio-emotional and language/learning outcomes.

The Bercow (2008) report is the most significant policy document in recent history with regards to speech, language and communication (SLC) for children and young people (0-19 years). It stated that the system for addressing speech, language and communication needs was highly varied and unequal, and recommended a focused approach to the SLC needs of vulnerable children. Although much of the report concerned children with more serious SLC needs than those within the scope of this review, some of the messages remain salient, including the need to focus on the early identification of difficulties, the need to develop a more skilled workforce in the area of SLC – including at the universal level – and the need to design services around the family.

One of the Bercow report's recommendations was the creation of a Communication Champion, whose final report (Gross, 2011) acknowledged examples of good practice around the country in terms of local initiatives to promote children's language and communication, including community-wide strategies that build the capacity of parents and children's workforce. The Gross report also highlighted the need for more multi-agency work to help prevent difficulties and identify and address them when they arise, and continued training for the early years workforce. It further identified the high need and demand for information about how parents can support children's language development. It placed a strong emphasis on providing suitable training, support and information for parents, ensuring that the Healthy Child Programme covers language adequately, and developing multi-agency community-wide strategies, and recommended that generic parenting programmes include components focused on promoting children's language and communication development.

Also as a result of the Bercow Report, the then Labour government commissioned the Better Communication Research Programme (BCRP) to build on the evidence base. The programme produced 19 reports and a large number of articles, significantly increasing knowledge with regards to SLC and the interventions used to improve outcomes. One of these, the 'What Works' (Law et al., 2010) report, highlights what interventions were beneficial, identifying three interventions (out of 57) that have a strong level of evidence, 32 (56%) with moderate evidence and 22 (39%) with indicative evidence. Information about these interventions was subsequently transferred into The Communication Trust's 'What Works' database[2], which has since expanded and continues to do so. Although the interventions included there are predominantly for children with more serious language needs, and relatively few focus on parent-child interaction, some are relevant to the current review. A reconciliation with the Communication Trust findings will be undertaken for the next stage of the EIF work.

[2] http://www.thecommunicationtrust.org.uk/projects/what-works/.

Arguably the key policy issue, however, is the transfer of the commissioning of public health services for children aged 0-5 years from NHS England to local authorities from October 2015. The Healthy Child Programme for 0-5 year-olds includes health visiting services and Family Nurse Partnership services. Related to this, Public Health England (PHE) commissioned a parallel rapid review to this one to update the evidence supporting the HCP 0-5 years. The current programme for 0-5 year-olds is based on the evidence available at the time of the last update of the HCP 0-5 years in 2009 (Barlow et al., 2008, 2010a). As local authorities take on the commissioning of the 0-5 years HCP and its delivery via the universal health visiting service, it was deemed important that the HCP is underpinned by the latest evidence. The aims of the review commissioned by PHE were to synthesise relevant systematic review level evidence about 'what works' in key areas covered by the HCP 0-5 years. The review (Axford et al., 2015) includes systematic review level evidence published from 2008 onwards, and like this report, also focuses on universal and targeted (but not treatment) interventions. In addition, it draws out key messages in relation to: identifying families in need of additional support; the effective implementation of the HCP at the service and individual practitioner levels; and workforce skills and training.

There are important similarities and differences between the two reviews. In terms of similarities, both reviews cover the same age range (conception to age 5) and the same levels of prevention, and evidence of effectiveness for improving attachment, speech and language development, and behaviour and socio-emotional well-being. However, there are four main differences. First, whereas the HCP review is broad in scope, covering areas as diverse as intimate partner violence, maternal smoking, obesity prevention and oral health, the current review focuses on interventions that explicitly promote parent-child interaction in order to improve the outcomes of (i) attachment and parental sensitivity, (ii) social, emotional and behavioural development, and (iii) language and communication skills. Second, the HCP update primarily involved a review of systematic review level evidence, whereas this study draws mainly on evaluations of discrete interventions, aiming to assess the nature and range of existing provision rather than to map the academic and peer-review evidence of what should work. This is an important distinction. We try to ensure the two methods are used to inform each other in the conclusions we draw. Third, the HCP review is limited to studies published from 2008 onwards, whereas the present review is not limited to research published during a specified period. Fourth, the HCP report is particularly orientated to the Healthy Child Programme and therefore the role of health visitors, whereas the current review will be of relevance to a wider group of providers (although the final chapter includes some discussion of the relevance of the findings to health visitors).

A separate review for the PHE focuses on parenting and home-to-school transition programmes (Donkin, 2014). It emphasises that the quality of parenting affects children's long-term physical, emotional, social and educational outcomes and therefore that differences in parenting between social groups have implications for health inequalities. In the UK there is a considerable achievement gap by age five along socio-economic lines. Among the report's recommendations are 'good parenting actions', defined as: (i) more children with secure attachment – more parents engaging positively with, and actively listening to, their children; (ii) an increase in the number and frequency of parents regularly talking to their children using a wide range of sentence structures and reading to their children every day; and (iii) more parents setting and reinforcing boundaries. Evidence is provided of the positive effect of parenting interventions in terms of a range of child outcomes, including attachment, language, and socio-emotional development. This applies particularly for children from more disadvantaged socio-economic groups, although the longer-term impact on health inequalities can only be inferred due to a lack of research on health outcomes. Among the parenting interventions cited are several that are also referenced in the current report, notably Family Nurse Partnership (FNP), Incredible Years, HIPPY, FAST, PCIT and Triple P. The report stresses that these are not a magic bullet and need to be delivered in the context of good quality early years provision, increasing families' financial security, improving maternal mental health, reducing alcohol dependency and drug addiction, addressing domestic violence and involving fathers.

The most recent policy development is the Early Years toolkit launched by the Education Endowment Foundation in early 2015[3]. This provides information on 12 categories of intervention, including some clearly related to this review (e.g. 'Communication and language approaches', 'Parental engagement' and 'Social and emotional learning strategies') but also others of less relevance here (e.g. 'Digital technology', 'Physical environment'). For each topic there is an overview of the nature and weight of evidence for the effectiveness, together with cost information. The toolkit focuses less on discrete programmes than on providing overarching messages based on a narrative synthesis of studies, and does not focus specifically on parent-child interaction even though this is an element of some of the interventions cited.

1.3 Research context

Over the past decade there has been an increasing recognition that parent-child interaction during the early years plays a vital formative role in key aspects of a child's development.

1.3.1 Interaction during the first year of life

Infants have a range of self-organising neurobehavioral capacities, but are on the whole highly dependent on their caregiver to help them to regulate their internal states, which takes place through reciprocal interactions with attachment figures (Tronick, 2007). Infants routinely experience moderate and short-lived stress from both internal (e.g. hunger and fear) and external (e.g. immunisations) sources, and the nature of this stress combined with the input of the adult in helping the baby to moderate it, contributes the child's developing capacity for self-regulation. This process takes place via the attachment system, which involves the dyadic regulation of infant stress. Research shows that strong, frequent or prolonged activation of the body's stress management system can produce structural and physiological changes to the infant's functioning that can impact on both their social and emotional development and later capacity for language and learning (NSCDC, 2014). For example, prolonged exposure to stressful experiences can result in elevation of cortisol levels, which can alter the function of a number of neural systems, suppress the immune response, and change the architecture of regions in the brain (e.g. the Hippocampus) that are essential for learning and memory (Qui et al., 2013). Cortisol can also influence epigenetic processes, in which specific genes are turned 'on' and others 'off' at particular times and locations in the brain. Sensitive and responsive caregiving from a parent or a child-care provider (i.e. when it is provided in out-of-home settings) can serve as a powerful buffer against stress hormone exposure (NSCDC, 2014).

Parent-infant interaction is now recognised to be bi-directional, synchronous and coordinated (Tronick, 2007), such that infants communicate to the parents their regulatory state (i.e. being distressed), and sensitive parents are able to respond to the meaning of such communication. Tronick (1989) used a range of microanalytic observations of parent-infant interaction and the still-face paradigm to demonstrate the impact on infants of perturbations to normal interactional exchanges, such as for example, in mothers experiencing postnatal depression. Overall, this research highlighted the importance of moment-by-moment interactions, where parents acknowledge infant cues by responding contingently, elaborating infant expressions and adjusting the timing to hold attention and affect, in supporting the infant in the key

[3] http://educationendowmentfoundation.org.uk/toolkit/early-years/.

developmental task of learning to regulate his or her emotions and behaviour (for a summary see Tronick, 2007).

While early research in the field of attachment highlighted the importance of parenting that was 'sensitive' for infants to become securely attached to their primary caregiver (i.e. securely attached infants have learned that they can turn to their caregiver for comfort when distressed), a review of the evidence showed that such sensitivity did not explain all of the variance and that other aspects of parenting were also important (De Woolf and Ijzendoorn, 1997). Recent research has highlighted the importance of two further components. The term 'reflective function' refers to a parents' capacity to treat their infant as an intentional being, and to understand their behaviours in terms of feelings, beliefs and intentions (Fonagy et al., 2002). Meins and colleagues coined the term 'mind-minded' to similarly refer to a mother's ability to treat her infant as an individual with a mind (Meins et al., 2001; Meins et al., 2002). Mothers who are low in mind-mindedness tend to view the child more concretely in terms of need states that must be satisfied (ibid). Parental mind-minded comments during interaction with 6-month-old infants have been significantly correlated with behavioural sensitivity and interactive synchrony (Lundy, 2003; Meins et al., 2001), and are a better predictor of attachment security at one year of age than maternal behavioural sensitivity (Meins et al., 2001).

Research has also highlighted the importance of 'midrange' interaction, which is characterised by parent interaction that is neither too intrusive, nor too passive as a consequence of the parent being preoccupied with self-regulation or interactive regulation (i.e. optimally in the midrange) (Beebe et al., 2010). This research showed that dyadic interaction outside the midrange was associated with insecure and disorganised attachment (ibid).

A number of aspects of parent-infant interaction have also now been identified as playing a significant role in derailing the development of children, particularly in terms of their attachment organization. 'Fr-behaviour' refers to parent-infant interaction that is both frightened and frightening (Main and Hesse, 1990). Such behaviours can be subtle (for example, periods of being dazed and unresponsive) or more overt (deliberately frightening children) (ibid). Fr-behaviours are distinct from neglect and express a distorted image of the child, which is the consequence of the mothers' unresolved trauma and losses (Jacobvitz et al., 1997).

Recent research has also suggested that such Fr-behaviours are 'embedded in a broader context of disrupted affective communication between mother and infant' (Lyons-Ruth et al., 2005). This research highlighted the importance of 'atypical' or 'anomalous' parenting behaviours that consist of 'parental withdrawing responses (i.e. maternal behaviours that are rejecting of the infant); negative-intrusive responses (i.e. where the mother is mocking or pulls at part of the infant's body); role-confused responses (i.e. where the mother seeks attention from their infant to meet her own emotional needs); disoriented responses (i.e. the mother adopts a frightened expression or has a sudden complete loss of affect), and affective communication errors (i.e. in which the mother might be positive while the infant is distressed) (ibid).

A meta-analysis of 12 studies identified a strong association between atypical or 'anomalous' parent-infant interaction at 12-18 months and disorganised attachment (Madigan, Bakermans-Kranenburg et al., 2006), which is highly stable and associated with wide-ranging problems in childhood. This research is summarised by Van der Voort et al., (2014) who examined the impact of both maternal sensitivity in the development of secure attachments, and 'atypical' parenting behaviours in which the parent is both frightened and frightening in the development of insecure and disorganised attachments. They show the ways in which both insecure and disorganised attachment can affect a range of aspects of later development, including their neurobiological development, social competence, and risk of later internalising and externalising problems.

1.3.2 Interaction with toddlers

As young children begin to develop a sense of independence, different types of interaction with the parent are required that are primarily aimed at enabling the toddler to use the parent as a 'safe base' from which to explore the world. The toddler thereby begins to build on the early interactions that took place during the first year of life in terms of being able to use the secure attachment to primary carers, to develop their exploration and learning. Parents who function as a 'safe base' for their toddler are able to both encourage and delight in the child's explorations and be available to comfort the child when they are distressed. This also involves them having the skills to provide boundaries and supervision, and to use positive sources of discipline that will avoid the type of coercive cycles of interaction that ultimately lead to both the development and reinforcement of behaviour problems (Patterson et al., 1989). For example, one study showed that intrusive parent-infant interactions were associated with avoidant attachment at 12 months, and that at 42 months such infants tended to be more negative, non-compliant; and hyperactive (Egeland et al., 1993). Further research suggests that such avoidance is associated with aggressive behavior in children who are living in high (i.e. disadvantaged) rather than low risk environments (Lyons-Ruth, 1996).

Research suggests that parent-child interaction is key for improving not only children's social and emotional development as a result of the attachment relationship, but also children's early language and cognitive development. Mathers et al. (2014) highlighted the importance for children's early learning of early interactions in which young children take the lead. Play is also important for supporting children's development and learning during their first years and beyond. Research suggests that the same conversational turn-taking skills, which are described above and are key to establishing early attachment relationships with infants, are also key to the early language and conversational skills of toddlers and young children (Markus et al., 2000). Further, the number and variety of different words or syllables a child hears (Pan et al., 2005) directly affects his or her speech and language development. Topping et al. (2013) reviewed six reviews and meta-analyses, and 54 studies with sample sizes up to 4,694 and of varying quality that evaluated interventions focusing on promoting parental interaction with children aged 0-3 years. They found that the quality of interaction or contingency in interaction (i.e. communicating when the infant is ready to receive and process it) is important. Less high contingency communication may be more effective than more low contingency communication. This sensitivity/responsiveness in communication particularly affects vocabulary and the age when children start talking. Emerging language is promoted through discussions about children's experiences. The review also found that gestures enhance subsequent language, including vocabulary and comprehension, and that toys facilitate symbolic play and the development of curiosity and provide an opportunity for interaction. Lastly, conflict and resolution resulting from interaction with siblings and peers also enhances language development. Thus, the behavioural features of contingency, elaborating and pre-literacy are essential ways in which parents can promote language development.

Similarly, the development of 'narratives' in the second year of life, which is also important for later learning involves responsive adults who can 'share and enrich children's narratives, support storytelling and creative games, teach early literacy skills and encourage children to play imaginatively together; allowing children to take the lead and provide structure and guidance when needed' (see Mathers et al., 2014 for an overview). In terms of early language development, therefore, the research suggests that the following factors are key to optimal early development: the amount of words spoken to a child; the extent to which adults provide cues for and respond sensitively to children's communication; the way adults talk with children, such as taking the lead from the child, elaborating on their utterances, reminiscing about events, and sharing rhymes, songs, and books; and the continued use of the home language when children are growing up bilingual.

1.4 Framework for analysing the programmes

The framework for analysing the programmes included in this report has three elements, as follows.

First, programmes are categorised in terms of their main outcome of focus. There are three categories:

i. *Attachment and parental sensitivity* – programmes that focus on promoting parental sensitivity and parent-infant/toddler interaction, with the aim of promoting secure attachment.
ii. *Social, emotional and behavioural development* – programmes that focus on parent-child interaction, with the aim of improving the social, emotional and behavioural functioning of young children.
iii. *Language and communication skills* – programmes that focus on promoting parents' playing and reading with children, with the aim of promoting children's language and communication in particular but also their wider development (e.g. cognitive, socio-emotional)

While the above three domains of child development are distinct, there is also considerable overlap. For example, improving parent-child interaction in order to improve a child's attachment will have beneficial consequences as well for their emotional and behavioural adjustment and their speech and language skills. All three outcomes also impact on children's readiness for school and their future development. If a child is ready for school it implies that they are prepared to succeed in a structured learning setting and specifically that they have the basic minimum skills and knowledge in a variety of domains, including: physical well-being and motor development; social and emotional development; approaches to learning; language development; and cognition and general knowledge, including mathematics (UNICEF 2012). This review has not covered all of these domains of early development.

Second, programmes are categorised in terms of their level of intervention, which refers to a combination of target group and aim. There are different ways of doing this in different disciplines. In general there are two main categories used in Local *Authorities:*

i. Universal – this category refers to interventions that are for the whole population (i.e. not identified on the basis of risk), and includes interventions that are intended to (a) promote healthy development (Promotion) and/or (b) prevent problems (Universal prevention) – many if not most interventions at this level do both, so no further distinction between them is made in the text (we use the term 'Universal prevention' to denote both).

ii. Targeted – within the wider health and prevention literatures it is found useful to distinguish between two important forms of targeting of services[4], namely:

a) Early intervention targeted at individuals or population sub-groups on the basis of the *elevated, general level of risk of development problems* – for example, infants who are judged to be more likely to have attachment problems because their mothers are depressed, or children living in a socio-economically deprived area who for that reason are considered to need additional support with early language development. The technical term for this is 'Selective prevention'.
b) Early intervention targeted at individual children on the basis of *detectable signs or symptoms in development foreshadowing mental, emotional, or behavioural disorder* but before the children

[4] This draws on a report published by the US Institutes of Medicine (O'Connell et al., 2009) and summarised in Appendix B to this report.

concerned have been diagnosed with a disorder – for example, children who are identified in pre-school or by parents as having behaviour problems but who do not have a formal diagnosis of conduct disorder. The technical term for this is 'Indicated prevention'.

Some interventions operate across these boundaries. For ease of presentation, interventions have been assigned to one level in this report but where relevant the potential for an intervention to operate at a different level is noted. We did not set out to include interventions that target children identified as currently suffering from a recognisable disorder (i.e. 'treatment'). The boundaries between the categories for levels of intervention are inevitably somewhat blurred, and this, combined with the way that some interventions operate at multiple levels, means that some of the interventions cited are arguably at the upper end of 'indicated' and blurring into 'treatment'. We think this is helpful because it illustrates the range of activity.

Third, programmes are categorised in terms of the type of intervention, which essentially captures the delivery mechanism, format and setting. For this review an initial set of eight categories was defined. In the further work of formally assessing these and the wider database of programme through the EIF Evidence Panel, these categories will also be reviewed:

i. *Media-based* – the intervention is delivered via popular media, either written materials (e.g. newsletter, newspapers, app) or verbal (e.g. radio reports)
ii. *Self-administered* – the intervention is available in a format (typically a DVD or website) that allows the participant to receive the intervention at their convenience (or the option to do this exists i.e. the programme exists in multiple formats)
iii. *Home visiting* – the intervention is delivered through a series of visits by a professional or volunteer to the family's home where they interact with the parent or parent and child and provide information, advice, support and coaching/modelling
iv. *Individually delivered* – the intervention is delivered by a professional on a one-to-one basis with the parent or parent-child dyad, either at home (shorter than home visiting) or in another setting (e.g. a clinic)
v. *Techniques involving live demonstration* – a sub-type of individually delivered interventions involving live demonstration or modelling of interaction by a practitioner with the parent alone or parent and child together, with coaching and support to help the parent to apply the skills learnt.
vi. *Group-based* – the intervention is delivered in a group setting, whether to parents, children, or parents and children together
vii. *Group-based with adjunctive components* – the intervention has a group element (usually for parents) with additional and usually parallel activities (usually for children)
viii. *Multicomponent* – the intervention has more than one main component and is delivered in the home and community, usually centre-based activity (e.g. for children) and home-based activity (e.g. visits for parents / parents with children).

Interventions do not tend to fit perfectly into one of these eight types, which overlap to some degree, and it would have been possible to have more categories to account for more specific types. For example, in relation to the outcome area of 'language and communication' it would be possible to have a category for book-sharing interventions, and to sub-divide this further in terms of whether they are delivered on an individual basis or in a group setting. However, it was deemed of greater value to have a shorter list of more generic categories that work across all three outcome areas to provide an initial framing of this diversity of approaches. To continue the example, book-sharing interventions are not classified separately but rather included under the broader headings of 'individually delivered' and 'group-based'.

This report does not provide an assessment of the quality and weight of evidence – that is, a distinction is not made between, for example, RCTs that are well-designed and executed and those that are not, or between

those that show an impact on the majority of outcomes measured (or on more than one measure of the same outcome) and those that have an effect on, say, only one of several outcomes (or only one measure of several measures of the same outcome). The task of making such judgements accurately and consistently requires detailed scrutiny. Thus, the report reflects prima facie judgements of the standard of evidence of impact for the programmes described. All programmes are in the process of being scrutinised in detail against the EIF standards of evidence and then considered by the EIF Evidence Panel, which will determine the level reached by each programme taking into account study quality and the preponderance of evidence of impact.

1.5 Structure of this report

Chapter 2 describes the methods used to identify and review the interventions covered in this report.

The following three chapters focus respectively on the evidence in relation to the three main outcome areas: secure attachment and parental sensitivity (Chapter 3), social, emotional and behavioural development (Chapter 4) and language and communication skills (Chapter 5).

Within each chapter the material is then organised as follows. Each chapter starts with a discussion of the importance of the outcome for subsequent development and describes some of what is known about it as a mechanism of achieving improved life outcomes. We include a summary of what is known about how to achieve impact on the outcome from recent systematic reviews.

We then describe programmes within a framework that distinguishes them in terms of the categories set out above: first by level of prevention (universal; selective (targeting by risk); and indicated (targeting by developmental problems); and second by primary form of delivery (media-based; self-administered; home visiting; individually delivered; in-vivo methods; group-based; group-based with adjunctive components; and multi-component).

Brief exemplars are used to illustrate each category of intervention. We selected them on the basis that they provide a good illustration of the category in question. Each one includes a brief summary of the aims, target group, content and delivery of the intervention, followed by a summary of the main impact evaluations and what they find (with references to relevant studies). In seeking to keep exemplars brief we have not gone into any intervention or evaluation in depth – for example, we do not describe logic models, or set out requirements for implementation, or appraise the quality of evaluations. Nor, since this was a rapid review, have we checked the content with intervention developers, purveyors or evaluators. If important information is felt to be missing then those concerned are encouraged to inform the EIF. Additional information about the interventions described may be found in the studies cited or, in some cases, on the EIF Guidebook, or on one or more of the databases listed in Appendix A. Information on sample size and, where available, effect size – a number that expresses the size of the impact that an intervention has on a specified outcome – is provided for the exemplar programmes.

There are different types of effect size, each represented by a different letter or symbol. Since these are used in the exemplars in Chapters 3-5 they are explained briefly here. The most common effect sizes, with rules of thumb for interpreting them, are: Cohen's d, where 0.2 is a small effect, 0.5 is a medium effect, and 0.8 and above is a large effect; Eta squared, where 0 - .1 is a weak effect, .1 - .3 is a modest effect, .3 - .5 is a moderate effect, and >.5 is a strong effect; and Odds Ratio (OR), where 1 means that the odds of a given outcome are equal between two groups (intervention and comparison), more then 1 means increased odds in the intervention group (compared with the comparison group) and less than 1 means lower odds in the intervention group (compared with the comparison group). Where studies do not state what type of effect size they use we use the short-hand term ‘ES’.

At the end of each of the three main outcome chapters there is a summary of the key findings, which are also placed in the context of relevant systematic reviews.

Chapter 6 draws out key messages from the preceding three chapters, summarising the nature and effectiveness of key methods of working before setting out some implications for policy and practice. This includes attending to issues such as workforce skills and training and the identification of families who could benefit from the interventions identified. It also describes the limitations of the review.

Chapter 2 Method

2.1 Search criteria

The review sought to identify studies of interventions that meet the following inclusion criteria:

- target children from conception to five years
- target children who have low or additional need (i.e. they operate at the universal level or target on the basis of risk for developmental problems (selective prevention) or signs of child development problems (indicated prevention)
- aim at increasing (i) children's attachment and parental sensitivity, and/or (ii) children's social, emotional and behavioural development, and/or (iii) children's language and communication skills
- focus on improving parent-child interaction
- span the range of the EIF levels of evidence (from those with multiple RCT/QED evaluations to those with qualitative or descriptive empirical evidence suggestive of beneficial impact).

2.2 Search process

The following process was used to identify interventions that met the above inclusion criteria.

First, key relevant online databases of interventions were searched using relevant search terms, including Investing in Children, Blueprints for Healthy Youth Development and the Washington State Institute for Public Policy. Together, these databases include several hundred interventions, a significant proportion of which focus on the age group and outcomes of interest in the proposed review. All focus on evidence from RCT/QED evaluations. Other databases of interventions were also consulted, some of which focus on evidence-based interventions (e.g. Child Trends, Promising Practices), and some of which include and/or focus on emerging practice (e.g. C4EO). A list of databases searched is provided in Appendix A. The search options vary for each database but they were searched in such a way as to cover the criteria described above.

Second, programmes that met the above criteria and which had been identified in a recent overview of 'What Works' for the A Better Start project funded by Big Lottery (Axford and Barlow, 2013) were considered.

Third, relevant programmes were identified that were cited in a review of health-led parenting interventions produced to provide evidence to underpin the Healthy Child Programme for 0-5 year-olds (Barlow et al., 2008, 2010a).

Fourth, relevant interventions were identified in the course of conducting the parallel rapid review commissioned by Public Health England to update the evidence for the Healthy Child Programme for 0-5 year-olds (Axford et al., 2015). The method for this review is described fully in the report but primarily entailed using relevant databases to identify systematic review level evidence in various areas, including some specifically related to the subject here (e.g. 'parenting skills', 'parent-infant attachment', 'speech, language and communication'). In the latter stages it also involved undertaking a search for the period 2009- 2014 of standard electronic databases (PubMed, CINAHL, PsychInfo, Medline) for RCT and QED studies in three areas relevant to this review: attachment / parental sensitivity; parenting support / skills; and speech, language and communication.

Fifth, a questionnaire was developed in collaboration with the EIF and sent to the 20 EIF Places and other organisations deemed likely to know of interventions that meet the inclusion criteria. The questionnaire asked

respondents to describe relevant interventions – including their delivery requirements and their underlying logic models – as well as the nature and results of any evaluations conducted on the interventions.

Sixth, other work undertaken by members of the review team was used. For example, current work by Dartington Social Research Unit to identify home-grown European interventions was examined. A number of early intervention projects that Jane Coad has been principal investigator or co-applicant on were also drawn on, including the Better Communication and Child Talk NICE-funded programmes, both of which sought to understand children's speech, language and communication better, and Listening to Young Children and Families, which included reviews of interventions aimed at enhancing the communication skills and competencies of Health Visitors and Early Years Health Professionals as well as families' engagement with young children. The project also involved developing and evaluating new interventions, and generated findings about the training needs of early health care professionals.

Lastly, experts in the field known to the EIF were invited to nominate interventions that they deemed met the inclusion criteria for the review.

Naturally there was overlap between sources in terms of interventions identified; that is, some interventions were identified though more than one source. Most interventions that were deemed to be relevant were identified through the databases and reviews, with the least originating from the questionnaire and experts.

The search process was not comprehensive as this was not possible with the time and resource available. Consequently, not all relevant interventions will have been identified, and nor will every evaluation of every included intervention have been found. For instance, we provide examples of interventions that use techniques such as infant massage, parent-infant psychotherapy and dialogic reading. Each of these methods have been applied in multiple programmes and evaluated in multiple studies. In order to contextualise the examples given, therefore, where relevant we have drawn on wider systematic reviews regarding intervention effectiveness.

2.3 Review process

The interventions identified through the search process were examined to ensure that they met the inclusion criteria. Common reasons for excluding interventions identified in the initial search following closer inspection were if they:

- targeted the outcomes of interest but did not focus on parent-child interaction
- focused on parent-child interaction but did not target the outcomes of interest
- constituted a general approach rather than a discrete intervention
- focused exclusively on treating diagnosed disorders (i.e. treatment rather than universal provision or early intervention targeted by risk (selective) or development (indicated))
- included children in the wrong age range, or included some children in the right age range but were mainly for older children (e.g. 5-11 year-olds)
- had no evaluation of impact.

Given the time and resource for the study it was not possible to review all of the interventions identified, nor were they all relevant to the purpose of the review. Interventions were therefore prioritised for review and inclusion in this report if they:

- were judged to be available in some form (this was not always easy to determine, and does not mean that the programme is necessarily ready for implementation in regular service systems; this would require additional data collection and analysis)

- had some evidence showing a positive impact, irrespective of the type of evaluation: interventions were not prioritised according to evaluation type because the brief for the study was to include a spread of interventions, from those with only preliminary or formative evidence of impact to those with multiple high quality comparison group studies showing consistent evidence of effectiveness
- were available in the UK or could be potentially (i.e. not currently but no obvious reasons why they could not fit in a UK context; reasons why programmes might not fit included that they were developed primarily for a particular ethnic group not present in the UK, or they were specifically designed for or fully integrated within another country's service system[5]).

In total, 518 interventions were identified through the review process and survey. Of these, 100 were reviewed in full after application of these criteria and are included in this report. Table 2.1 provides a breakdown of interventions to help explain how we arrived at 100 from the original 519. Nearly two-thirds (64%) of interventions were excluded because they did not meet the inclusion criteria. Just over one in 10 (12%) were excluded because it was not clear that they were available, or they were not relevant to the UK. For a further 5% of interventions we had insufficient information to review or classify them. As a result, about one in five (19%) of the interventions identified were reviewed and are included in this report, which represents 62% of the 162 that met the inclusion criteria.

Table 2 Overview of interventions identified

Category	*Number of interventions*	*Percentage*
Met inclusion criteria and available and relevant to UK (and therefore reviewed and included in report)	100	19
Met inclusion criteria but not available or not relevant to UK	26	5
Met inclusion criteria but unclear availability or unclear UK relevance	36	7
Did not meet inclusion criteria (identified through databases of programmes)	61	12
Did not meet inclusion criteria (identified through EIF)	258[6]	50
Did not meet inclusion criteria (identified through other sources)	12	2
Insufficient information to review or classify	25	5
TOTAL	518	100

[5] We were able within the resource available to review a small number of well-known interventions that are embedded in other countries' service systems but are nevertheless instructive for this review (e.g. Head Start).
[6] The EIF sent the review team all interventions it had identified, not only those that were considered likely to meet the criteria for this review.

2.4 Data extraction and critical appraisal

The following information was extracted for the identified interventions and studies by a team of researchers trained in the review process:

Intervention

- Outcome focus (attachment and parental sensitivity; social, emotional and behavioural development; language and communication skills)
- Target group (including socio-demographic characteristics if relevant and risk/need profile)
- Level of intervention (universal prevention, selective prevention, indicated prevention) (see Appendix B)
- Content (including what is provided, how, by whom, in what setting(s), over what period and how often)
- Logic model or theory of change (a brief summary, if available, of how the intervention is expected to achieve the desired outcomes with the target group)

Evaluation

- Method: randomised controlled trial (RCT), Quasi-experimental design (QED), pre-post, other
- Evaluation quality: the nature of the evidence was graded using the Maryland Scientific Methods Scale.[7] In the case of RCT or QED studies (Levels 3-5 of the Maryland Scale) a *brief* review of the quality of the evaluation was undertaken, drawing on Dartington Social Research Unit's standards of evidence.[8]

Impact

- Overall impact on outcomes of interest, taking into account whether there is consistency within and between studies of the same intervention
- Whom it works for (i.e. this involved reporting the study population(s) and in some cases also required reporting evidence of differential impact such as by gender, socio-economic status).

Implementation

- Who delivers the intervention (i.e. type of practitioner, volunteer)
- What their experience/qualifications/skills are
- Who supports them (and what their experience/qualifications/skills are)

Completed reviews were checked against the source material to ensure accuracy and consistency, and amended if necessary.

[7] The Maryland Scientific Methods Scale has five levels, from Level 1 (weakest), which is correlation between an intervention and the outcome of interest at a single point in time, to Level 5 (strongest), which covers random assignment studies (Sherman et al., 1997).

[8] It was not possible to undertake a full review because of constraints of time and resource, but where relevant an indication was given of whether the intervention would be likely to perform well on quality criteria and therefore be deemed worth reviewing in full in the future.

2.5 Overview of programmes included in the report

Table 3 summarises how the 100 interventions included in this report fit into the framework described in Chapter 1, recognising that classification is not always straightforward and that we have chosen a 'best fit' approach. (Appendix C lists all programmes alphabetically and provides brief information about each one.) The 100 interventions split fairly evenly across the three outcome areas: attachment and parental sensitivity (32%); social, emotional and behavioural development (38%); and language and communication skills (30%). Nearly half (45%) of the interventions target by level of risk (selective prevention), with the remainder split between universal prevention (24%) and those targeting on the basis of children's development (indicated prevention) (30%). The most common intervention type is group-based (28%), followed by individually delivered (25%) and home visiting (18%). Three intervention types are each represented by 5% or fewer interventions, namely media-based, self-administered and group-based with adjunctive components.

There are also relationships between the three dimensions of the framework. For example, with one exception the media-based and self-administered interventions operate at the universal level of prevention, home visiting operates overwhelmingly through targeting by level of risk (selective prevention), whereas individually delivered interventions mostly operate through targeting children with identified developmental problems (indicated prevention). All but one of the multicomponent interventions pertain to the outcome area of language and communication skills and most function through targeting by risk (selective prevention). Lastly, techniques involving live demonstration are mainly relevant to the outcome of attachment, and all but one of the interventions in this category targeted by level of risk (selective prevention).

Table 3 Overview of interventions in terms of the analysis framework

Level of intervention	Intervention type	Outcome area		
		Attachment and parental sensitivity	Social, emotional and behavioural development	Language and communication skills
Universal prevention (n=25)	Media-based	2	1	
	Self-administered		1	1
	Home visiting			2
	Individually delivered	1		4
	Techniques involving live demonstration	1		
	Group-based	2	7	2
	Group-based with adjunctive		1	

	components			
	Multicomponent			
Targeted by level of risk (Selective prevention) (n=45)	Media-based			
	Self-administered			
	Home visiting	11		5
	Individually delivered	1		1
	Techniques involving live demonstration	5	1	
	Group-based	3	4	2
	Group-based with adjunctive components		4	
	Multicomponent			8
Targeted by signs of child development problems (Indicated prevention) (n=30)	Media-based			
	Self-administered		1	
	Home visiting			
	Individually delivered	6	9	3
	Techniques involving live demonstration			
	Group-based		8	
	Group-based with adjunctive components			
	Multicomponent		1	2
TOTAL		32	38	30
Number of sections in relevant chapter		9	11	10

The empty cells in the table are interesting because they indicate the categories for which our search process did not identify example programmes. While other types of intervention not listed may nevertheless be available to commissioners in the UK, the fact that the search process employed has not found them provides prima facie evidence of a gap. Further work to stress test this assessment is required.

In the next three chapters, we run through the categories by outcome, level of need and programme type but only include specific sub-types where there are interventions to include from amongst the 100 interventions included in the report. The bottom row of the table shows how many sections this equates to. For example, in the next chapter, on attachment and parental sensitivity, there are seven sections in total, including three under the heading 'Universal interventions' for media-based, individually delivered and group-based interventions.

Tables 4.1-4.3 show where each of the 100 programmes fit in the framework (one table for each intervention level), with exemplar programmes in bold. As we have emphasised, these are not hard and fast categories and many programmes have operated in multiple ways but we have classified them according to what we have best been able to establish from the published evidence.

Table 4.1 Universal prevention programmes identified in the review. (Case studies in report in bold)

Intervention type	**Outcome area**		
	Attachment and parental sensitivity	**Social, emotional and behavioural development**	**Language and communication skills**
Media-based	**Baby Express.** Baby Express Outreach.	**Triple P Universal (Level 1).**	
Self-administered		Parenting Wisely (Young Children).	**Hear and Say Reading with Toddlers.**
Home visiting			**PALS (Playing and Learning Strategies).** Parents as Teachers.
Individually delivered	My Baby's Brain.		Baby sign. Bookstart (Regular). **Bookstart Plus.** Let's Read.
Techniques involving live demonstration	Newborn Behavioural Observation (NBO) System.		

Group-based	**Family Foundations.** Right from the Start.	123 Magic. Active Parenting Now. **COPEing with Toddler Behaviour.** Family Links Nurturing Programme. Listening to Children. Solihull Approach Parenting Group. Toddlers Without Tears.	Kaleidoscope Play & Learn. **PEEP (Parents Early Education Partnership).**
Group-based with adjunctive components		**EFFEKT.**	
Multicomponent			

Table 4.2 Selective prevention programmes identified in the review. (Case studies in report in bold)

Intervention type	**Outcome area**		
	Attachment and parental sensitivity	**Social, emotional and behavioural development**	**Language and communication skills**
Media-based			
Self-administered			
Home visiting	CAMP (with home visiting). Community Mothers. Early Start. **Family Nurse Partnership (FNP).** Family Thriving Programme. MECSH (Maternal Early Childhood Sustained Home Visiting programme). **Minding the Baby.** Newpin (includes Newpin Perinatal Support Project). Nobody Slips Through the Net. Social Baby. SafeCare.		Child FIRST. **Let's Play in Tandem.** My Baby & Me. Parent Child Home Programme. Trafford Early Home. Learning Programme.
Individually delivered	Little Minds Matter.		**Reach Out and Read.**

Techniques involving live demonstration	Attachment and Biobehavioural Catchup (ABC). Circle of Security (group). Circle of Security (individual). Infant massage. **VIPP (Video feedback Intervention to promote Positive Parenting).**	**VIPP-SD (Video feedback Intervention to promote Positive Parenting and Sensitive Discipline).**	
Group-based	**Baby Steps.** **Mellow Babies.** Mellow Bumps.	**EPEC (Empowering Parents, Empowering Communities).** Parenting Fundamentals. **Mellow Parenting** Supporting Father Involvement.	**Bookstart Corner.** Sing & Grow.
Group-based with adjunctive components		FAST (Families and Schools Together). **Parent Corps.** Strengthening Families Programme (SFP) 3-5. **Dare To Be You**	
Multicomponent			Early Head Start. Even Start. **Getting Ready.** Head Start. **HIPPY (Home Instruction Programme for Preschool Youngsters).** Infant Health and Development Programme. REAL Project (Raising Early Achievement in Literacy). Sure Start.

Table 4.3 Indicated prevention programmes identified in the review. (Case studies in report in bold)

Intervention type	**Outcome area**		
	Attachment and parental sensitivity	**Social, emotional and behavioural development**	**Language and communication skills**
Media-based			
Self-		**Triple P Self-directed.**	

administered			
Home visiting			
Individually delivered	Anna Freud Centre Parent Infant Project (PIP). Child Parent Psychotherapy (CPP). Infant Parent Psychotherapy (IPP). Modified Interaction Guidance (MIG). Toddler Parent Psychotherapy (TPP). Watch, Wait, Wonder.	Enhancing Adoptive Parenting. EPaS (Enhancing Parent Skills). Family Check-Up. New Forest Parenting Programme (NFPP). Parent Child Game. **Parent-Child Interaction Therapy (PCIT).** **Parents Under Pressure.** Triple P Primary Care (Level 3). Triple P Standard (Level 4).	Home Talk. **Language for Learning.** Lidcombe Programme.
Techniques involving live demonstration			
Group-based		COPEing with 3-12 year olds. Hitkashrut. **Incredible Years parent training (Toddler).** **Incredible Years parent training (Preschool).** Parent Management Training - Oregon Model (PMTO). Parents Plus Early Years. Triple P Discussion Groups (Level 3). Triple P Group (Level 4).	
Group-based with adjunctive components			
Multicomponent		**First Steps to Success.**	**It Takes Two to Talk.** Target Word.

Chapter 3 Attachment and Parental Sensitivity

3.1 Introduction

It is well established that sensitive parenting is important if infants are to become securely attached to their primary caregiver (see section 1.3.1). Securely attached infants have learned that they can turn to their caregiver for comfort when distressed. About a third of the interventions identified by the review focused on parental sensitivity and parent-infant/toddler interaction, with the aim of promoting secure attachment (and, often, other outcomes e.g. child behaviour). Most of the programmes described in this chapter focus on promoting secure attachment by supporting sensitive parenting, or addressing parental problems that might interfere with the provision of such parenting. Attachment-based interventions focusing explicitly on pre-term babies have not been included (for information on such interventions see Benzies et al., 2013; Evans et al., 2013).

This chapter describes the main approaches and the programmes that were identified within these. We begin by describing the underpinning mechanisms of change in terms of how the interventions seek to achieve the desired outcomes, and also summarise briefly relevant evidence from recent systematic reviews. We then describe the interventions by level of need and programme type. Each section aims to depict some of the key programmes exemplifying that particular model of working.

3.2 Theory and systematic review evidence

3.2.1 Underpinning mechanisms of change

The main theoretical approach underpinning many of the programmes reviewed in this chapter is attachment theory, and evidence regarding the impact of early parenting on both the child's later capacity for managing their emotions ('affect regulation') and their neurological functioning (i.e. both structure and physiology). Research shows that secure attachment is associated with better functioning across a range of domains, including social and emotional adjustment, scholastic achievement and peer-rated esteem (Sroufe et al., 2005). Insecure attachment and disorganised attachment are associated with significantly compromised outcomes, particularly in the case of the latter (see van der Voort et al., 2014 for a summary).

This large body of research has highlighted two important aspects of the parents' or caregivers' role: (a) they need to understand the way in which early parenting can impact on their child's later ability for affect regulation, and thereby their wider social, emotional and cognitive functioning; and (b) they need to receive support that will enable them to provide the type of early parent-infant interaction that will optimise their child's development. Specifically, the research points to the importance of a range of aspects of parent-infant interaction in terms of later attachment security including sensitivity/attunement (De Wolff and van IJzendoorn, 1997). However, the research also highlights the importance of parents' understanding their infant's internal states and the way in which these influence their behaviours, known as reflective functioning (Slade et al., 2005) or mind-mindedness (Meins et al., 2001), in addition to the parent's ability for both 'self' and 'interactive' regulation within an optimal mid-range (Beebe et al., 2010).

The underpinning theories of change with regard to each type of intervention will be presented at the beginning of each section that follows. All of the programmes are concerned either in whole or in part with

promoting parental sensitivity, but the studies of their effectiveness may or may not measure attachment. In many cases the evaluations do not measure attachment security directly, and many measure proxy outcomes that either precede attachment security (e.g. parental sensitivity) or that postdate it (e.g. behavioural adjustment). Of the programmes that have studies evaluating their impact on attachment, some but not all show evidence of effectiveness.

3.2.2 Evidence from systematic reviews

Mortensen and Mastergeorge (2014) conducted a systematic review of relationship-based parenting interventions for families with infants and toddlers that are designed to facilitate supportive parenting behaviours and improve the parent-child relationship. They included 18 studies (15 of which were RCTs) of 18 interventions (including home visiting; VIPP; Family Check-Up; and pregnancy programmes focusing on alcohol use), all of which targeted low-income mother and child pairs (or 'dyads'). A meta-analysis found limited evidence of effectiveness across all 18 relationship-based interventions. However, the results were strongest for programmes that were shorter in duration, provided direct services to the parents and children, used practitioners with professional qualifications, and assessed parent-child interactions with free-play tasks.

A systematic review by Kersten-Alvarez et al., (2011), which included 10 controlled studies evaluating 13 preventive interventions aimed at improving sensitivity in depressed mothers (including interpersonal psychotherapy, non-directive counselling, CBT, infant massage, home-based interaction coaching, parent training, support group, and mother-infant therapy). This found a small-to-medium effect on maternal sensitivity, with interventions that include baby massage proving highly effective in improving maternal sensitivity (i.e. when examined separately, those interventions yielded a large effect).

It is clear from the previous review that several types of intervention can increase parental sensitivity. Another review (Fukkink, 2008) examined the effectiveness of video feedback on parenting behaviour (e.g. sensitivity, responsiveness, verbal and non-verbal communication) and child problem behaviours. It included 29 studies (13 RCTs, eight QEDs, and eight pre-post designs). Of these, 23 included children aged under five years. A meta-analysis showed a positive, statistically significant effect 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'. The authors concluded that family programmes that include video feedback achieve the intended dual level effect: parents improve their interaction skills, which in turn help in the development of their children. Parents become more skilled in interacting with their young child and experience fewer problems and gain more pleasure from their role as parent.

In relation to infant massage, a systematic review by Bennett et al. (2013) involving 34 RCTs with healthy mother and infant pairs in the first six months of life found no impact for a range of aspects of infant temperament, parent-infant interaction and mental development. The impact on other outcomes, including other aspects of mental health and development, and physical development, was also limited, especially when studies judged to be at high risk of bias were removed. The authors concluded that the findings do not currently support the use of infant massage with low-risk groups of parents and infants, and that future research should focus on the impact of infant massage in higher-risk groups (e.g. demographically and socially deprived parent-infant pairs) where there may be more potential for change. A realist evaluation involving 39 mother-infant pairs concluded that infant massage should be targeted at parents who are experiencing moderate problems in terms of parent-infant interaction (Underdown et al., 2013). It found that women categorised as 'low' risk (on the basis of a range of factors, including socio-demographics, depression, maternal and infant behaviour) on the whole showed no change in parent-infant interaction (i.e. because they were already in the adequate range) and limited change in levels of depression, and that 'high-risk' mothers also appear unlikely to benefit from infant massage alone. Mothers categorised as 'moderate risk' required good quality programmes for change to occur, meaning the presence of seven or more of the 14 mechanisms

needed for infant massage programmes to be effective identified by Underdown and Barlow (2011). For example, these include: having a consistent facilitator who has the necessary technical skills and personal qualities; running groups that are optimum size (4-8 parent-infant pairs); and teaching about infant cues).

Although many evaluations of home visiting programmes include RCT or QED level data, evidence about effectiveness is highly variable. A review of reviews found that some home-visiting programmes are effective in improving both early parenting practices and parent-infant interaction (Bull et al., 2004), both of which have been shown to be important precursors of later infant attachment security. Other effects include parental responsiveness towards their children, improved parent-child relationships, reduced parental stress, improved parenting attitudes, more positive parenting, less punitive parenting, increased verbal stimulation and warmth, and also positive child outcomes in areas such as language and behaviour. Mikton and Butchart (2009) concluded that while early home visiting programmes are effective in reducing risk factors for maltreatment, such as parental stress and measures of child abuse potential, it is less clear-cut that they reduce direct measures of maltreatment (e.g. reports from child protection services), the exception being FNP.

Parent-infant/child psychotherapy is a targeted intervention that involves a therapist working with the parent and infant/toddler together, establishing a therapeutic alliance with the parent in order to identify unconscious patterns of relating in terms of the parents' own experiences of being parented and their internal working models. The aim of the therapy is to help the parent to recognise the way in which their current interactions are shaped by past experiences, and thereby enable them to respond more freely and sensitively to their infant. One systematic review has evaluated the effectiveness of parent-infant/toddler psychotherapy (Barlow et al., 2015), and included eight RCTs comparing the effectiveness of parent-infant/toddler psychotherapy (PIP) with a no-treatment control group (six studies) or comparing PIP with other kinds of treatment (four studies)[9]. 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 than those in a no-treatment control group; however, there were no significant differences between groups in studies comparing outcomes of PIP with other kinds of treatment (e.g. video-interaction guidance, counselling, CBT) – this included parent-infant interaction (maternal sensitivity) and attachment. 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, such as mental health, reflective functioning, and parent-infant interaction.

3.3 Universal prevention

3.3.1 Media-based programmes

Focus and content

Over the past decade a range of media-based methods have been developed to provide information to parents during the first few years of life. These media-based models are underpinned by recognition that parents need good information about the perceptual and communicative abilities of their baby, and their role as a parent in promoting emotional/social, communication and cognitive skills in infants and young children. The provision of information in new and accessible formats is aimed at meeting the needs of busy parents for whom traditional sources of knowledge (e.g. extended families and community supports) have declined as a result of wider social changes to the family and working life.

[9] Two of the four studies with another treatment group in addition to the PIP group also included a no treatment control.

Delivery

Media-based information for parents typically involve the delivery of written materials (e.g. a regular newsletter or resource pack), tailored to the child's age, and/or screen-based material (DVD/video) with related learning materials. There are diverse approaches, including newsletters (e.g. **Baby Express**) and their embedding within an assertive outreach model that involves home visiting (**Baby Express Outreach**) and the use of books and DVDs (e.g. **The Social Baby**). There is also a range of newly developed approaches, including websites (e.g. Getting to Know Your Baby) and apps (e.g. Baby Buddy). Many of these are now undergoing rigorous evaluation but have not reported yet and so are not included here.

Evidence of impact

Until now the evidence relating to these models in general is limited owing to a lack of evaluation, notably of the newer apps and websites, although with some of them evaluations are underway (see below). For those interventions that have been evaluated, there is a lack of evidence for an impact on attachment and parental sensitivity. Thus, there is comparison group study evidence of impact for two of the programmes reviewed, with both measuring aspects of the parent-child relationship and one measuring attachment. A trial of Baby Express showed an impact on a limited range of parent outcomes, such as perceived hassles and appropriate child expectations (see box), and a pre-post evaluation of Baby Express Outreach found improvements in child behaviour and parental stress and depression.[10] The Social Baby has been evaluated through an RCT and found to have a positive effect on maternal sensitivity and depressed mood and infant attachment security but only as a home visiting intervention that was based on the book and delivered in a deprived community in South Africa (Cooper et al., 2009).

BABY EXPRESS

Baby Express exemplifies the media-based approach. It is an 8-page newsletter sent monthly to parents of infants, until the child is 1 year of age, after which it is sent once every two months for the next 4 years. The newsletter is written by a local health journalist, and provides information on emotional development, parent-child interaction and play. The intervention aims to enhance maternal wellbeing and positively alter parenting style.

A randomised controlled trial was conducted with 185 families from a socio-economically disadvantaged area in England in which the first newsletter was provided through a home visit by the researcher (Waterston et al., 2009). Parents in the intervention group had significantly lower perceived hassles (frequency ES=0.47, p=0.005; intensity ES=0.60, p<0.001) and inappropriate expectations of the child (ES=0.31, p=0.024). The programme had no significant impact on other measures – parental empathy towards children's needs, belief in corporal punishment as a means of discipline, reversing parent-child role responsibilities, oppressing children's power and independence, or parental wellbeing. Child outcomes were not measured.

[10] http://archive.c4eo.org.uk/themes/earlyyears/vlpdetails.aspx?lpeid=471

3.3.2 Individually delivered programmes

Focus and content

We identified one individually delivered universal intervention to enhance caregiver sensitivity. **My Baby's Brain** is aimed at parents and practitioners with contact with children aged 3 years and under, and is designed to promote sensitive and attuned caregiving. It is based on printed materials and other resources that help parents and practitioners gain knowledge of the science of brain development and provide guidance in the so-called 'Five to Thrive' activities: respond, cuddle, relax, play and talk. The intention is that practitioners will use these concepts in their work with families, observing and reinforcing positive parent-child interaction. The programme has also been delivered at a targeted level.

Delivery

The intervention can be delivered by multidisciplinary practitioners working in the early years, including health visitors, children's centre staff and social workers. Although it is commonly delivered in an 'embedded' form, meaning that practitioners weave key messages into normal conversations and interactions with parents in practice settings, it can also be delivered in a 'structured format', that is in group sessions covering one or more of the five messages.

Evaluation of impact

A study by Nethercott et al. (2012) included a pre-post survey of 69 parents and found statistically significant improvements in parenting self-efficacy, confidence in parenting, and the perceived importance of specific parent-child interactions (such as cuddling). Ghate et al. (2014) focused primarily on implementation issues but included four in-depth interviews with parents and briefly reported parents saying that My Baby's Brain boosted their confidence (amplifying existing positive parenting behaviours) and changed aspects of parenting attitudes and behaviour.

3.3.3 Programmes involving live demonstration

Focus and content

The **Newborn Behavioural Observation (NBO) System** (initially known as the Clinical Neonatal Behavioural Assessment Scale (CLNBAS)) involves brief demonstrations of the infant's perceptual and interactive capabilities by a trainer. It is for use with any full-term baby from birth to three months old but it may also be used with premature babies from about 35 weeks gestation, and developmentally delayed babies. A set of 18 observations are designed to help the clinician and parent together observe the infant's unique competencies and vulnerabilities and thereby help parents to understand and respond to their baby in a way that meets her/his developmental needs. Examples of the observations are looking at the infant's: capacity to habituate to external light and sound stimuli; response to stress; capacity for self-regulation; and visual, auditory and social-interactive capacities (degree of alertness and response to both human and non-human stimuli).

Delivery

The NBO System takes 7-10 minutes to deliver, followed by guidance and discussion. It can take place in home, hospital or clinic settings. More then one session may be delivered to the same family.

Evidence of impact

There is evidence from a series of studies to show that demonstrating the newborn infant's behavioural capacities to parents can help parents learn about their new infant, thereby strengthening the parent-child relationship and improving parental sensitivity (Brazelton and Nugent, 2011). A small RCT (n=40) of the NBO applied in hospital at two days and home settings at two months found positive effects at four months of age for maternal sensitivity and baby cooperativeness in the context of mother-infant interactions (Nugent et al., 2006).

3.3.4 Group-based programmes

Focus and content

Although antenatal classes have been a common and popular means of preparing parents for pregnancy and childbirth, and are recommended by NICE (2008), there has been little evidence to suggest that traditional antenatal programmes that focus on outcomes relating to labour and childbirth improve outcomes for mothers or babies such as pain in labour and low birthweight (Schrader-McMillan et al., 2009). An emerging form of provision involves group-based programmes that focus on the transition to parenthood. They are largely psycho-educational in their orientation, meaning that they are based on strengths, treat the recipients as partners, and focus on offering a combination of education, training and support to build competencies. The theory of change underpinning most of these programmes is that the provision of knowledge to parents-to-be/new parents will optimise the likelihood of parents providing the type of early parenting associated with secure attachment. The knowledge specified is about their new roles and the emotional needs of themselves as parents and their new baby, alongside strategies to address new problems as they arise. One such programme, **Family Foundations**, is included here.[11] (See section 3.4.4 below for targeted preparation for parenthood programmes.)

One other group-based intervention is included here, namely **Right from the Start** (RFTS). This does not focus on preparation for parenthood but rather seeks to enhance caregiver skills in reading infant cues and responding sensitively. Parents watch videos of parents making errors in parent-child interactions and then discuss in groups of 4-6 the impact of the errors and alternative responses. They practise skills at home and discuss their experiences in the next week's group session, receiving peer support for their efforts. The developer acknowledges that group-based parent training is rarely used to address attachment concerns, the more common option often being home visiting by a public nurse or other clinician (Niccols, 2008). However, she suggests that a group format may offer some powerful mechanisms for change, such as opportunities for social networking and a sense of empowerment through helping others in the group, in addition to practical advantages such as lower cost and easier access (Niccols, 2000).

Delivery

Family Foundations is a good example of a preparation for parenthood programme. Such programmes are typically provided to groups of parents during the perinatal period (i.e. beginning in pregnancy and continuing in the immediate postnatal period), and typically provide a weekly two-hour session over the course of around 8-9 weeks. They are provided by a range of practitioners, most of whom are qualified professionals (e.g. midwifery, health visiting, social worker) with many years' experience who then undertake additional training to deliver the specific programme. All programme providers also needs skills in working with groups, and ongoing supervision during the delivery of the programme. RFTS is of similar duration and intensity but starts in the postnatal period. It is delivered by infant development specialists with educational backgrounds in psychology, early childhood education and/or social work, and with training and experience in parent education and intervention with families of infants at risk.

[11] Other universal 'preparation for parenthood' programmes that are aimed at preparing couples for changes in their relationship and for early parenting include NCT's Bumps and Babies, Solihull Pregnancy Programme (also known as the Solihull antenatal programme) and Baby Triple P, but to our knowledge these have not been evaluated.

Evidence of impact

Although preparation for parenting interventions are promising models of working, the evidence to support their use is currently not strong owing to a lack of evaluation. There is, however, comparison group study evidence that Family Foundations has an impact on fathers' parent-child dysfunctional interactions, paternal reports of infant 'soothability', and child internalising and externalising problems (see box). There is also comparison group study evidence showing that RFTS is as effective as home visiting, with both groups in an RCT (Niccols, 2008) – where home visiting was the control – showing small improvements at post-test and six-month follow-up in infant attachment security and maternal sensitivity (there was no statistically significant difference between the two conditions).

FAMILY FOUNDATIONS

Family Foundations is a good example of a universal group-based preparation for parenthood programme. It is a group-based antenatal parenting programme for (heterosexual) couples that are expecting their first child. The aim is to prepare the couple for parenthood, support co-parenting, and improve their mental health, with the ultimate aim of improving child outcomes. Programme content targets three key areas: feelings, thoughts, and communication, and teaches emotional regulation, problem-solving skills, communication, support strategies, and parenting strategies including promoting parent-child attachment security. Sessions are led by two trained childbirth educators (one male and one female), and involve nine 2-hour weekly sessions, six of which are prenatal and three postnatal.

Among various outcomes reported in an RCT that evaluated a modified version of the programme (8 sessions, 4 prenatal and 4 postnatal), the programme was found to improve mothers' and fathers' parent-child dysfunctional interactions ($d=0.70$ and $d=0.34$ respectively, $p<0.05$) and maternal reports of infant 'soothability' ($d=0.35$, $p<.05$) at six months, and at 12 months it was found to improve positive parenting behaviours (mothers $d=0.34$, fathers $d=0.45$, both $p<.05$), reduce negative parenting behaviours for fathers ($ES=0.60$, $p<.05$) and improve child self-soothing behaviour ($d=0.46$, $p<.05$). When the child was three years old there were positive effects on child internalising ($d=0.70$, $p<.05$) and externalising problems ($d=0.78$, $p< .05$) The intervention was especially effective for parents with lower education, and higher levels of attachment insecurity. The sample consisted of 169 couples from two cities in USA, predominantly non-Hispanic White, married, and of high socio-economic status. Couples were enrolled during pregnancy and followed-up until the child was around three years (Feinberg and Kan, 2008; Feinberg et al., 2009; Feinberg et al., 2010). Findings from a second RCT of 399 heterosexual couples are in the process of being published.

3.4 Selective prevention (targeting on the basis of general risk)

3.4.1 Home visiting programmes

Focus and content

A review of the effectiveness of home visiting programmes identified over 250 named programmes for pregnant women and families with children aged 0-5 years with studies (RCT, QED, implementation study) published in English since 1989 (Paulsell et al., 2010). They range widely in their approach in terms of their content/curriculum, duration, and underpinning theory (Boller, 2012). Core features of such early childhood home visiting programmes, including the ones identified for this review, are an intensive series of home visits beginning prenatally (e.g. **Family Nurse Partnership** (FNP)) or soon after the child's birth (e.g. **Community Mothers**) and continuing during the child's first two years of life. They are typically delivered by specially trained personnel – usually professionals but sometimes volunteers, as is the case for two interventions in this category of the report – who provide information, support and training regarding child health, development and care. Programmes vary in terms of the issues they address, driven largely by their theoretical

underpinnings (see below). Common themes include early infant care, infant health and development and parenting skills, but they may also include maternal health and well-being, diet, smoking, drug/alcohol use, exercise, transition to parenthood and the parent's relationship with their partner. Overall, the programmes place a strong emphasis on building a good relationship within the family, tailoring the intervention to the needs of the family, and developing parents' social support network.

Many home visiting programmes (e.g. FNP – see box) are underpinned by Ecological theory (Bronfenbrenner, 1979), which emphasises the importance of the inter-relationship between the individual and the wider systems within which they are located (e.g. family, school, neighbourhood, society and culture). The focus of such programmes is on helping parents to develop strategies to prevent or address problems that can occur within each of these systems. Several home visiting programmes that have a strong focus on early childhood development are also underpinned by attachment theory (e.g. FNP) in terms of promoting one-to-one interaction that is aimed at helping children gain cognitive, pre-reading and numeracy skills. Some programmes also involve the provision of books and play materials. The most newly developed home visiting programme (**Minding the Baby** – see the case study below) is underpinned by recent developments within the field of attachment theory that emphasise the importance of parental reflective functioning. This programme involves practitioners working with the parent during weekly home visits, using techniques to promote maternal reflective functioning.

Most home visiting programmes are targeted on the basis of elevated risk, including low-income first-time teenage mothers (FNP), pregnant teenage women with high levels of stress (**CAMP** – Colorado Adolescent Maternity Programme with intensive home visiting component), women who are depressed or at risk of depression (**Newpin**), parents experiencing general socio-economic adversity (e.g. Community Mothers, **The Social Baby**), and parents with significant histories of trauma and abuse or who may be risk of abuse (e.g. **SafeCare**, **Family Thriving Programme** and Minding the Baby).

Delivery

Most home visiting programmes are intensive in terms of the frequency and duration of the service. For example, FNP involves bi-weekly visits that may then be offered weekly, and less intensively in the final stages of the programme. In some cases the frequency and duration vary depending on families' needs. Most of the programmes last more than a year, with some extending to two years (e.g. FNP). Some home visiting programmes are delivered by highly qualified professional staff, such as health nurses (e.g. FNP, **MECSH** – Maternal Early Childhood Sustained Home-visiting), while others are delivered by volunteers (e.g. Community Mothers, Newpin). All programme providers are given additional training in the programme being delivered and ongoing supervision.

Evidence of impact

In this review, 11 selective home visiting interventions were identified for this category. Of these, there is comparison group study evidence of a positive impact for eight (Community Mothers, **Early Start**, Family Thriving Programme, FNP, MECSH, **Nobody Slips Through the Net**, SafeCare, and **The Social Baby**) and formative evidence of a positive impact for two (**Newpin**, and **Minding the Baby**[12]). Collectively these studies report evidence of impact on a wide range of parenting and child outcomes, including aspects of the parent-child relationship, such as parent responsiveness, sensitivity, warmth towards babies/infants, reading and playing with the child, basic care (e.g. immunisations), communication, harsh parenting, neglect/abuse,

[12] Categorised as formative because although there are some results from an RCT the study is not yet complete.

stimulation, bonding with the child and attachment. Effects are also seen for aspects of parental mental health (e.g. maternal depression) and child development (e.g. language, social, behavioural). However, it should be noted that evidence of impact is often varied within and between studies. For example, an RCT of MECSH found no impact on child outcomes (mental, psychomotor, behaviour) and although participating mothers were more emotionally and verbally responsive during the first two years of their child's life, there was no significant impact on parent-child interaction (Kemp et al., 2011). Also, not all studies measure child outcomes, and few demonstrate an impact on attachment per se. One of the interventions has a comparison group study that shows no impact (CAMP).

FAMILY NURSE PARTNERSHIP (FNP)

The Family Nurse Partnership (FNP) is selected here as it is the best-known home visiting programme available and has the strongest evidence base. It is a public health manualised intensive home-visiting programme to improve child and maternal outcomes for vulnerable families. It has been adapted from the American Nurse Family Partnership (NFP) programme. Home visits begin in early pregnancy, and continue until the child is two. A specially trained family nurse, who is supported by a nurse-supervisor, conducts the home visits. Nurses provide mothers and, if applicable, their partners, with support and psycho-education designed to improve parenting knowledge and skills and the quality of parent-child interaction. Visit length differs according to family need. Regularity of visits is dependent on stage in the programme, and can be weekly, fortnightly, or monthly. The programme engages young first-time pregnant women under 19 years of age.

NFP has been trialled in three USA studies, based in New York (Olds et al., 1986; sample size 400 pregnant women), Tennessee (Olds et al., 1997; sample size 743 pregnant women), and Colorado (Olds et al., 2002; sample size 735 pregnant women), which have found significant positive impacts for subsequent pregnancies, prenatal health, and domestic violence. For children, there were significant positive effects on child health, emotional development, language and mental development, and at 6 to 12 years on school readiness and academic achievement, behaviour and mental health problems (Olds et al., 2002, Olds et al., 2004, Olds et al., 2014, Kitzman, Olds, et al., 2010). It also impacted on arrests, alcohol and cigarette use and sexual partners in children aged 15-19 years (Olds et al., 1998; Eckenrode et al., 2010). In relation to attachment, families being visited by a nurse as part of FNP have shown significant gains in mother-infant responsive interaction (mean difference: 1.32, $p < 0.05$) compared with those in the control group (Olds et al. 2002). RCTs have also been conducted for adapted versions of the programme in Germany (Jungmann et al., 2009) and the Netherlands (Mejdoubi et al., 2013). Results from an RCT in the UK are yet to be reported but the initial pilot showed promising results (Ball et al., 2012; Barnes et al., 2011; Barnes et al., 2009). It is important to bear in mind that until now evidence of impact for FNP comes primarily from the US, where public service provision for the

MINDING THE BABY

Minding the Baby is selected here because it represents an approach that is underpinned by recent developments within the field of attachment theory, specifically an emphasis on the importance of parental reflective functioning. It is for 'at risk' first-time mothers (aged 14-25 years) who are struggling with problems such as depression, homelessness, poverty or violent relationships. It is designed to increase parental sensitivity and reflective functioning in order to strengthen infant attachment security. The programme comprises weekly home visits from the 7th month of pregnancy until the child is one year old, followed by biweekly visits for a year. A qualified nurse and social worker provide developmental guidance, crisis intervention, parenting support and practical support (visits are alternated between them). The nurse provides ongoing help in relation to health and care giving, while the social worker provides infant and parent mental health services and social services support. They receive supervision from highly qualified specialists in either mental health or nursing backgrounds.

Minding the Baby is strongly informed by the concepts of 'mentalisation' and 'parental reflective functioning'. Mentalisation refers to envisioning mental states in oneself and others and understanding behaviour in terms of mental states. Parental reflective function refers to parents' capacity to make sense of their child as a separate differentiated person with thoughts, feelings and a mind of their own – in other words, to think reflectively about that child. Helping parents to keep their babies and themselves in mind is hypothesised to help create secure attachment patterns.

Two RCT evaluations are underway – one by Yale University in the US (Sadler et al., 2013; sample size 209 families) and one in the UK funded by the NSPCC (http://www.annafreud.org/pages/minding-the-baby-mtb.html). Initial results of the Yale RCT found no significant impact on attachment at 4 months, but at 12 months significantly more babies in the intervention group were securely attached to their mothers compared with the control group (OR =0.29, p=0.028). Also, the control group was significantly more likely to have disorganised attachment (OR = 3.10, p=0.049). Additionally, the intervention group mothers had significantly fewer incidents of rapid subsequent childbearing. There was no significant impact on maternal mental health, child abuse and neglect, infant birth weight, caesarean section rate or reflective functions.

3.4.2 Individually delivered programmes

Focus and content

Little Minds Matter is an intensive home-based intervention for parents with children aged 0-2 years who have risk factors that may impact on attachment (such as depression), and is designed to strengthen maternal sensitivity, parent-child interaction and infant attachment security. The home-based intervention is offered within a wider package that involves liaison with other agencies, consultation to identify infants' needs, and training and supervision for staff in various agencies.

Delivery

Home visits are delivered by infant mental health workers.

Evidence of impact

There is formative evidence for the impact of Little Minds Matter in the form of monitoring data on a randomly selected 10 out of 99 participants, showing an improvement in the quality of attachment and an increase in maternal pleasure in interaction and absence of hostility towards the child.[13]

3.4.3 Programmes involving live demonstration

Focus and content

This group of interventions is characterised by the use of live demonstration in order to increase parental sensitivity, and ultimately infant attachment security. They aim to help parents become aware of their infants' developmental and interactive capabilities with a view to enhancing parental responsiveness. One such intervention, **infant massage**, is delivered to groups of parents and provides the opportunity for parents to learn about infant states and cues, and optimal ways of interacting. The other three interventions in this category involve the use of video feedback techniques, namely **VIPP** (Video feedback Intervention to promote Positive Parenting), **Circle of Security** and **Attachment and Biobehavioural Catchup (ABC)**, a home-based intervention targeting children at risk of maltreatment and providing 'in the moment' feedback to the parent about their interactions with their child. Video-feedback generally involves a professional videotaping up to 10 minutes of interaction between carer and baby, returning subsequently to examine the tape with the parent, and using the videotape to point out examples of positive parent-infant interaction.

Delivery

These brief interventions are typically provided by practitioners who already have a professional background (e.g. midwifery, health visiting or social work) and who then undertake additional training in the relevant programme. Some of the more complex methods of working that involve interaction guidance require more extensive training and ongoing supervision. They are generally delivered on a one-to-one basis (i.e. practitioner and parent-infant dyad), although Circle of Security also has a group version. The length varies considerably. For example, ABC involves 10 one-hour sessions, whereas group Circle of Security involves 20 weekly 75-minute sessions.

Evidence of impact

Although all of these in vivo methods of working have been evaluated in comparison group studies, the nature and strength of evidence varies. There is comparison group study evidence from three RCTs and one QED study for the positive impact of VIPP on parental sensitivity, but only one of the studies found a positive impact on secure attachment (see box). An RCT of the individual version of Circle of Security, involving 220 parents and irritable infants, found no impact on attachment except for infants who were highly irritable at the outset (Cassidy et al., 2011). A pre-post study of the group version found a decrease in disorganised attachment and an increase in attachment security (Hoffman et al., 2006). Two comparison group studies of infant massage with depressed mothers found an impact on maternal depression (Onozawa et al., 2001; O'Higgins et al., 2008) but only the former found an effect on the parent-infant relationship; this should be viewed in the context of the systematic review level evidence cited earlier in this chapter. A recent RCT of ABC with children aged under two years at risk of maltreatment found that a lower proportion of children in the intervention group (32%) were classified as having a disorganised attachment compared with children in the control group (57%), while a higher proportion of intervention children were securely attached (52% vs. 33%) (Bernard et al., 2012).

[13] http://www.c4eo.org.uk/local-practice/validated-local-practice-examples/%E2%80%9Clittle-minds-matter%E2%80%9D-building-relationships-between-parents-and-their-babies-in-portsmouth.aspx.

VIPP (VIDEO FEEDBACK INTERVENTION TO PROMOTE POSITIVE PARENTING)

Video-feedback Intervention to promote Positive Parenting (VIPP) targets parents and infants that are at risk of an insecure attachment relationship. Masters-qualified health professionals videotape interactions between mothers and their 6-month infants, review and then discuss selected fragments with the parent, with a special emphasis on positive interaction sequences. Video feedback provides the opportunity to focus on the infant's videotaped signals and expressions, thereby stimulating the parent's observational skills and empathy for his/her child. It also enables positive reinforcement of the parent's moments of sensitive behaviour shown on the videotape. Before or after the video feedback the parent receives a brochure on sensitive responding (e.g. about crying and comforting, or about playing together). VIPP consists of four themes that are elaborated successively during the four home visits: (1) the baby's contact-seeking and explorative behaviour; (2) the accurate perception of the infant's (subtle) signals and expressions; (3) the relevance of prompt and adequate responding to the infant's signals; and (4) affective attunement and sharing of emotions.

Four studies found a significant impact on maternal sensitivity (d=0.65, 0.78, 0.49, OR=0.38 respectively) but evidence that it improves children's attachment security is unconvincing. A QED study (Juffer et al., 1997; 2005) observed that children of mothers who received VIPP were less likely to be classified as having disorganised attachment at 12 months (d = .46). However, a seven-year follow-up showed that the benefits of the programme were not obtained for the entire sample, only for one of the adoption subgroups (Stams et al., 2001). This study combined two samples of 91 Sri Lankan/Korean infants adopted by Dutch parents in the 1990s and a sample of 40 Columbian children who were adopted into homes where there were also biological children. The second study (Kalinauskiene et al., 2009) did not find any significant differences between groups in attachment status. This was an RCT with 54 Lithuanian mothers who were identified as insensitive when their child was five months old. The third study (Velderman et al., 2006) also did not observe any increases in attachment security. It randomised 81 mothers identified as having an insecure attachment to a control group, VIPP or video-feedback plus additional therapy. Another RCT was conducted with 80 mothers with bulimia nervosa (Stein et al., 2006). The study compared a more intensive version (13 visits) with a therapeutic counselling control group and observed significantly greater infant autonomy during mealtimes at 13 months (OR=4.75; based only on post-intervention comparison rather than change).

3.4.4 Group-based programmes

Focus and content

Three group-based preparation for parenthood programmes that have been designed for use with groups selected on the basis of risk were reviewed. **Baby Steps** has been developed for use with vulnerable parents, including those who have chaotic lifestyles and who traditionally have been called 'hard to reach', and consists of six group-based sessions spanning the perinatal period, complemented by two home visits. **Mellow Babies** is a 14-week group-based programme spanning the perinatal period that supports disadvantaged parents to develop a strong relationship with their new baby. The approach of both programmes is psycho-educational. **Mellow Bumps** is an attachment-based antenatal group programme that aims to improve the mother-infant relationship.

Delivery

These programmes are delivered by two practitioners together, both of whom are typically experienced professionals (e.g. health visitors, social workers or psychologists) who have received additional training and ongoing support. In the case of Baby Steps training comes from the NSPCC and ongoing support comes from a local supervisor with experience in reflective supervision. In relation to Mellow Babies and Mellow Bumps, practitioners trained to deliver the programme receive continuous access to practitioners through face-to-face, online or email supervision. Formal supervision is offered by senior Mellow Parenting trainers by a free bookable appointment at the Mellow Parenting Office and is also offered via Skype or phone. The training

consists of two parts – one focusing on the general theory of Mellow Parenting programmes and the other on the age-specific programme.

Evidence of impact

Although these are promising models of working, there is on the whole only formative evidence to support them. Baby Steps has a pre-post study involving over 200 parents (Coster et al., 2015) but no comparison group. A small RCT of Mellow Babies had a mixed impact on outcomes, for example finding an effect but not all measures of parent-child interaction (see box). For Mellow Bumps there is no formative evidence of impact but rather qualitative evidence of participants' experiences of the programme (Birtwell et al., 2013; Breustedt and Puckering, 2013).

MELLOW BABIES

Mellow Babies is a group-based day programme targeting women experiencing depression and is underpinned by cognitive behavioural theory. The intervention is delivered over 14 weeks, during which time mothers and infants attend the group for a whole day (i.e. 10am - 3pm) on a weekly basis. Babies are cared for in the crèche in the morning, providing the mothers with an opportunity to reflect on their own lives, draw links between past and present feelings and relationships, and consider ways of managing depression using broadly cognitive behavioural approaches. In the afternoon, participants engage in play-time involving interaction coaching, baby massage, looking at picture books, lap games and nursery rhymes to promote sensitive interaction and attunement. The babies are then returned to the crèche and the afternoon sessions involve the use of videos of mothers interacting with their baby to demonstrate sensitive interaction.

The results of a small RCT involving 20 mothers found significant improvements in maternal depression and in parent-infant interaction in terms of positive anticipation, positive responsiveness, negative autonomy and negative control (Puckering et al., 2010). There were also trends favouring the intervention group for negative distress, positive control, positive co-operation and positive autonomy. There were no significant differences between groups for positive distress, negative anticipation, negative responsiveness or negative co-operation. No effect sizes were provided.

BABY STEPS

The Baby Steps programme aims to help parents throughout their pregnancy and also after birth for the first few weeks. It is targeted at vulnerable parents (e.g. living in poverty, victims of domestic violence, recent asylum-seekers) identified by health and social professionals and referred to the NSPCC. Following a home visit, the programme is explained and the classes commence. The intervention comprises a group-based class, which explores the journey to parenthood and focuses on the teaching of parenting skills. There are nine sessions – six before birth and three after. Classes take place in NSPCC service centres, children's centres and prisons. The skills are explained using discussion, workshops and films. The main goals are strengthening of the parent-infant relationship, encouraging strong social networks, and improving parents' self-confidence and knowledge of child development. The programme was based on the Preparation for Birth and Beyond framework (DH, 2011).

A pre- and post-test evaluation (Coster et al., 2015) of Baby Steps involved all participating parents (188 mothers, 43 fathers) completing a questionnaire at baseline and post-intervention. The parents were asked whether they felt any improvements with regards to a number of outcomes at three subsequent points in time (last antenatal session, post-birth home visit, and final session). Several validated scales were used. In general, couples' relationship quality did not increase or decrease throughout the study, but for those who were considered 'at-risk' the relationship quality improved, particularly from the perspective of fathers. Parental self-esteem, anxiety and depression improved a small amount for mothers, but not for fathers. Overall, levels of depression did not change. Parental bonding with their baby significantly improved as a result of the programme in terms of relationship quality and warmth of infant towards the parents. There was no improvement in perceived invasiveness.

3.5 Indicated prevention (targeted on the basis of signs of child development problems)

3.5.1 Individually delivered programmes

Focus and content

This review has identified two categories of programmes that can be used to address attachment problems where there are signs of difficulty: attachment-based parenting programmes (discussed in section 3.4.3 above on techniques that involve live demonstration) and parent-infant psychotherapy. Early forms of parent-child psychotherapy were informed by both psychodynamic theory in terms of the psychological forces that underlie human behaviour, feelings and emotions, and the ways in which these relate to early experience, with a particular focus on the dynamic relations between conscious and unconscious motivation, and attachment theory in terms of the way in which the parent's internal working models (sometimes referred to as Ghosts in the Nursery) stemming from their own experiences of being parented (e.g. Lieberman and van Horn, 2008). This form of therapy is known as 'representational' and the theory of change underpinning these programmes focuses on the use of the therapeutic work in the sessions (i.e. involving a supportive relationship with the therapist and discussions based on what the therapist observes in the interaction between the parent and baby), to increase the parents' understanding about the way in which past maladaptive relationships influence their current relationship with the child, and to improve parent sensitivity, responsiveness and relational harmony, and thereby reduce the influence of the ghosts in the nursery.

More recently, such approaches have been modified to include behavioural 'infant-led' components that encourage the parent to 'Watch, Wait, Wonder' about their infants' play and interactions, and to follow the infants' lead. The therapist works at representational and interactional levels through observation and comments to help the mother clarify and alter distorted perceptions, and to link current experience with the

mother's childhood experience. The programmes that work with infants and toddlers (**Anna Freud Centre Parent Infant Project**, **Infant-Parent Psychotherapy** (IPP) / **Toddler-Parent Psychotherapy** (TPP)) or children (**Child Parent Psychotherapy** (CPP)) involve encouraging the parent and child to interact in the context of play. Some parent-child psychotherapy programmes have also incorporated the use of video feedback (e.g. the Anna Freud Centre Parent Infant Project).

The parent-child psychotherapy interventions in this category are indicated, but they may also be used at a treatment level. This may include children who have experienced traumatic events such as abuse, violence or bereavement, and who are consequently experiencing behaviour, attachment or mental health problems including Post-Traumatic Stress Disorder (PTSD) (e.g. CPP). Other reasons for the intervention include the mother reporting problems with bonding, or the infant having problems with feeding or sleeping (e.g. Watch, Wait and Wonder, Modified Interaction Guidance), or the treatment of mothers with depressive disorder (all programmes).

Delivery

The interventions in this category are mostly clinic-based, although they can be home-based, or even delivered in other settings (for example, the Anna Freud Parent Infant Project has been delivered in children's centres, hospitals and a homeless hostel). The interventions are often provided during 60-90 minute sessions that take place over the course of 5-12 sessions, although the programmes are adapted to meet the needs of individual parent-child pairs (dyads) and may, as such, continue for much longer (e.g. up to a year). Parent-child psychotherapy is led by a psychotherapist who receives regular (weekly) supervision. For example, the CPP programme is delivered by a Masters/Doctoral level clinician who has at least two years' experience and receives telephone support.

Evidence of impact

Of the five programmes in this category for this review, four have comparison group evaluations showing evidence of a positive effect, (Anna Freud Parent Infant Project (PIP); Toddler-Parent Psychotherapy; Watch, Wait, Wonder; Child Parent Psychotherapy (Lieberman model) see box). Collectively, these show evidence of reductions in: child PSTD symptoms; child behaviour problems; maternal stress; maternal PTSD; attachment insecurity; and disorganised attachment. Gains can also be seen in terms of increased attachment security and increased capacity of infants to regulate their emotions. (It should be noted that impact is mixed within studies.) For example, an RCT of Toddler-Parent Psychotherapy involving depressed mothers and their toddlers (Cicchetti et al., 1999), and an RCT of Infant-Parent Psychotherapy involving maltreating mothers and their infants (Cicchetti et al., 2006; Stronach et al., 2013), both found positive effects on attachment security. A comparison group study of Modified Interaction Guidance found a decrease in atypical behaviour and disrupted communication for the intervention group but no significant difference between groups (Benoit et al., 2001; Madigan, Hawkins et al., 2006).

CHILD PARENT PSYCHOTHERAPY (CPP)

Child Parent Psychotherapy (Lieberman model) is a clinic-based programme that focuses on improving parent-child relationships. It helps parents to interact positively with their children by making parents aware of how their own past maladaptive relationships influence their relationships with their children. The therapist and parent work together to improve upon the dysfunctional aspects of the parent-child relationships. The programme aims to improve parental sensitivity, responsiveness, and relationship harmony and child views of parent and family. It is based on the premises that the attachment system is the main organiser of children's responses to danger and safety in the first years of life, and that early mental health problems should be addressed in the context of the child's primary attachment relationships (Lieberman et al., 2005). In the study cited below, CPP was delivered in weekly one-hour sessions over a year by clinicians with Masters and PhD degree level training in clinical psychology.

An RCT of CPP with 75 mother-child pairs involved children aged 3-5 years who had witnessed marital violence (Lieberman et al., 2005), with a follow-up six months after the intervention (Lieberman et al., 2006). The control group comprised monthly case management and referral for individual treatment as usual. It was hypothesised that CPP would be more effective in alleviating children's traumatic stress symptoms and behaviour problems because it focuses on improving the quality of the child–mother relationship and engages the mother as the child's ally in coping with the trauma. At post-test for children there were significant ($p<0.05$) positive intervention effects on traumatic stress disorder symptoms ($d=0.63$) and behaviour problems ($d=0.24$). The authors attributed these effects to 'CPP's focus on fostering child mental health by promoting a relational process in which increased maternal responsiveness to the child's developmental needs strengthens the child's trust in the mother's capacity to provide protective care' (p.1246). For mothers there were no effects on re-experiencing or hyperarousal symptoms of PTSD, or the global severity index (a measure of maternal distress), but there was an effect for PTSD avoidance symptoms ($d=0.50$). The authors suggested that this reflected the consistent attention in CPP sessions to the construction of a joint narrative between the child and mother – in other words communicating openly about what had happened in order to process it. Six months after the intervention, the effect was significant ($p<0.05$) for total behaviour problems ($d=0.41$) and global severity index (a measure of maternal distress: $d=0.38$). The authors concluded that the study provides evidence of the efficacy of CPP with this population and highlights the importance of a relationship focus in the treatment of traumatised preschool children.

3.6 Summary

Infant attachment security is associated with optimal child functioning, and various of aspects of parent-child interaction have been identified as significant precursors to the development of such security. This chapter has described a selection of programmes whose primary aim is to promote parental sensitivity and secure attachment or to support parents experiencing significant problems that may interfere with the development of such attachment security. These programmes are diverse and span the period from pregnancy to age five years, although the majority are towards the younger end of this age range. The key findings may be summarised as follows.

3.6.1 Media-based programmes

There are a growing number of media-based interventions aimed at helping parents and expectant parents. However, evidence for the impact of universal media-based strategies (print and screen) on attachment and parental sensitivity and responsiveness is limited owing to a lack of evaluation and equivocal results from the few evaluations that exist. One RCT of an intervention involving the dissemination of newsletters (Baby

Express) found improvement for some aspects of early parenting (perceived hassles, appropriate expectations) associated with attachment security, but no impact on parental empathy towards child's needs.

Many developers would observe that communications technologies are undergoing rapid change and such that innovation and development is required. They might also note that the potential of the approach is considerable given its low cost and universality. So it is not surprising that many continue to use these methods. There is much good evaluation underway.

3.6.2 Home visiting programmes

Studies of selective home visiting interventions with comparison group study evidence and formative evidence of a positive impact were identified. Collectively these studies reported the positive impact of home visiting interventions on a wide range of outcomes (albeit mixed within and between studies), including aspects of each of the following: parent-child relationship (e.g. responsiveness, warmth towards child, attachment); parental mental health (e.g. anxiety); and child development (e.g. behaviour). This is supported by the systematic review level evidence cited earlier (section 3.2.2), which shows that while the impact of home visiting is variable, with some programmes showing no evidence of effectiveness, other programmes are effective. Some of the newly developed programmes based on concepts such as 'mentalisation' and parental reflective functioning' have not yet been evaluated, although this review found preliminary evidence from an ongoing RCT to suggest that one mentalisation-based programme (Minding the Baby) has a positive effect on attachment security.

3.6.3 Individually delivered programmes

There is comparison group study evidence that interventions involving parent-infant psychotherapy for children with signs of attachment difficulty (i.e. indicated prevention) can improve attachment security, behaviour and PTSD symptoms in infants who may have experienced traumatic events such as abuse and family violence. This is corroborated by evidence from one systematic review (Barlow et al., 2015), which suggests that parent-infant/toddler psychotherapy is promising for improving infant attachment security in high-risk families but also states that further research is needed into its impact on mediating factors. Two individually delivered interventions were identified at the universal and selective levels respectively but evidence for their impact is formative only.

3.6.4 Programmes involving live demonstration

Techniques involving live demonstration by professionals of interaction with children are designed to make parents more aware of the infants' development and interaction capacities and to increase parent responsiveness. At the universal level there is comparison group evidence that when a clinician demonstrates a newborn infant's behavioural capacities to parents it can increase parental sensitivity (e.g. Newborn Behavioural Observations (NBO) System). The evidence for interventions in this report for parents targeted because of elevated risk (i.e. selective prevention) is variable. Two small comparison group studies of infant massage interventions showed a positive impact on maternal depression but only one study found an impact on parent-child interaction. Systematic review level evidence cited in section 3.2.2 shows that infant massage has no impact at a universal level (with low risk groups of parents and infants) but suggests that it may have more potential for change with higher-risk groups. Evidence for video feedback is stronger for impact on parental sensitivity (supported by a systematic review by Fukkink, 2008) than it is for impact on attachment.

3.6.5 Group-based programmes

The evidence for the effectiveness of universal and targeted group-based preparation for parenthood programmes (typically perinatal, two hours weekly over 8-9 weeks, provided by qualified professionals) in terms of promoting attachment is limited, again owing to a lack of evaluation. At the universal level, one

programme (Family Foundations) had a comparison group evaluation, showing evidence for a positive effect on various outcomes, including parent-child interaction and child soothability. Another universal group-based programme (Right From the Start), designed to enhance caregiver skills in reading infant cues and responding sensitively, has been found to be as effective as home visiting in improving maternal sensitivity and attachment (producing a small effect). For parents targeted because of elevated risk (i.e. selective prevention), there is comparison group study evidence (limited owing to sample size) of a positive impact on parent-child interaction of one intervention (Mellow Babies), and formative evidence for the impact of another (Baby Steps) on parents bonding with their baby and relational quality/warmth.

3.6.6 Conclusion

There is some evidence to support the use of parent-infant psychotherapy to improve secure attachments in infants who may have experienced traumatic events such as abuse, and who consequently display attachment, or emotional and behavioural problems. The evidence for techniques involving live demonstration, such as through infant massage and video feedback, where there is elevated risk (i.e. selective prevention), is stronger for impact on parents than it is for impact on attachment. The evidence for home visiting interventions is mixed, with comparison group study and formative evidence of an impact on the parent-child relationship (including sensitivity and responsiveness) but less evidence of an impact on attachment. The evidence is limited for universal media-based and universal and selective group-based interventions, in large part because of the relatively small number of studies.

Chapter 4 Social, Emotional and Behavioural Development

4.1 Introduction

While the promotion of child attachment security is associated with improved social, emotional and behavioural functioning, it is also possible to improve these outcomes directly by targeting other aspects of parental functioning affecting children who are commonly aged two years or more (attachment-based interventions are mostly delivered during the perinatal period). Around one-third of the programmes reviewed for this study focus on parent-child interaction with the aim of improving the social, emotional and behavioural functioning of young children. Most of the programmes that were identified fall within the generic category of parent training (or parenting) programmes, and unlike the programmes in Chapter 3, most of these focus on supporting interactions with children aged two years and older.

This chapter describes the main approaches and the programmes within these that were reviewed. It begins by describing the underpinning mechanisms of change in terms of the ways in which these programmes differ from those described in Chapter 3, and briefly summarises recent relevant systematic review level evidence. It then describes the models, beginning with the universal approaches (in particular media-based and group-based parenting programmes aimed at promoting good parenting and preventing the onset of problems) before looking at selective programmes for those with general, elevated risk (mostly group-based parenting programmes targeting parents and children who are at increased general risk of poor outcomes) and indicated programmes where children have early signs of social and emotional problems (e.g. mostly one-to-one or involving the parent and child together).

4.2 Theory and recent systematic review evidence

4.2.1 Underpinning mechanisms of change

Most parent training programmes that are available today have their theoretical and empirical origins in social learning theory, underpinned by Patterson's 'escalation' theory. This depicts the way in which 'coercive' cycles of interaction can develop between parents and children as a result of parents rewarding behaviour that they are seeking to eradicate, and becoming caught up in cycles of interaction that are self-reinforcing (e.g. child refuses to co-operate; parent shouts; child refuses again; parent escalates the shouting). Early research supported this model and showed an association between harsh and inconsistent discipline, little positive parental involvement with the child, and poor monitoring and supervision, and an increased risk of a range of poor outcomes including delinquency and substance abuse (Patterson et al., 1989). A meta-analysis of 47 studies (Rothbaum and Weisz, 1994) found that such coercive parenting practices are part of a broader context of rejecting parental behaviours (i.e. absence of warm approval, lack of respect for the child's autonomy, and lack of contingent responsiveness – referring to how parents behave in response to their child's behaviour). More recent research has also shown that positive proactive parenting (e.g. involving praise, encouragement and affection) is associated with high child self-esteem and social and academic competence, and is protective against later disruptive behaviour and substance misuse (Byford, 2012).

Although the focus of many early parenting programmes was behavioural, during the past two decades many parent training programmes (not necessarily effective) have been developed that are underpinned by more diverse approaches that are aimed at addressing some of the wider issues that can contribute to child behaviour problems, such as parental maladaptive thinking (i.e. beliefs that are false, negatively biased and

rigid, and can cause and maintain emotional problems) or communication patterns. Programmes that are underpinned by these types of theory focus on providing parents with the knowledge and skills not only to manage children's behaviour but also to address issues such as attachment problems (Attachment theory), or communication problems (Adlerian Theory), or parental cognitions (CBT) and attributions (Attribution Theory), or parents' motivations to make change (Motivational Theory), or the wider interactions that are taking place within the family (Family Systems). Different programmes have different emphases in this respect. In this review, the interventions that were reviewed are primarily behavioural in nature in that they focus on teaching parents strategies for improving child behaviour.

The success of parent training programmes in helping parents to manage children's behaviour has resulted in their use to support parents experiencing more complex problems, although these programmes are typically provided on an individual rather than group basis, either with parents alone or with the parent and child together (see below). Such programmes also tend to be underpinned by the recognition that parents experiencing complex problems of this nature are often influenced by their own deregulated emotional states, resulting from their own traumatic and abusive childhoods. The most recently developed programmes within the field of parent training have begun to build on what is described as the 'third wave of cognitive behavioural theory' with its emphasis on 'mindfulness', and the use of such techniques to help parents to regulate their own emotional states (Harnett and Dawe, 2012) such that they can manage their child's behaviour better.

4.2.2 Evidence from systematic reviews

There is substantial systematic review level evidence demonstrating the effectiveness of parent training interventions in relation to children's behaviour and emotional well-being. Barlow et al. (2010b) examined individual and group-based parent training programmes aimed at improving the emotional and behavioural adjustment of children from birth to three years. They included eight studies in total – six RCTs, one quasi-randomised trial and one QED. Meta-analyses produced consistent evidence that parenting programmes are an effective way of enabling parents to reduce conduct problems in children. The authors concluded that the findings provide some support for the use of group-based parenting programmes to improve the emotional and behavioural adjustment of children aged under three years, but that there is still insufficient evidence to know if such programmes could prevent problems. They also pointed out that there is limited evidence available on the long-term effectiveness of these programmes, and that the relative effectiveness of different parenting programmes (e.g. group-based versus self-administered) requires further research.

Piquero et al. (2008) focused on family or parent training programmes that aim to prevent anti-social behaviour and delinquency as a result of improving the quality of the parent-child relationship. The review identified 55 studies (all RCTs) of home visiting, parent training or multi-component interventions that combine parent training for parents of preschool children with day-care. Although the criteria specified interventions from birth onwards, most interventions included or were designed for parents of under-fives. The authors concluded that, overall, the findings support the continued use of early family/parent training to prevent problems such as anti-social behaviour and delinquency. They added that further research is needed to understand causal mechanisms and that longer follow-up is needed to assess the impact of interventions when children reach adolescence.

Furlong et al., (2012) undertook a systematic review to assess the effectiveness and cost-effectiveness of behavioural and cognitive-behavioural group-based parenting programmes for improving child conduct problems, parental mental health and parenting skills. The mean age of the children across the 13 included studies was 64 months (five years and four months); children were aged between three and nine years in all but three of the studies where a small number of children (less than 10% of the samples) were just under three years old. The severity of conduct problems varied considerably between studies. In seven trials, all children at pre-treatment scored above the clinical cut-off point on a validated measure for conduct problems,

whereas six studies reported that at pre-treatment all or most of the children were diagnosed with either Conduct Disorder (CD) or Oppositional Defiant Disorder (ODD) as well as scoring above the clinical cut-off point on a validated questionnaire. Five studies reported a low level of comorbidity with Attention Deficit Hyperactive Disorder (ADHD). The results indicated that parent training can produce a statistically significant reduction in child conduct problems, whether assessed by parents or independently. The intervention led to statistically significant improvements in parental mental health and positive parenting skills. Parent training also produced a statistically significant reduction in negative or harsh parenting practices according to both parent reports and independent assessments). Further research is needed on the long-term assessment of outcomes.

There is systematic review level evidence for two interventions in particular, namely Incredible Years and Triple P. The reviews did not focus exclusively on group-based versions of the programmes but are salient nonetheless. Thus, Menting et al., (2013) undertook a meta-analytic review of Incredible Years parent training (IYPT) on disruptive and prosocial child behaviour, and aimed to explain variability in intervention outcomes. Fifty studies, in which an intervention group receiving the IYPT was compared with a comparison group immediately after intervention (41 RCTs, eight QEDs, one unspecified design), were included in the analyses. The mean age of participating children was between three and nine years. The study did not provide a breakdown of effects according children's age range. Overall, results showed that the IYPT is an effective intervention. Positive effects for distinct outcomes and different sources of outcome data were found. For parental report, treatment studies were associated with larger effects than were indicated and selective prevention studies. Furthermore, the initial severity of child behaviour was revealed to be the strongest predictor of intervention effects, with larger effects for studies including more severe cases. Findings indicated that the IYPT is successful in improving child behaviour in a diverse range of families, and that the programme may be considered well-established.

Sanders et al., (2014) undertook a systematic review and meta-analysis of the effects of the multilevel Triple P-Positive Parenting Program system on a broad range of child, parent and family outcomes. Multiple search strategies identified 116 eligible studies conducted over a 33-year period, with 101 studies comprising 16,099 families analysed quantitatively. The age range of children across trials spanned birth to 18 years (average child mean age across trials was 5.85 years). Significant short-term effects were found for: children's social, emotional and behavioural outcomes; parenting practices; parenting satisfaction and efficacy; parental adjustment; parental relationship and child observational data. Significant effects were found for all outcomes at long-term, including parent observational data. Targeted and treatment approaches were associated with larger effect sizes than universal studies, although significant effect sizes were reported for preventative programmes as well. Another review of Triple P (Wilson et al., 2012) examined 33 studies, including 31 RCTs (29 of the 33 clearly included children aged 2-5 years). The authors considered all (five) levels of Triple P as well as specialist versions; interventions ranged duration and varied in setting. Of the 23 studies that could be meta-analysed, the results showed a significant improvement in behaviour for maternal but not paternal reported outcomes, although the authors noted a number of sources of potential bias in the included studies.

Lastly, O'Brien and Daley (2011) examined the effectiveness of self-administered programmes aimed at parents of children aged 2-9 years in improving child behaviour over the short and longer term. The study looked at 13 studies (including 10 RCTs) that evaluated bibliotherapy (i.e. written format) and multimedia interventions, or interventions with minimal therapist support, for parents of children with behaviour problems. All studies apart from one included children aged 24-36 months and over. The authors concluded that there is good evidence supporting the efficacy of self-help programmes in improving child behaviour over the short- and longer-term, and that self-help programmes led to outcomes similar to those achieved with more intensive therapist input. Parents viewed self-help favourably but significantly less so than programmes including some form of therapist input.

4.3 Universal Prevention

4.3.1 Media-based programmes

Focus and content

The review identified one programme that included a universal, media-based approach and that had been evaluated in terms of impact on social and emotional skills. **Universal (Level 1) Triple P** (see box) involves the use of media and informational strategies (e.g. newspaper and local radio articles), informational flyers and brochures, which can be distributed widely to community centres, advocacy organisations, and individual family households. These are designed to de-stigmatise parenting and family support, enable all parents to learn about effective parenting strategies, and facilitate help-seeking and self-regulation by parents who need higher intensity intervention.

Delivery

Universal (Level 1) Triple P is delivered in the form of various media and informational strategies (see above).

Evaluation of impact

Universal (Level 1) Triple P has been tested in television and audio formats in three RCTs (see box). These show positive effects, although there is some inconsistency in terms of outcomes affected, and one study suggests that providing additional support alongside the broadcasts is beneficial.

TRIPLE P

Universal (Level 1) Triple P is a media-based programme that provides parenting advice through online podcasts or television series. Parents with children aged 2 to 10 years, with or without concerns about their child's behavioural and emotional adjustment can participate. Level 1 presents parents with guidelines for using a range of positive parenting strategies designed to address common behaviour problems, to prevent problems from occurring and to teach children new skills and help them master difficult tasks. Topics covered include positive reinforcement, rewards and gifts for children, managing disobedience, dealing with aggression, sharing, mealtime difficulties and social responsibility and empathy.

An RCT in Australia involving 56 mothers with children aged 2-8 years not receiving treatment for behavioural problems tested a 12-episode TV series called 'Families' (Sanders et al., 2000). Each episode was 20-30 minute long, of which 5-7 minutes were Triple P segments (other elements included feature articles on topical issues for families, and celebrities talking about issues in their families). Mothers received a tip sheet providing written information of what was covered and were advised to watch two episodes per week over six weeks. At the end, the results showed significant improvements in parents' sense of competence and the extent to which they perceived children's behaviour as a problem, but no effect on behaviour intensity (i.e. the frequency of occurrence of the 36 negative child behaviours listed in the Eyberg Child Behaviour Inventory). There was no difference between intervention and control groups for mother reports of depression, anxiety or stress, parenting style or parental conflict over child rearing. Effect sizes were not provided.

TRIPLE P

Another RCT (Sanders, Calam et al., 2008) found that providing a self-help workbook, extra web support such as parenting tip-sheets, audio/video of parenting messages and email support in addition to the television series might have greater benefits.

454 parents either received a six-episode television series or the enhanced version. Effects were greater for the enhanced condition on child problem behaviour (Effect size of 0.63 in enhanced group and 0.38 in standard), parenting practices (laxness, overreactivity and verbosity; d=0.67 vs d=0.46) and parental conflict over child rearing (d=0.43 vs d=0.13). However, no significant differences were seen on other measures – parent anger in response to child-related situations, parental confidence, relationship quality and depression/anxiety/stress. At six-months, though improvement was maintained, the differences between groups were not significant. The greatest changes occurred in families who watched every episode.

It should be noted that Triple P is a public health intervention delivered in five levels, including this universal media campaign but also brief targeted intervention provided in primary care or childcare settings, and more intensive or broader parenting interventions for families with higher risk levels. Two studies evaluate the entire Triple P system. In a QED study in Australia involving 20 communities, parents in the intervention group reported a greater reduction in the prevalence of mental health problems (stress and depression) and coercive parenting and there was also a positive impact on child behaviour and emotional problems (Sanders et al., 2008). Effect sizes were not provided. A cluster RCT in the US involving 18 counties found a positive effect for child maltreatment, child out-of-home placements and child maltreatment injuries (d=1.09, p<0.03), child out-of-home placements (d=1.22, p<0.01) and child maltreatment injuries (d=1.14, p<0.02) (Prinz et al., 2009). It should be noted that neither study focuses specifically on children aged 0-5 years, although both include children in this age range.

4.3.2 Self-administered programmes

Focus and content

One universal parent-training programme that provides parents with the option of self-administration was identified. Parenting Wisely (Young Children) (see box) is an adaptation of the Parenting Wisely programme. It provides an interactive DVD for parents of children aged 3-9 years that is underpinned by social learning, cognitive behavioural, and family systems approaches (see section 4.2.1 above) and involves teaching parents adaptive parenting skills to improve family relations and child behaviour. The programme uses videos depicting common problems such as misbehaviour in shops, interrupting telephone conversations, problems getting along with friends, school and homework problems, and sibling rivalry. Parents are taught communication and behaviour management skills such as redirection, setting limits, non-directive play and active listening.

Delivery

Along with the interactive DVD, the programme consists of a workbook that outlines problems and solutions along with critiques of each, the review questions, and skill practice exercises. Although the main programme is self-administered, studies have evaluated versions including additional components. Some versions may have additional therapeutic material through group or individual sessions with a clinician or include facilitated

group discussions. These can be conducted in various community settings or clinics such as mental health centres.

Evidence of impact

No study has evaluated the self-administered version of Parenting Wisely exclusively. There are, however, two comparison group evaluations that entail group-based and/or individually delivered elements in addition to the DVD and include children in the age-range of interest for this review. One study (Pushak and Pretty, 2004), which included the young and older versions of the programme, compared three delivery models (clinician only, group only, clinician and group) and found reductions in child behaviour problems in all three versions but that the group version was more effective than the individual version. Another study (Lagges and Gordon, 1999), an RCT involving parents-to-be and teenage parents with infants and toddlers, evaluated a version of the programme delivered via two two-hour group-based sessions. Parents in the intervention group demonstrated greater increases in their knowledge of effective parenting skills two months after the intervention ended, as well as more appropriate selection of behaviour change strategies compared with control group parents, but there was no impact on ability to apply adaptive skills.

4.3.3 Group-based programmes

Focus and content

Universal group-based parenting programmes such as the ones included in this category of the report (**Toddlers without Tears**, **123 Magic**, **COPEing with Toddler Behaviour** (see box), **Listening to Children**, **Active Parenting Now**, **Family Links**, and **Solihull Approach Parenting Group**), are aimed at supporting parents without identified problems to provide the type of parenting that supports the child's social, emotional and behavioural development. While some of these programmes focus explicitly on supporting parents to avoid coercive cycles of interaction (e.g. programmes underpinned primarily by social learning theory), some have wider aims. For example, Active Parenting Now, which has a tailored version for parents with children aged 1-4 years, aims to support appropriate developmental expectations and empathic parenting, alongside the use of positive methods of discipline.

Delivery

Group-based parenting programmes – including those in this category but also in the selective and indicated categories below (see sections 4.4.2 and 4.5.3) – can be delivered in a range of community settings, such as schools, children's centres and clinics, and are mostly led by professionals (often two working together), notably psychologists, education psychologists and others with BA/Masters degrees. The number of sessions is usually in the region of 6-18 (although there may be more or fewer), with sessions commonly lasting about two hours, and programmes typically involve 5-12 parents (in some cases including couples). Practitioners are usually supported through regular supervision and coaching. The more established and better-known group-based parenting programmes have a robust infrastructure to support high-quality implementation, with practitioners and supervisors required to demonstrate that they achieve a certain quality standard.

Evidence of impact

The evidence regarding the effectiveness of the universal parenting programmes identified here is fairly limited. Two programmes (Listening to Children and the Solihull Approach Parenting Group) have formative evidence of impact. The remaining five programmes in this category have comparison group evaluations but for three of these there is little or no evidence of effectiveness (Active Parenting Now, Family Links Nurturing Programme, and Toddlers Without Tears). For example, an RCT of the Family Links Nurturing Programme in Wales found no effects on any measure of parenting or parent or child well-being (Simkiss et al., 2013), while

an RCT of Toddlers Without Tears in Australia found a positive effect at some time points on some aspects of parenting behaviour (e.g. reduced harsh/abusive parenting) but no effects at any time point on child externalising behaviour (Hiscock et al., 2007, 2008, 2012). In two cases, however, there is comparison group study evidence of a positive impact. An RCT in Canada of a parenting programme using the 123 Magic video (involving 222 children aged 3-4 years whose parents had concerns about behaviour) found a significant positive impact on parenting (e.g. reduced parental over-reactivity, laxness and verbosity) and child behaviour (e.g. reduced persistent and unstoppable behaviour, negative adaptation and affect, hyperactivity and hostility) (Bradley et al., 2003). Similarly, a small RCT in Canada (79 families) of COPEing with Toddler Behaviour with a non-targeted group found a positive effect on child behaviour, positive parent-child interaction, parental over-reactivity and parent depression (see below).

COPEING WITH TODDLER BEHAVIOUR

COPEing with Toddler Behaviour is typical of the universal group-based parent training programmes in this category in terms of its main features (e.g. duration). It is for parents of children in late infancy and toddlerhood (12-36 months old in the study). Parents learn parenting styles and strategies to manage their child's behaviour. The theory is that improving positive parenting behaviour will improve parent-child interaction and in turn lead to more positive behaviour and less negative behaviour of children. The programme focuses on preventing challenging behaviour in infancy and toddlerhood, and creating a positive relationship with the child. Some of the strategies and techniques discussed are authoritative parenting, developmentally appropriate expectations, redirecting and ignoring inappropriate behaviour. It is delivered in 8 weekly 2-hour sessions in a community agency to groups of 15-40 parents, and is run by two group facilitators. In the study (see below) these were individuals with a background in psychology, early childhood education or social work, with additional training and experience in parent education and intervention with families of young children.

An RCT (Niccols, 2009) in Canada involving 79 children found significant effects (all $p<.05$) favouring the intervention group for child behaviour problems (as reported by parents), positive parent-child interaction, parental overreactivity (authoritarian discipline, displays of anger) and depression. There was no effect, however, on parental laxness (permissiveness) or observed negative child behaviour. Effect sizes for between group differences were not provided. The author concluded that when delivered as part of a community strategy, groups such as COPEing with Toddler Behaviour may promote positive parent-child interaction and children's mental health.

4.3.4 Group-based programmes with adjunctive components

Focus and content

A number of the universal group-based parenting programmes have adjunctive components involving children. In some cases this involves parallel work with the children of the participating parents. One example is given here. **EFFEKT** (see box) has both a parent-training component and a child training component. The parent-training component covers issues such as positive parenting, setting limits, dealing with difficult parenting situations, coping with stress, and enhancing social relationships in the family and with friends. The child-training component teaches children about their emotions, how to reflect on reasons for behaviour, problem-solving skills (such as providing alternative solutions in conflicts), and anticipation of actions and evaluation of consequences.

Delivery

The two parts of the intervention are delivered by trained practitioners over several weeks (see box).

Evidence of impact

A QED study of EFFEKT in Germany, involving 447 children, found a positive impact in relation to positive parenting and inconsistent discipline but mixed evidence in terms of child behaviour (see box).

EFFEKT

EFFEKT is a universal programme that aims to improve parenting and reduce child behaviour problems. It consists of parent and child training. Through five weekly sessions of 90-120 minutes, parents are trained about basic rules for positive parenting, requests and demands, setting limits, dealing with difficult parenting situations, coping with stress, and enhancing social relationships in the family and with friends. Two trainers (with a postgraduate degree in psychology) deliver the parent training component (based partly on programmes from the Oregon Social Learning Center) to groups of 6-15 parents, making use of presentations, group discussions, role-playing, self-awareness exercises, and homework exercises. The child training component, also delivered by two trainers, is an adaptation of the 'I Can Problem Solve' programme and consists of 15 sessions lasting 30-60 minutes each, with 3-5 sessions per week. It provides social problem-solving skills training and focuses on the identification of emotions and reasons for behaviour.

The programme has been evaluated with 447 children aged 4-5 years in Germany in a QED study (Stemmler et al., 2007; Lösel and Stemmler 2012). Families whose children attended kindergartens deemed suitable for implementing EFFEKT were assigned to receive parent training only, child training only, or a combination of parent and child training. Matched controls were recruited from kindergartens that were not considered suitable to implement EFFEKT. In terms of parenting outcomes, at the end of the programme parents who received training (including parent training alone and combined training group) made significant improvements in positive parenting ($d=0.30$, $p<0.01$) and inconsistent discipline ($d=0.29$, $p<0.05$) compared with the control group. Gains in positive parenting were slightly higher for parents whose children received training compared to those who didn't – there was no difference for inconsistent discipline. As regards child outcomes, children who received training (child training only and combined training groups) had significantly more conflict solutions and less aggressive solutions (mediator) ($d=0.25$-0.47, p not provided). The overall effect on the social behaviour scale was small ($d=0.30$, p not provided). Children who received training (any group) had significantly better teacher-reported behaviour compared with the control after the programme, which was maintained at two years after intervention (child aged about seven years) and 4-5 years after the intervention (child aged c.9-10 years). Effects on parent-reported behaviour were not significant.

4.4 Selective prevention (targeting on the basis of general risk)

4.4.1 Programmes involving live demonstration

Focus and content

One intervention based on live demonstration was reviewed that focuses on improving children's behaviour, namely **Video-feedback Intervention to promote Positive Parenting and Sensitive Discipline (VIPP-SD)**. In vivo methods are described in the previous chapter (section 3.4.3). The programme can operate at the selective and indicated levels.

Delivery

The delivery of VIPP-SD is similar to that of the in vivo methods described previously (section 3.4.3).

Evidence of impact

There are two RCTS of the programme. One shows a positive impact on attitudes to sensitive parenting and on the use of positive (but not negative) discipline strategies. However, the impact on child behaviour was only seen for one sub-group of families. The other study found a positive effect on maternal sensitivity but not discipline strategies. It did not measure impact on child behaviour.

VIPP-SD (Video-feedback intervention to promote Positive Parenting and Sensitive Discipline)

VIPP-SD is a good example of an in-vivo method that uses video feedback to promote positive parenting. It is a form of Video Interactive Guidance (VIG) and targets parents of children aged 12 months to five years who are displaying or are at risk of externalising behaviour problems. It includes six sessions, each lasting about 1.5 hours and usually delivered in the family home. Sessions 1 to 4 take place monthly and focus on improving parental sensitivity to the child. Sessions 5 and 6 take place every other month and focus on consolidating the information provided in sessions 1 to 4 and teaching parents sensitive discipline skills. Sessions start by videoing standard mother-child interactions such as reading a book together, followed by feedback and video from the previous session related to session themes. Themes covered include praising positive behaviour, ignoring negative attention-seeking, recognising the child's signals and expressions, providing prompt and adequate responses to the child's signals, using time-out to de-escalate temper tantrums, and promoting empathy for the child. Mothers are also given exercises and tips. Session content is consistent across families, although its presentation and the video feedback are tailored to the specific needs of each family.

An RCT (Van Zeijl et al., 2006) was conducted with 237 children (1 to 3.5 year olds) with relatively high levels of behaviour problems and their mothers in The Netherlands. Families in the intervention group received six 1.5-hour home visits, and families in the control group received six telephone calls.

The first four home visits were conducted monthly, and the last two sessions took place every other month (adherence was high). All effect sizes reported are partial eta squared. There was a significant improvement among mothers in the intervention group compared with the control group in attitudes toward both sensitivity (ES=0.07, p< .01) and sensitive discipline (ES=0.02, p<.05), and in parenting – positive discipline particularly (ES=0.03, p<.01). The intervention was less effective in decreasing negative discipline strategies, possibly because the intervention protocol focused mainly on reinforcing positive interactions and effective parenting strategies. There was no effect on child behaviours for the entire sample. However, there was an improvement in child overreactive behaviour for families with high marital discord (ES=0.03, p<.01) and with a high level of daily hassles (ES=0.04, p<.05). The authors concluded that VIPP-SD is effective and should be used either as a standalone intervention or as the starting 'module' in a stepped approach that leads to more intensive attachment-based interventions with more seriously disturbed families – particularly given its short duration and relatively modest training requirements.

A subsequent RCT (Yagmur et al., 2014) involving 86 mother-infant dyads from Turkish minority families in the Netherlands, and also using partial eta squared as the effect size metric, found significant improvements favouring the intervention group for sensitive parenting (ES=0.06, p<.05) and non-intrusiveness (ES=0.10, p <.01). There was no effect on maternal discipline overall or on the subscales for laxness, physical discipline, or supportive presence, and child outcomes were not measured.

4.4.2 Group-based programmes

Focus and content

There is a range of group-based programmes targeting parents at risk of poor outcomes. These include families living in poverty (**Empowering Parents, Empowering Communities – EPEC** – see box), parents who are hard to reach, in particular mothers who are in poverty, depressed and socially isolated (**Mellow Parenting**) and parents who are on low incomes, or part of an immigrant family, or involved with the court or social services system (**Parenting Fundamentals**). **Supporting Father Involvement** targets low-income families that are expecting a child or have a child aged seven years or younger.

EPEC and Parenting Fundamentals are broadly similar in terms of focus. EPEC aims to enhance parent-child interactions, increase parental confidence, reduce parents' stress and help them manage child behaviour, all with a view to reducing problem behaviour in children. Parenting Fundamentals covers parent-child communication, with the aim of improving child behaviour and family relationships. It is designed to improve parenting strategies (e.g. nonviolent disciplinary approaches, knowledge of child development, parent-child communication skills, and problem solving) and, by extension, to improve their children's behaviour, social capacities, emotional competencies and cognitive abilities. Supporting Father Involvement is similar but has a specific aim to strengthen fathers' positive involvement and promote healthy child development. It focuses on the wellbeing of parents, the relationship between them, coping with stress and enhancing social support. Parenting Fundamentals also seeks to connect parents with other services they need (e.g. psychological, family, educational, recreational, community, and health services). Mellow Parenting combines several elements in each session. These include a group session in which mothers reflect on their own experience, lunch sessions that offer opportunities for feeding and interaction with children, parent-child activities, a parenting workshop, and time to plan activities in the home. Mellow Parenting uses video and direct work with parents and children on their own parenting problems. It involves working with parental strengths using a

structured format, and aims to improve parent-child interaction by helping parents to understand, communicate and play with the child in everyday settings.

Delivery

In many respects the delivery of these programmes is similar to that of group-based programmes described earlier in the chapter. Two are of a similar length and intensity: EPEC and Parenting Fundamentals both comprise eight weekly two-hour sessions, although in the case of the latter parents may additionally receive up to three home visits (these provide opportunities for individualised assistance, discussion and practice of parenting strategies, an evaluation of the home environment). The main difference between the two relates to who delivers them. Like most group-based parenting programmes, Parenting Fundamentals is delivered by specially trained practitioners, in this instance social workers or paraprofessionals who have been trained in the Parenting Fundamentals method. EPEC, by contrast, is provided by parents living in the community who have been trained to deliver the programme. Supporting Father Involvement is longer (weekly two-hour meetings over 16 weeks) and has been delivered in two formats: one for couples, and one for fathers only. Mellow Parenting is delivered by trained practitioners over 14 5-hour weekly sessions to groups of six parents in a community venue.

Evidence of impact

There is comparison group study evidence for the effectiveness of all three programmes in this category, albeit stronger for parenting / parent-child interaction than for child behaviour. An evaluation of EPEC in the UK using an RCT (116 families) found mixed effects. There was a significant positive impact on child problem behaviour (but only on one of the two instruments used) and on a measure of parenting competencies, but no impact on a measure of parent stress (which includes subscales for parental distress, difficult child and parent-child dysfunctional interaction) (see box). An RCT in the US of Supporting Father Involvement involving 371 couples found increased couple satisfaction, reduced parent stress and fathers being psychologically and behaviourally more involved with their child, but no impact on child behaviour (Cowan et al., 2009). However, a pre-post study with 236 couples, also in the US, found a positive impact on parent-child relationship quality and children's behaviour problems (Cowan et al., 2014). An RCT of Parenting Fundamentals, involving 312 participants, found a positive on parenting skills (communication, problem solving, non-violent discipline), home environment (quality and quantity of stimulation and support) and aspects of child behaviour (including internalising but not externalising problems) (Adams et al., 2010). A modest QED study involving 70 families identified positive effects of Mellow Parenting on mother-child interaction, maternal wellbeing, and child development and behaviour post-intervention, sustained and in some cases magnified at one-year follow-up (see box).

EMPOWERING PARENTS, EMPOWERING COMMUNITIES (EPEC)

EPEC is a peer-led parent training programme that aims to enhance parent-child interactions, increase parental confidence, reduce parental stress and help them manage child behaviour, all with a view to reducing problem behaviour in children. It is designed for primary caregivers of children aged 2-11 who have difficulties in managing their child's behaviour. There are 8 weekly two-hour sessions, delivered by 2 facilitators to 7-14 parents.

An RCT with 116 socially disadvantaged families was conducted in Southwark, London, with the majority of families belonging to minority ethnic groups (Day et al., 2012). Compared with the control group there were significant improvements in the frequency ($d=0.38$, $p=0.01$) and number ($d=0.56$, $p=0.001$) of child behaviour problems as measured by the more sensitive of the two parent self-report measures (Eyberg Child Behaviour Inventory) but not on the other (Strengths and Difficulties Questionnaire) for children in the intervention group. There was no effect on a measure of parental stress (which includes parent-child dysfunctional interaction), but there were improvements relative to the control group in parenting competencies (laxness, over-reactivity and verbosity; $d=0.69$, $p<0.001$). The authors conclude that EPEC is a promising method for providing effective and acceptable parenting support to families considered hard to reach by mainstream services.

MELLOW PARENTING

Mellow Parenting is a home-grown UK programme and is particularly invested in working with 'hard-to-engage' families. It seeks to enhance parent-child interactions, parental wellbeing, parental effectiveness and confidence in parenting. Target families have a child under five years old and are generally experiencing significant parenting or relationship difficulties, including child protection concerns or family violence. Mellow Parenting uses videos, parent-child activities and a parenting workshop to help parents reflect. Practitioners work with parents to build strengths. The programme is delivered over 14 weekly sessions of about five hours each to groups of six parents in any convenient community venue.

Apart from case studies, this indicated prevention programme has been evaluated in one QED study with 70 families at family centres in Scotland (Puckering et al., 2013). Referrals were taken from existing family centre users and from child clinical psychology, psychiatry, educational psychology, social work and health visitors. Families needed to have a child aged under five years and be experiencing parenting difficulties or relationship problems (including child protection issues), or family violence, or at least two of the following: child behaviour problems, maternal mental health problems, difficulties in current family relationships or family of origin.

The mean age of the child was around 3.5 years, and families had histories of adversities such as socio-economic deprivation, marital discord, and no confiding relationships. Positive effects were found for mother-child interaction, maternal wellbeing, and child development and behaviour in the Mellow Parenting group post intervention. At one-year follow-up these effects were sustained and in some cases magnified. Effect sizes were not provided.

4.4.3 Group-based programmes with adjunctive components

Focus and content

Four selective interventions were identified in which parent and child groups run concurrently, with some joint sessions. In the **Strengthening Families Programme (SFP) 3-5**, which is targeted at children aged 3-5 years of substance-abusing parents, parents learn to increase desired behaviours in children by, for example, using attention and rewards, clear communication and effective discipline, while children learn about effective communication, understanding feelings, social skills and problem solving. During the second hour families (parents and child together) engage in structured family activities, practise therapeutic child play, learn communication skills and practice effective discipline. **Parent Corps** (see box), which was designed to promote effective parenting practices and prevent behaviour problems among ethnically diverse children from disadvantaged urban communities, is broadly similar in focus. **FAST (Families and Schools Together)** takes an ecological approach to child behaviour and helps parents develop protective factors by strengthening bonds with the children, school and community. It works with parents of children as young as three years (age range 3-11 years).[14] Weekly meetings involve a shared meal among family members, 15-minute play sessions, family communication activities and parent discussion. It can operate at a universal level but it also tends to include families targeted on the basis of elevated risk or evidence of children having problems such as behavioural difficulties. **Dare To Be You** (see box) targets children aged 2-5 years from high-risk families (e.g. on the grounds of abuse, school failure, economic disadvantage, mental health issues, history of substance misuse, acute or chronic developmental issues). It provides childcare during sessions for parents but also includes 15 minutes of games and activities between parents and children and a family meal.

Delivery

The first two interventions are of a similar length and intensity – 13 weeks for Parent Corps and 14 weekly two-hour sessions for SFP 3-5 – and involve separate concurrent sessions for parents and children respectively before the two groups are brought together. In Dare To Be You, families attend 10-12 weekly 2-hour workshop sessions over 3-4 months. FAST is longer: groups of 10 parents attend eight weekly 2.5 hour sessions with their children, followed by monthly sessions for two years. SFP 3-5 facilitators (two for parents group, two for children's group) can be professionals (e.g. teachers) but also members of the community who are effective at facilitating groups with parents or children (it is considered helpful if they are parents or comfortable and skilled in dealing with young children) and trained in the programme. It can take place in a variety of community settings (e.g. schools, churches, recreation centres). In Parent Corps the parent groups are delivered by trained mental health professionals, while the child groups are delivered by classroom teachers. FAST is delivered by a team consisting of teachers, educational psychologists, family support workers, community leaders and parents who have graduated from the programme, and represent the background of the attending families. Dare To Be You sessions are facilitated by trained peer helpers.

Evidence of impact

Three of the interventions have comparison group study evidence of effectiveness, although it varies in strength. In the case of Parent Corps, evidence from two trials was found (see box). One found evidence of a positive effect on parenting practices and child behaviour, while the other found a positive effect on parenting but no effect on behaviour (other than for dysregulated boys). Although there are several studies of FAST with older children showing a positive effect, only three studies (all in the USA) include children falling within the

[14] FAST can operate across the universal, selective and indicated levels.

age range covered by this review (i.e. Kindergarten – 5-6 years as part of a wider age range), including two matched-pair RCTs (100 and 137 children respectively) and one pre-post study with 196 children. The results are mixed within and between studies. For example, in the pre-post study parents reported significant gains in cohesion, expressiveness, relationship, some measures of efficacy, child and social relationship, support, child emotional symptoms and parent involvement in school (Crozier et al., 2010). However, there were no significant impacts on parent-reported child prosocial behaviour, conduct problems, peer problems or hyperactivity. Teachers reported gains in children's prosocial behaviour but not in difficulty scores, or relationship with parent. In the two RCTs there were also mixed effects. For example, in one (Kratochwill et al., 2004) there were positive effects ($p<.05$) at post-test in terms of reduced aggressive behaviour ($d=1.20$) and reduced withdrawn behaviour ($d=.87$), and at 9-12 month follow-up for withdrawn behaviour ($d=1.92$) and teacher-rated academic competence ($d=.77$), while in the other there was a positive impact at post-test and 9-12 month follow-up on family adaptability[15] ($d=1.35$ and $.79$ respectively) and on externalising behaviour at follow-up ($d=.68$) (Kratochwill et al., 2009). However, in both studies these positive effects represent only a very small proportion of outcomes measured. There is formative evidence for the impact of SFP3-5. A study of SFP compared different versions of the programmes for different ages (Kumpfer et al., 2010) but effectively examined pre-post differences for each version, including the one aimed at 3-5 year-olds. It found a statistically significant pre-post difference favouring the intervention group on all parenting and child behaviour outcomes measured for this age group, with an average effect size of $d=.67$. Dare To Be You has been tested in one RCT and two QEDs, with evidence of a positive impact on child behaviour and other aspects of child development, parent substance use, and aspects of child-rearing (e.g. parent self-efficacy, improved communication, reduced harsh punishment).

PARENT CORPS

ParentCorps exemplifies a group-based programme with adjunctive components. It aims to help parents improve social, emotional and self-regulatory skills in order to encourage healthy development and school success. The 13-week intervention is provided in pre-kindergarten and involves children aged four years and their parents. Parent and child groups are held concurrently in adjacent classrooms, with some group activities to bring parents and children together to allow parents to practice new skills. The parent groups aim to enhance parent-child interaction and positive reinforcement. In the child groups, leaders use behaviour management practices to promote children's positive behaviours and reduce or prevent behaviour problems. Two studies (Brotman et al., 2011; Dawson-McClure et al., 2014) evaluated the effect of ParentCorps on parenting and related child outcomes. Both trials took place in the US.

The first study, a cluster RCT with eight schools (171 families), found medium-size positive effects for both effective parenting practices (ES = 0.50, $p<0.001$) and child behaviour problems (ES = 0.56, $p<0.05$) (Brotman et al., 2011). The intervention effect on observed parenting practices was moderated by the baseline score of this measure; there was a large intervention effect for parents with baseline scores below the median and a small effect for parents with baseline scores above the median. In terms of secondary outcomes, there were small and non-significant intervention effects on parent involvement and child school readiness and these effects were not significantly moderated by baseline scores.

The second RCT of Parent Corps (Dawson-McClure et al., 2014) involved 1,050 children aged four years and their parents in 10 schools in deprived areas. The trial design involved matching schools on size and splitting them into pairs; within each pair, one school was randomly assigned to the intervention and the other to the control group. The intervention had positive effects on parenting knowledge ($d=0.32$, $p<0.001$), parent positive behaviour support ($d=0.16$, $p=0.032$), and teacher-rated parent involvement in early learning ($d=0.38$, $p<0.001$), as measured over a two-year period (end of kindergarten). There was also a significant effect on academic performance ($d=0.25$, $p=0.01$) (Brotman, 2013).

[15] This refers to the family's ability to be flexible in terms of its power structures, roles and rules in order to meet the child's developmental needs.

DARE TO BE YOU

Dare To Be You consists of a family programme, a preschool programme, and a community/school programme. The family programme involves a series of 10-12 weekly two hour and 15 minute sessions over three to four months. It is designed to increase parental self-efficacy, stress management and positive role modelling, and provide a peer support system. Trained peer helpers conduct workshops, and teenagers from the community provide childcare supervised by a preschool teacher. The preschool programme provides training to staff from schools or childcare used by intervention families, and others in the community, and the community/school programme provides 15-18 hours of training to staff from six agencies that have contact with intervention families. These support the learning and activities from the family programme. The intervention targets children aged 2-5 from high-risk families (presence of abuse; school failure; economic disadvantage; mental health issues; history of substance misuse; acute or chronic developmental issues; living in a community with a population substance abuse rate of >90%).

The programme has been evaluated in one RCT with 797 families (Miller-Heyl et al., 1998), which found intervention effects on positive child behaviour, parent substance use, and some child-rearing measures. There have been mixed results from two US quasi-experimental studies – one study found improvements in parenting (MacPhee and Miller-Heyl, 2000; 193 families), and the other found improvements in parenting, child development, and behaviour (MacPhee and Fritz 1999; 358 families). Effect sizes were not provided in any study.

4.5 Indicated prevention (targeted on the basis of signs of child development problems)

4.5.1 Self-administered programmes

Focus and content

Self-administered (or 'self-help') parenting interventions range from programmes that are entirely self-administered to those that include the addition of brief therapist assistance, usually via the telephone (O'Brien and Daley, 2011). They are designed to be implemented by parents and can be presented either in written (bibliotherapy) or multimedia format (DVD, CD-ROM, Internet or TV). An example of an indicated bibliotherapy intervention is **Self-directed Triple P**, which uses a parenting workbook that covers the causes of problem behaviours and strategies for promoting children's social competence and dealing with difficult behaviour.

Delivery

The intervention is designed to take 10 weeks to complete. Parents' use of the workbook can be supplemented by brief weekly telephone consultation with a trained therapist (the so-called enhanced version).

Evidence of impact

The intervention has been evaluated in three RCTs, two of which tested the enhanced version. All found a positive impact on children's behaviour and aspects of parenting.

SELF-DIRECTED TRIPLE P

Self-directed Triple P is a 10-week parent training programme designed to teach parenting skills to help improve children's behaviour in the home and community. The booklet covers the causes of problem behaviours, 10 strategies for promoting children's social competence (e.g. quality time, talking with children), and seven strategies for dealing with difficult behaviour (e.g. setting rules, directed discussion, planned ignoring). Parents are expected to select goals, monitor their child's and their own behaviour, and evaluate their own skills. There have been three RCT evaluations – the first two in Australia and the third in Germany.

The basic version of the programme has been evaluated through an RCT (Markie-Dadds and Sanders, 2006a). Sixty-three children aged 24-60 months, whose parents reported clinical levels of child behaviour problems (based on the Eyberg Child Behaviour Inventory – ECBI), participated in the study. The study found a positive impact in terms of child behaviour (reduced number and frequency of problems) and parent efficacy, satisfaction and over-reactivity. These effects were maintained at follow-up. Effect sizes were not provided.

Another RCT (Markie-Dadds and Sanders, 2006b) evaluated an enhanced version of the programme, which involved 20 minutes of weekly telephone consultation with a trained therapist in addition to the parenting workbook. Fourteen children aged 24-72 months were randomly allocated to receive the enhanced version, another 15 to receive the workbook only and 12 to the waitlist control group. These children were also in the clinical range according to the parent-reported ECBI. There were statistically significant improvements post-intervention in child behaviour in both intervention groups compared with the control, but more improvement in the enhanced intervention group. There was no difference in parenting measures between the workbook only and control groups. Parents in the enhanced version had decreased use of dysfunctional parenting strategies, although at six months follow-up this effect had disappeared. Effect sizes were not provided. A third RCT (Hahlweg et al., 2008) evaluated the enhanced version (15 minutes weekly telephone consultation) with 63 children aged 36-72 months (16% of whom had clinical levels of behaviour problems). Children in the enhanced version showed a statistically significant reduction in externalising behaviour compared with those in the waitlist control, but only a marginally significant improvement in internalising behaviours. Parent over-reactivity, laxness and verbosity was significantly lower for parents who received the intervention compared with those who didn't. However, there was no effect on maternal depression, satisfaction or marital quality. Effect sizes were not provided.

4.5.2 Individually delivered programmes

Focus and content

Individually delivered parenting programmes have been designed to support parents who have complex needs (e.g. who are maltreating or substance dependent) and/or whose children display behaviour problems (in some cases serious).

Some of these programmes work directly with the *parent[s]* as opposed to with children or children and parents. For example, **Parents under Pressure** (see box) targets substance-dependent parents, and utilises the teaching of mindfulness strategies alongside a range of other parenting techniques, with the aim of improving parental functioning and parenting practices (Dawe and Harnett, 2007). The programme is underpinned by an ecological model that involves addressing wider problems (e.g. housing and finance). It has now been extended to include parents of children under two years of age (Barlow et al., 2012). **Triple P Standard (Level 4)** is for parents with a child aged 0-12 years who have concerns about their child's behaviour. Role play exercises, homework exercises and discussions involving video-taped examples of effective parenting strategies are used to help parents learn strategies for dealing with unwanted child behaviour and supporting their child's emotional needs. **In Triple P Primary Care (Level 3)**, also for parents with specific concerns about

their child's behaviour, involves providing parents with advice about common child rearing issues, such as toilet training eating and family routines.

Other programmes in this category target the *parent-child dyad* (**Parent-Child Interaction Therapy (PCIT,** see box**)**, **Parent-Child Game**, **EPaS (Enhancing Parent Skills)**, **New Forest Parenting Programme**) using live demonstration techniques. One of the programmes in this category (**Family Check-up**) comprises three home visits that focus on assessing the whole family, using motivational interviewing to help parents to address significant issues, and then identifying appropriate services for referral. Programmes targeting the dyad (e.g. PCIT; Parent-Child Game) use a range of in-vivo methods to work directly with the parent and child. PCIT, for example, involves two components that focus on basic interactions and that utilise in-vivo techniques to support the parents interaction with the child: Child Directed Interaction (CDI) is based on play therapy and supports the parent to engage their child in a play situation with the goal of strengthening the parent-child relationship; Parent Directed Interaction (PDI) utilises behaviour therapy techniques to help parents to develop behaviour management techniques as they play with their child (e.g. command-giving and discipline).

Similarly, the Parent Child Game is for children aged from 18 months to 8 years with severe or longstanding behaviour problems, and is underpinned by social learning and attachment theory. It involves two components: The Child Game focuses on helping parents to develop their child-centred behaviours within the context of 10-minute guided play sessions in which the therapist remains behind a screen and communicates directly with the parent through an earpiece. Child-centred behaviours meet the child's emotional needs and give them a positive experience (e.g. when they are praised). The Parent Game then focuses on helping the parent to use child-directive strategies, which are behaviours that demand a response from the child or restrict their behaviour (e.g. commands, criticism, negative looks).

Delivery

The length and intensity of the programmes in this category varies, in large part depending on nature and severity of the problems they seek to address. For example, Parents Under Pressure lasts 16-20 weeks, whereas Triple P Standard involves 10 weekly sessions and Triple Primary Care comprises 3-4 15-30 minute consultations.

The programmes in this category are typically provided by experienced practitioners (e.g. psychologists) who have received additional training and ongoing supervision. For example, Parents Under Pressure is provided by practitioners who have extensive professional experience working with high-risk families (e.g. social workers and psychologists) alongside additional training and ongoing support to deliver the programme itself. Triple P programmes are delivered by accredited Triple P practitioners.

Evidence of impact

There is comparison group study evidence for all programmes in this category, with all but two (Enhancing Adoptive Parenting, and EPaS) showing a positive effect. For example, a small RCT of the Parents Under Pressure programme showed a positive impact in terms of parenting stress, child abuse potential (the risk of parents abusing their children), parental methadone dose, and child behaviour (see box). There is also evidence from RCTs for the effectiveness of Parent-Child Interaction Therapy in terms of child behaviour, parent-child interaction and child abuse potential (see box). There are two RCTs of Triple P Primary Care, both showing reduced child behaviour problems (Turner and Sanders, 2006; Boyle et al., 2010), and Triple P Standard has evidence from three RCTs, which collectively show improvements in child behaviour and aspects of parenting (Nicholson and Sanders, 1999; Sanders et al., 2007; Sanders et al., 2000). Lastly, two RCTs of the New Forest Parenting Programme show significant improvements in children's ADHD symptoms (Sonuga-Barke et al., 2001; Thompson et al., 2009).

PARENTS UNDER PRESSURE

Parents Under Pressure (PuP) aims to help parents facing adversity develop positive and secure relationships with their children. It is delivered to parents receiving methadone or substance-abusing parents, with children aged 0-8 years. It is designed for families in which there are many difficult life circumstances such as depression and anxiety, substance misuse, family conflict and severe financial stress. It is an intensive home-based intervention, combining methods for improving parental mood and parenting skills within a multisystemic framework that takes into account contextual influences on family functioning. One-to-one sessions are delivered in the family's home at least once per week for 1-2 hours over 16-20 weeks. Modules cover topics such as emotional regulation using cognitive mindfulness, parental self-efficacy, child-centred play skills, connecting with one's child, encouraging good behaviour, and building social support. It is delivered by clinicians with professional qualifications and experience in treating families as well as social workers, family support workers and substance treatment workers.

Four evaluations have been conducted, including three pre-post studies and one RCT. The RCT, conducted in Australia with 64 parents receiving methadone and with at least one child aged 2-8 years, compared PUP with a brief (two-session) parenting skills training intervention and standard care (Dawe and Harnett, 2007). It showed significant reductions for the intervention group in parenting stress, child abuse potential, rigid (harsh) parenting, parental methadone dose and child behaviour problems. Only the abuse score significantly changed for the other two groups (this decreased in the brief intervention group and actually increased in the standard care control). Effect sizes were not provided. The pre-post studies found improvements over time in parental functioning, parent-child relationships and, in one study, parental substance use and risk behaviour (Dawe et al., 2003; Frye and Dawe, 2008; Harnett and Dawe, 2008).

These studies suggest the intervention holds promise for very vulnerable and traditionally hard-to-reach groups. The multifaceted nature of the intervention is important given the complexity of the needs of the target group. The authors of the RCT study also emphasise the importance of the mindfulness component. They speculate that directly addressing the parents' cognitive-affective functioning – i.e. helping them to manage emotional dysregulation generally and specifically during child-focused play and managing difficult child behaviour – may have increased the effectiveness of the parenting skills component of the programme. The engagement rate in the RCT study was also good (of 22 families randomly allocated to PUP, 17 received 10 or more sessions), suggesting the value of the phone reminders and an emphasis on building the therapeutic alliance.

PARENT CHILD INTERACTION THERAPY (PCIT)

The Parent Child Interaction Therapy (PCIT) is an example of a programme that involves working with the parent and child together, rather than only with the parent or the child. It aims to reduce externalising child behaviour problems like aggression and defiance among children aged 2-12 years with emotional and behavioural disorders. It does this by improving the quality of the parent child relationship and increasing positive parenting behaviours. It teaches parents play therapy and communication skills, and behaviour management. It generally consists of 12 weekly 90-minute sessions, followed by one booster session after one month. An abbreviated 5-session programme is also available. It is conducted in clinics or community settings and is delivered by PCIT-trained therapists, with the support of a supervisor.

The programme has been evaluated through six RCTs and two QED studies – five in the US (Bagner and Eyberg, 2007; Boggs et al., 2004 (QED); Chaffin et al., 2011; Chaffin et al., 2004; Shuhman et al., 1998) and one in each of Australia (Nixon et al., 2003, 2004), Hong Kong (Leung et al., 2008 (QED)) and Puerto Rico (Matos et al., 2009)) – and has largely been shown to be effective. Significant positive intervention effects have been found on child behaviour ($d=0.97$-1.59, $p<0.01$), skills ($d=1.32$-2.06, $p<0.01$), parent-child interactions ($d=1.20$-1.38, $p<0.01$) and parent abuse of children. Positive and negative parenting behaviours ($d=1.4$, $p<0.001$), parental stress ($d=0.97$-1.38, $p<0.01$), sense of competence and locus of control ($d=0.77$-1.37, $p<0.05$) have been analysed to mediate programme effects, meaning that the impact of the intervention on child outcomes is achieved by changing these intervening factors for the better. (Not all studies measured all outcomes/reported effect sizes.)

4.5.3 Group-based programmes

Content and focus

The indicated group-based programmes are on the whole provided to parents whose children are exhibiting behaviour problems (e.g. **Incredible Years parent training** Toddler and Pre-school versions – see box), **Triple P** (including Level 3 Discussion Groups, and Level 4 Group), **Parents Plus Early Years**, **Parent Management Training – Oregon Model (PMTO)**, **Hitkashrut**, and **COPEing with 3-12 year olds**). Parents in need of these programmes are typically identified though either (a) rating on an objective measure that indicates whether a child is displaying increased difficulties with behaviour/emotions (e.g. a Strengths and Difficulties Questionnaire (SDQ), which covers problems such as tantrums and hitting other children) or (b) parents expressing subjective concerns. Most of these programmes focus on providing parents with a range of skills that will improve their management of behaviour problems, in an approach underpinned by social learning theory.

Delivery

These programmes commonly entail weekly two-hour sessions for groups of about 6-12 parents (sometimes including couples) over a period lasting between six and 20 weeks. (COPEing with 3-12 year-olds is unusual in accommodating 25-30 parents at a time.) Sessions can be delivered by practitioners from different professions, including social workers, psychologists and health visitors, all of whom receive bespoke trained and regular supervision. Often the group will have two facilitators. Groups can take place in various community settings, such as children's centres, clinics, schools and homeless shelters.

Evidence of impact

The majority of the interventions cited have evidence of impact from comparison group studies – some from multiple studies (e.g. Incredible Years, Triple P, PMTO). The evaluations of several interventions in this category show that they have a positive impact not only on children's behaviour but also on mediating factors such as parent stress and parenting behaviours. For example, an RCT of Triple P Discussion Groups (Joachim et

al., 2010) found a positive effect on parent-reported dysfunctional parenting practices and child behaviour problems.

INCREDIBLE YEARS PARENT TRAINING

Incredible Years is arguably the best-known group-based parent training programme and has strong and consistent evidence of effectiveness in multiple contexts. There are three different versions: Baby Programme (9-12 sessions), Toddler Programme (12-13 sessions), Preschool Programme (18-20 sessions). Each session lasts 2-3 hours; sessions are conducted weekly by trained group leaders, who are professionals (therapists, and parent educators from psychology, social work, education, nursing and psychiatry). The intervention can be delivered in community or clinical settings. Targeted families are generally economically disadvantaged.

An RCT in the US of the Toddler version involving 208 parents of 2-3 year-olds from 11 day care centres serving low-income families (Gross et al., 2003). Centres were randomly assigned to Parent and Teacher training, Parent training only, Teacher Training only and a wait list control. Parents in the Parent training only and Parent and Teacher trainings arms of the study demonstrated more positive and less directive interactive behaviours with their toddlers than control parents, and less use of coercive discipline strategies. There was no effect on parent-reported child behaviour problems or observed negative child behaviour, but there was a clinically significant effect on behavior problems in the day care classroom: over 44% of the high-risk behaviour problem children whose parents received training moved to the low-risk behaviour problem group at post-intervention, compared with 19% of control group children.

An RCT of the Preschool version in Wales involved allocating 153 families from 11 Sure Start areas on a 2:1 basis to intervention and control (Hutchings et al., 2007). There was a positive impact post-intervention on child behaviour as measured using the problem (ES=0.63, p<.001) and intensity (ES=0.89, p<.001) scales of the Eyberg Child Behaviour Inventory. A positive effect was also observed on parenting in terms of more positive parenting behaviours (ES=0.57, p=.002).

Incredible Years parent training has been evaluated extensively, with studies conducted across the world, including real world settings. A recent meta-analysis (Menting et al., 2013) examined 50 studies (4,745 participants) of the Incredible Years parent training programme. It found improvements in both children's disruptive behaviour (ES=0.27, p <0.001) and prosocial behaviour (ES=0.23, p<0.001). There is no evidence of harmful effects. Although the two studies cited above were included, it should be noted that the meta-analysis covered a wider age range than that focused on in this review, and also included treatment-level studies as well as selective and indicated.

4.5.4 Multicomponent programmes

Focus and content

One indicated multicomponent intervention was identified, namely **First Steps to Success** (see box), involving school- and home-based elements.

Delivery

The school-based element is delivered by consultants and teachers and lasts approximately 3.5 months. The home-based element consists of six weekly sessions for parents.

Evidence of impact

There is comparison group evidence demonstrating a positive impact on children's behaviour.

FIRST STEPS TO SUCCESS

First Steps to Success is a school- and home-based intervention for kindergarten children (aged 5-6 years) displaying antisocial behaviour and their parents. The classroom intervention involves a curriculum delivered by coaches followed by teachers using behavioural reinforcement techniques to monitor and change behaviour. Children are introduced to a rewards system by consultants in 20-30 minute sessions that occur twice a day for 10 days. After this, the intervention is conducted by the teacher, lasting three months. The home-based part (HomeBase) consists of a parent-training programme delivered by consultants in six weekly 60-90 minute sessions. Parents are taught how to build children's competencies relating to school performance, behaviour, friendships and individual skills, and are instructed to practise these skills with their children for 10-15 minutes daily. One pre-post study (Golly et al., 1998), one QED study (Walker et al., 2005) and one RCT (Walker et al., 1998) of the programme included children at the top end of the 0-5 years age range. All three studies were conducted in the US and found significant positive effects on children's aggression, social skills and academic involvement. In particular, the RCT, which had a sample of 46 kindergarteners, found a significant reduction in teacher-reported aggression ($d=0.99$, $p<0.001$) and maladaptive behaviour ($d=0.93$, $p<0.001$) and an increase in adaptive behaviour ($d=1.17$, $p<0.001$) among children in the intervention group compared to the children in the control group. (There was no impact on teacher-reported withdrawn behaviour.) There was a positive impact on time engaged in academics ($d=0.26$, $p<0.05$).

4.6 Summary

Parent-child interaction has a key role to play in terms of influencing outcomes for children aged 3-5 years in terms of the way in which parents manage children's growing independence and the coercive cycles that can result from such interaction. This review has considered a range of programmes that can be used to promote the type of parenting that will prevent the emergence of such problems or that can be used to address problems once they have emerged. Although some of the programmes that were identified still only have formative evidence of effectiveness, some have evidence from single or multiple high quality comparison group studies (including RCTs) to show that they are effective in terms of improving both parenting behaviours and a range of social, emotional and behavioural outcomes for children, and some have been found not to be effective. The EIF Evidence Panel will make formal assessments on the question of what doesn't work.

4.6.1 Media-based programmes

The review identified a universal, media-based approach (Triple P Universal – Level 1) that includes newspaper, television, radio and flyers. It informs parents about effective parenting strategies, including how to address common problems. Three trials of this programme find mixed effects but overall there is a positive impact on aspects of parenting and child behaviour. Effects were stronger for some outcomes when the television series was supplemented by additional support for parents.

4.6.2 Self-administered programmes

One universal self-administered parenting programme (DVD-based, seven 2-3 hour sessions) was identified (Parenting Wisely). The self-administered version has not been evaluated but there is comparison group study evidence from one RCT of a two-session group-based version of a positive impact on parents' knowledge of effective parenting skills and the appropriate selection of behaviour change strategies. An indicated self-administered programme (booklet-based) was identified for parents of children with identified behavioural difficulties (Triple P Self-directed). There is evidence from three RCTs (in two cases with additional weekly

telephone consultation) of its positive impact on child behaviour. As indicated above (section 4.2.2), there is systematic level review level evidence (O'Brien and Daley, 2011) supporting the use of self-administered parent training programmes for parents of children with identified behaviour problems.

4.6.3 Individually delivered programmes

For families experiencing complex problems (e.g. maltreatment, substance abuse) and/or with child displaying behaviour problems (often serious) there is considerable comparison group study evidence to support the delivery of one-to-one programmes (all eight programmes in this category had comparison group studies, and no effect was found for only two). One of the programmes identified in this review, Parents Under Pressure, targets substance-dependent parents, and was shown in an RCT to contribute to reduced parenting stress, child abuse potential, harsh parenting, parental methadone use and child behaviour problems. Others, such as Triple P Standard (Level 4) provide parents with advice and guidance on effective parenting strategies, again with positive effects on parenting and child behaviour. Programmes such as Parent Child Interaction Therapy (PCIT) target the parent-child dyad, often using live demonstration, again with evidence from comparison group studies of a positive impact on parent-child interaction, child behaviour and child abuse potential.

4.6.4 Programmes involving live demonstration

There is comparison group study evidence from two RCTs for a video feedback intervention (VIPP-SD) designed to promote positive parenting and sensitive discipline for children displaying or at risk of externalising behaviour problems (i.e. selective and indicated levels). One study found a positive impact on parental sensitivity, while the other found a positive impact on discipline strategies. The one study that measured child behaviour found no overall effect but rather sub-group effects for families with high marital discord and high daily hassles.

4.6.5 Group-based programmes

There is evidence from multiple comparison group studies for the use of indicated group-based parenting programmes to support parents whose children show early – and in some cases more established – signs of emotional and behavioural problems. These programmes tend to have several features in common, such as: using age-appropriate strategies for effective praise, communication and discipline; being led by professionals; taking place in a range of community settings; and typically comprising 6-18 two-hour sessions). The evidence for some programmes, notably Incredible Years and Triple P, is particularly strong. These conclusions are supported by substantial systematic review level evidence, as cited earlier in the chapter (section 4.2.2). The evidence for universal and selective group-based parenting programmes is more limited. At the universal level, two had formative evidence of impact only, and for three of the five with comparison group studies there is evidence of little or no impact on behaviour problems. However, for the other two universal programmes (123 Magic and COPEing with Toddler Behaviour) with comparison group studies, there is evidence of a positive impact on parenting and behaviour. At the selective level there is comparison group study evidence for the effectiveness of all three programmes considered (EPEC, Parenting Fundamentals, Supporting Father Involvement), but it is stronger for parenting / parent-child interaction than for child behaviour.

4.6.6 Group-based programmes with adjunctive components

There is comparison group study evidence of a positive impact on parenting and child behaviour for selective and indicated group-based parenting programmes that involve adjunctive components targeting the child. However, overall the evidence is not as strong as the evidence for group-based programmes, owing to (a) there being fewer programmes and studies, and (b) evidence of impact being mixed within and between studies. There is also a comparison group study of a universal programme in this category (EFFEKT), showing a positive impact on parenting and inconsistent discipline but mixed effects for child behaviour.

4.6.7 Multicomponent programmes

There is comparison group study evidence for the effectiveness of one multicomponent programme in terms of children's behaviour.

4.6.8 Conclusion

The strongest evidence is for indicated group-based parenting programmes (i.e. where children have early signs of developmental problems), which show an impact on parenting and child behaviour. This is supported by strong systematic review level evidence. The evidence for universal and selective group-based programmes, or for group-based interventions with adjunctive components, is more limited and mixed. The evidence is also strong for individually delivered interventions for families with complex problems and/or with children displaying behaviour problems in terms of improving parenting and reducing child abuse potential and child behaviour problems. Although few universal media-based and universal and indicated self-administered programmes were identified, there is comparison group level evidence of an impact on child behaviour, and systematic review level evidence supports the use of self-administered programmes at the indicated level.

Chapter 5 Language and Communication Skills

5.1 Introduction

About a third of the interventions included in this report are designed to promote parent-child interaction with a view to improving children's language and communication skills in particular but also other aspects of their readiness for school. The interventions in this chapter are based on the notion that during the early years, a child's home and parents are the main agents of influence. Parents and carers can enhance their children's speech and language development, and in the process enhance their own relationship with children, through conversation and enjoyable shared activities such as book reading, and sharing rhymes and songs. As with the other topics covered by this report, there is a considerable literature in this area, and this review has selected key models of working for further examination. It focuses primarily upon interventions that children's centres, health visitors and others can run to support such learning in the home, although some interventions involve teachers, early years educators and speech therapists inasmuch as they are seeking to enhance parent-child interaction.

The chapter is not concerned with educational interventions delivered in schools, early years' settings or clinics unless they include a specific focus on promoting parent-child interaction. Although not the focus of this review, centre-based interventions are clearly important, as demonstrated by systematic review level evidence demonstrating the effectiveness of early childhood care and education programmes in terms of children's social and cognitive development, especially for children from socio-economically disadvantaged backgrounds (e.g. Burger, 2010; Camilli et al., 2010). The toolkits developed by the Education Endowment Foundation provide extensive information on the effectiveness of a range of interventions that can be delivered in schools or early years settings, only some of which involve parents directly.[16]

This chapter begins by describing the underpinning mechanisms of change in terms of the ways in which these programmes differ from those described in Chapters 3 and 4, and cites relevant recent systematic review level evidence. It then moves on to describe the models, beginning with universal approaches before moving to selective and indicated approaches respectively.

5.2 Theory and recent systematic review evidence

5.2.1 Underpinning mechanisms of change

The interventions identified are informed by a range of theoretical perspectives. One is Vygotsky's (1978) social-cultural approach, which holds that social learning and culture precede and shape cognitive development, and development will vary across cultures and social experiences. Cognitive functions are therefore influenced by the beliefs, values and behaviours from each child's culture. Skills are developed

[16] See the 'Teaching and Learning Toolkit' for teaching 5-16 year-olds and the 'Early Years Toolkit' for early years settings: http://educationendowmentfoundation.org.uk/.

through modelling, guidance and encouragement from a more knowledgeable person, who withdraws as the child becomes more proficient. Interventions can provide this type of modelling or help parents to improve their interactions with their children in such a way that support this kind of cognitive development. Related to this is the concept of the 'zone of proximal development' (ZPD). This refers to the difference between what a child can do with adult guidance and what she is able to do independently. It is suggested that there are certain skills that children can complete but only with adult guidance. These are the skills that the child is ready to learn. Educational interventions should focus on helping children to develop skills in this zone, which will be different for each child. The supportive strategies adults use to help children solve cognitive problems may be described as 'scaffolding'. Successful scaffolding involves the caregiver leading the child toward a shared understanding of the task and helping him/her develop his/her own conception of the task. The parent is sensitive to the child's level of competence, and provides guidance accordingly; they then gradually withdraw support, providing an opportunity for the child to perform independently.

Another theoretical perspective is Epstein's (1992, 1995) overlapping spheres of influence model, which states that the relationship among school, family, and community partnerships is instrumental for student learning and growth. According to the framework, the contexts that influence children and are influenced by children are their family, school, and community, but the relative influence and relationship between these spheres changes over time. Parents need to discover their potential to become "children's first teachers' in order to prepare the child for engagement in school and community. Epstein overlapping spheres of influence model: relationship among family/home, school and community is instrumental for growth and development.

One of the theoretical constructs represented is 'responsiveness' (e.g. PALS – Playing and Learning Strategies). Responsive parenting can be defined as the use of warm and accepting behaviours to respond to children's needs and signals. This can contribute to a child experiencing acceptance of his or her uniqueness, which in turn encourages them to continue to communicate their needs and interests and to engage in learning interactions. Responsiveness is an important component of a number of theories and research frameworks, including attachment, socio-cultural and the socialisation of young children.

Several interventions are based on the concept of 'dialogic reading'. This is a technique that involves parents sharing books with their children, using a range of prompts to encourage discussion, and aims to guide older children who are reading to consider what they are reading and asks questions to gauge understanding. It is based on the PEER sequence (Prompts, Evaluates, Expands, Repeats), which asserts that with active participation in the reading process, children retain more of the information they are reading (Hargrave and Sénéchal, 2000).[17] It is beneficial in developing children's reading and comprehension skills, particularly with regards to those with limited vocabulary. Practical application of dialogic reading would involve either group or one-to-one reading where the facilitator allows time for reflection and further development. Prompts may be used together with careful listening to allow the child to think further about the content of the book. For younger children who are not yet learning to read the related concept of 'dialogic book talk' is relevant. It involves an adult sharing a familiar book with an individual or group. In advance they think about comments they will make, open-ended questions to ask, and key vocabulary introduced in the book. They also plan and use prompts and comments, inviting the child to relate the book to their own experience.

[17] Whitehurst (1992) summarises the approach as follows: 'The adult: Prompts the child to say something about the book; Evaluates the child's response; Expands the child's response by rephrasing and adding information to it; and Repeats the prompt to make sure the child has learned from the expansion. For example, if the parent and child are looking at the page of a book that has a picture of a fire engine on it the parent might say, "What is this?" (the prompt) while pointing to the fire truck. The child says, *truck*, and the parent follows with "That's right (the evaluation); it's a red fire truck (the expansion); can you say *fire truck*?" (the repetition).'

A substantial body of empirical work underpins the programmes in this category. Specifically, developers and evaluators cite increasing evidence that parental involvement in early learning has a greater impact on children's well-being and achievement than any other factor and that supporting parents to help them provide a positive home learning environment is therefore a vital part of improving outcomes for children, particularly those from disadvantaged backgrounds (e.g. Miedel and Reynolds, 1999; Melhuish et al., 2001; Desforges and Abouchaar, 2003; Englund et al., 2004; Sylva et al., 2004; Gorard et al., 2011; Van Voorhis et al., 2013). The Education Endowment Foundation's Early Years toolkit cites evidence of the positive effects on children's learning of a range of ways of involving parents, including encouraging parents to read and talk with their children at home. This includes meta-analyses of parent involvement in pre-school children's reading (Bus et al., 1995) and family literacy programmes (e.g. Van Steensel et al., 2011). Specifically, it states that 'Approaches that encourage general parental engagement, for example, by encouraging parents to read with their children can have a small positive impact for all children, including those from low-income families. Studies highlight the benefits of reading to children before they are able to read, and then of reading with children as soon as they are able to read. A number of studies have identified the positive impact of encouraging parents to talk with their children.'[18]

5.2.2 Evidence from systematic reviews

Broadly, there is systematic review level evidence to support interventions involving parents in relation to young children's language and communication.

Pickstone et al. (2009) evaluated environment-focused interventions to improve the speech and language of children with or at risk of primary language impairment.[19] This type of intervention focuses on the people (adult input) and resources (e.g. toys, TV, radio) around the child and the way that they interact with the child (i.e. the opportunities, language models and feedback they provide). It contrasts with a child-focused approach, which concentrates on addressing aspects of the child's cognitive, linguistic and social performance. The study included 17 papers (11 RCTs; one QED; two comparison studies; two follow-up studies; and one multiple base line study). The review covered children up to the age of 66 months (5.5 years). The aim was to measure outcomes focusing on speech, language and interaction outcomes. Outcomes focusing on parents' behavioural change were reported if the study also reported the speech, language, and interaction of the children. The authors concluded that these types of interventions may be beneficial for some children, notwithstanding methodological limitations of the studies examined. They maintained that parent-child interaction appears to have an impact on the children's environment, and that when children receive intervention from speech and language therapists, parents should be present in order to learn the techniques used in therapy.

Marulis and Neuman (2010) evaluated interventions specifically aimed at improving vocabulary through instruction. The interventions sought to increase both receptive and expressive vocabulary, and were delivered through teachers, experimenters or parents. The authors evaluated 67 studies in total (11 RCTs and 56 QEDs). Children were in pre-K or kindergarten (ages 3-6 years). The interventions ranged from one week to 42 days, and varied in terms of number and length of sessions. Storybook reading and dialogical reading were the most common interventions. Results indicated a large effect on vocabulary measures. The most effective

[18] http://educationendowmentfoundation.org.uk/toolkit/early-years/parental-engagement/

[19] Primary language impairment refers to when a child's speech and/or language skills are delayed in apparent isolation from their other developmental skills.

interventions were those delivered by the experimenters or teachers, rather than parents or carers. The authors found vocabulary interventions to be most beneficial to middle and upper income at-risk children compared to those from low income backgrounds and at-risk. They concluded that although vocabulary interventions might improve oral language skills, they are not sufficiently powerful to close the achievement gap – even in the preschool and kindergarten years.

Law et al. (2010) evaluated the effectiveness of speech and language therapy (SLT) interventions aimed at children with primary speech or language delay or disorder. Parent-administered interventions were included, along with therapy, clinic-administered interventions and one play programme. Thirty-six papers were included, reporting on 33 trials (all RCTs). In most studies children were in the 1-5 years age range, although a few studies included younger and older children. A meta-analysis involving 25 trials found that SLT is effective for children with phonological difficulties and children with vocabulary difficulties, but there is less evidence of efficacy (no statistically significant effect) for receptive difficulties (difficulties in understanding speech sounds, words, sentences and grammar). Findings for the impact on expressive syntax (production of sentences and grammar) were mixed. An important finding for the present review is that there were no differences between clinical interventions and those implemented by trained parents. The authors concluded that, overall, SLT interventions have a positive effect for children with expressive phonological (production of speech sounds) and expressive vocabulary (production of words) difficulties. The evidence for expressive syntax difficulties is more mixed, and there is a need for further research to investigate interventions for receptive language difficulties.

Parent-child book-reading, parent-child conversations and parent-child writing interventions improve language and emergent literacy skills among preschool children. Based on 11 experimental studies that evaluated parent-training programmes with parents of preschool or kindergarten children who were not receiving any formal reading instruction but who were developing normally, Reese et al., (2010) – not a systematic review – found that the three types of interventions are effective, but often enhance specific skills: interventions that promote talking about books enhance vocabulary; interventions focusing on story telling improve narrative skills; and interventions focusing on print enhance writing skills. Although these different types of interventions are not mutually exclusive, the combined effect is not known, and nor is whether targeting multiple skills in this way would overload parents. The authors found that interventions shown to be most effective for typically developing children's language have similar strategies to those designed to help children with language delays – for example, expanding upon children's utterances. They also highlighted that fidelity is imperative and many parents, particularly those on a low income, struggle to make time. However, the review found that parents can incorporate strategies when interacting with their children that are beneficial for children's language and literacy development.
A meta-analysis (Mol et al., 2008) of 16 experimental and quasi-experimental studies comparing dialogic reading interventions with a reading-as-usual control group found that dialogic reading benefited children's vocabulary ($d=0.42$, $p<0.001$), with a moderate effect ($d=0.59$, $p<0.001$) on expressive vocabulary and a small effect ($d=0.22$, $p<0.01$) on receptive vocabulary. Thus, in addition to story reading, active involvement (i.e. verbal responses) matters in promoting language development and the dialogue between parents and children strengthens the effect. The meta-analyses included 626 parent-child dyads where children were 27.8 to 70.2 months from a range of socio-economic backgrounds. Younger children (preschoolers) benefited significantly more than kindergarten children ($d=0.50$ vs $d=0.14$), and the effect on children at risk (based on low income, government support, low maternal education) was lower than for those not at risk ($d=0.13$ vs $d=0.53$).

Lastly, a systematic review conducted by Roberts and Kaiser (2011) found that parent-implemented language interventions are effective for young children with language impairments, showing a positive impact on children's receptive language skills (the ability to understand language heard or read), expressive language skills (the ability to communicate with others using language i.e. by putting thoughts into words and sentences), receptive vocabulary (words that a child can comprehend and respond to, even if they can't

produce them), expressive vocabulary (words that a child can express or produce), expressive morphosyntax (the structure of words and way in which words are put together to form phrases and sentences), and rate of communication.

The study evaluated the effectiveness of parent-implemented language interventions for children with language impairments aged 18-60 months (including the Hanen intervention included in this report). These interventions involve training parents to carry out specific instructions, and seek to develop children's language skills, specifically receptive and expressive language skills. They last 10-52 weeks, and entail 13-36 hours of training. Eighteen studies were included (15 RCTs and three with a non-randomised comparison group) and included parents of children with language impairment (11 studies), autism (3 studies) and developmental delay (4 studies). The majority (11) included a home-based component. Participating parents were mainly middle class.

A meta-analysis showed that, when compared with a control group, parent-implemented language intervention had positive and statistically significant effects on children's receptive and expressive language skills, receptive and expressive vocabulary, expressive morphosyntax, and rate of communication. An intervention effect was also observed for one parent measure – parent responsiveness – but there was no impact on parent rate of communication or use of language models. When parent-implemented intervention was compared to a therapist-implemented intervention, effect sizes were smaller and mostly non-significant. The authors concluded that parent-implemented language interventions are effective for young children with language impairments from middle-class families whose parents agree to participate in research studies, and that even a small amount of parent training can have substantial effects on children's language development. The largest effects were for expressive morphosyntax, meaning that children whose parents receive training use more complex language than children whose parents do not receive such training. The effect on children's language appears to result from parents learning to use specific language intervention strategies, although the exact mechanisms of change were not examined.

5.3 Universal prevention

5.3.1 Self-administered programmes

Focus and content

Only one of the programmes reviewed for this study fits this category. **Hear and Say Reading with Toddlers** is for parents with children aged 2-3 years. At its heart is a 16.5 minute videotape explaining dialogic reading to parents and early childhood educators.

Delivery

There are three different ways of delivering the material. Two of the three are based on self-instruction delivery models in which parents received the instructional video and a children's book by mail along with instructions. In one of these two models parents also receive two brief (3-5 minute) telephone calls, one in each of the two 4-week reading periods. The third delivery model, in-person training, involves two group-based sessions for 2-6 parents in a community setting (e.g. library). Trainers model behaviours and parents have the opportunity for role-play and feedback. These two sessions last 45-60 minutes each, and take place four weeks apart. Parents are encouraged to use the new way of reading with their children daily, 5-10 minutes per day for 4 weeks. In the study, the instructor delivering the in-person support was a community resident trained by the researcher; phone calls were conducted by a university-based staff member.

Evidence of impact

There is only formative evaluation evidence from one study for Hear and Say Reading. In the study, 95 parents were randomly assigned to the three delivery models described above. A further 30 parents were assigned to the baseline group and then to the telephone follow-up condition. There was no 'no treatment' control. There were significant positive gains in reading style for all three groups and these did not differ by method of instruction. This evidence doesn't show effectiveness because of the lack of a comparison group. Studies found that few parents read with a dialogic style prior to instruction, but instruction was followed by a significant increase in parents' dialogic reading behaviours and there were significant gains in children's language use (including number of words and mean length of utterances) during shared reading. More detailed analysis showed a significant difference favouring in-person instruction as the more effective method of instruction, especially for parents with high school education.

5.3.2 Home visiting programmes

Seven home visiting interventions were identified that focus on enhancing parent-child relationships as a means to improving child cognitive development and school readiness, speech and reading. Two of these are universal interventions: **Parents as Teachers**, and **Playing and Learning Strategies (PALS**, see box**)**. There are two versions of PALS, one for parents and children aged 6-8 months (PALS I) and one for those aged 24-28 months (PALS II). Both can be used for the general population, but also for children identified as being at potential risk (i.e. the selective level – see section 5.4.1).

Focus and content

The programmes focus on developing a home environment that is conducive to preschool children's learning. Specifically, they seek to enhance parental knowledge of early childhood development, promote positive parenting practices, and improve parent-child interaction in order to promote various aspects of child development, including cognition, self-regulation, language and communication, early literacy skills, basic numeracy and social-emotional development. There is a strong emphasis on increasing parent-toddler verbal interaction to stimulate positive cognitive development and school competence. For example, PALS seeks to promote a responsive parenting style in order to support children's social-emotional, cognitive and language development. It targets each of the four aspects of a responsive parenting style: contingent responding; emotional-affective support; support for infant focus of attention; and language input that supports developmental needs. There may also be modelling of developmentally appropriate activities by providers. In Parents as Teachers, for instance, practitioners demonstrate strategies like reading activities, play sessions, and techniques to regulate unwanted behaviour and promote self-regulation. After the practitioner models these, the parents practice them and practitioners provide feedback.

Some of these programmes use videos. PALS uses videos in two ways. Each session includes an introduction of the topic and viewing of educational videos demonstrating the skill, followed by guided, videotaped practice in which the parent uses the skill with their own child. This videotaped practice is then reviewed, and practice for the following week is planned. Practice during the week is also encouraged in other programmes.

Programmes may also provide additional activities. For instance, Parents as Teachers practitioners facilitate referrals to services where necessary and facilitate group parent meetings to provide peer support.

Delivery

Parents as Teachers home visits last approximately one hour for families with one child, and 75 minutes for families with multiple children. The programme is delivered by early years professionals (a minimum QCF Level 3, with Level 4 recommended[20]) trained in delivering the programme. In the US programme it is specified that parent educators should have at minimum two years' work experience with children or parents. Through the programme they should have at least two hours individual reflective supervision per month with a supervisor/mentor/lead parent educator, focusing on case reviews and home visits. The developers provide intensive technical support to enable fidelity of implementation. In PALS, trained family coaches deliver the intervention by visiting families on a weekly basis (1.5 hours for each visit) over the course of three months. The family coaches receive training on coaching skills, how to implement each programme session, and how to use the curriculum in a flexible manner in order to meet parents' learning needs.

Evidence of impact

In the case of Parents as Teachers, there is mixed evidence of impact from comparison group studies. The programme has been evaluated in both RCTs (Drotar et al., 2009; Wagner and Clayton, 1999; Wagner et al., 2002) and QED studies (Albritton et al., 2004; Pfannenstiel and Seltzer, 1989; Plannenstiel et al., 2002; Zigler et al., 2008). One RCT found improvements in two subscales of an assessment of parenting behaviours (Wagner and Clayton, 1999), while another found improvements in children's task mastery and cognitive functioning at 24 months of age for children from low socio-economic status families and improvements in task mastery for all children at 36 months (Drotar et al., 2009). One QED found significant impacts on most child development and parent outcomes (Pfannenstiel and Seltzer, 1989). However, another QED found inconsistent effects (Albritton et al., 2004), and the RCT evaluations found no significant impacts on several other parent and child outcomes (e.g. parenting knowledge, child behaviour, and attachment).

There have been two RCTs of PALS (one for each of PALS I and PALS II – see below). These show a positive impact on maternal warmth, with increased responsiveness leading to greater growth in infants' social, emotional, communication and cognitive competence, supporting a causal role for responsiveness on infant development.

[20] This refers to the Qualifications and Credit Framework: http://www.accreditedqualifications.org.uk/qualifications-and-credit-framework-qcf.html. Level 3 refers to A-Levels and BTEC qualifications, whereas Level 4 refers to the first year of a Foundation degree or Bachelors degree, or a Higher National Certificate.

PALS (Playing and Learning Strategies)

PALS has two age-specific programmes: PALS I (Infant Curriculum) for mothers of infants aged 6-8 month and PALS II (Toddler Curriculum) for mothers of infants aged 24-28 months. It is a home-visiting programme for families at socioeconomic disadvantage and/or have other risks for suboptimal parenting, including low infant birth weight. Trained family coaches deliver the PALS curriculum through 10 x 1.5-hour home visits over the course of three months. The programme aims to develop a responsive parenting style and uses educational videos, coaching and feedback on videotaped interactions, and encourages reflection and planning.

PALS I was evaluated in an RCT involving 264 mother-infant (<6 months) pairs (Landry et al., 2006) and PALS II was evaluated in an RCT with 166 families (Landry et al., 2008): when they were aged two years old, infants from the intervention and control group from the first RCT were randomly allocated to PALS II or control. Both studies took place in the USA. The evaluations found that PALS I increased maternal warmth, and PALS II was beneficial for cognitive responses. The mothers who had received the intervention(s) showed better responsiveness to child behaviours.

In more detail, PALS I had a significant positive effect on contingent responsiveness (d=0.93), levels of warm sensitivity (d=0.49), harsh voice tone (d=0.28 favouring control), level of physical intrusiveness (d=0.50 favouring control), verbal scaffolding (d=0.79), labelling of objects (d=0.71), levels of labelling actions (d=0.63), infant use of words (d=0.75) and infant social cooperation (d=0.39).

Results also showed evidence of an increase in aspects of parental responsiveness mediating the impact of the intervention on selected outcomes. PALS II had a significant effect on parent verbal encouragement (d=0.25), infant's cooperation (d=0.30), social engagement (d=0.32), infant's use of words (d=0.37) and vocabulary (d=0.36).

The authors of the second study concluded that 'Facilitation of maternal warmth occurred best with the PALS I intervention, while cognitive responsive behaviors were best supported with the PALS II intervention. Behaviors that required responsiveness to the child's changing signals (contingent responsiveness, redirecting) required the intervention across both the early and later periods' (p.1335).

5.3.3 Individually delivered programmes

Focus and content

The review identified two forms of intervention that fit in this category. The first concerns baby signing, in which parents are encouraged to communicate with their preverbal infant using symbolic gestures. The theory is that infants will adopt these gestures and use them to represent objects or concepts, such as 'milk', 'hot' and 'where' before they use the spoken words, and that this can have a positive impact on children's linguistic (and non-linguistic) abilities. Symbolic gesturing commonly starts at the end of the infant's first year, so baby signing tends to start around then (or before).

The second is book-sharing. This typically involves providing families with resources (books, tips for parents on reading with children, vouchers for books) and support for parents, for instance to help them read together with children for pleasure and confidence. It seeks to promote parents' reading with children and parent-child interaction, and in so doing contribute to improved child cognitive development, speech and reading. Three interventions fit this particular category (similar interventions operate at the selective level and in group as well as individual formats – see below). **Let's Read**, which was developed and implemented in Australia, involved modelling by trained nurses during regular 'well-child' checks in the home and the distribution of book packs with the aim of increasing parent-child shared reading and, in turn, children's expressive vocabulary and communication. The intervention was designed to be delivered when children are 4 to 8, 12, and 18 months of age and then again at age 3.5 years. At the usual well-child visit, the nurse was asked to

spend about five additional minutes delivering, modelling, and discussing the Let's Read intervention messages, and Let's Read take-home packs containing a free, age-appropriate picture book from the Let's Read book list (included in the pack) and guidance messages (plus a DVD at the first session only) were distributed. **Bookstart** (Regular) involves families receiving a Bookstart Baby Pack, containing books, tips for parents, and a £1 book voucher, during the infant's first year, followed by a Bookstart Treasure Chest, which contains two picture books and tips for parents, when the child is 3-4 years. **Bookstart Plus** (see box) is for two-years olds and their parents and delivered at the universal level.

Delivery

Training for parents in baby signing is delivered in various ways, including one-to-one and in groups, by practitioners trained in the method (including child minders and nursery centre staff). Let's Read was implemented by trained nurses as part of the standard well-child checks. Health visitors deliver Bookstart Plus and the first part of Bookstart (Regular) in the family home; the second part of the regular version is usually distributed via a nursery, preschool or other early years setting.

Evidence of impact

There is comparison group study evidence for all interventions in this category. A small RCT (40 mother-infant dyads) of symbolic gesture (or 'baby sign') when applied at the universal level found no positive benefits for language outcomes (Kirk et al., 2013). The authors concluded that the results do not support previous claims that encouraging gesturing with infants accelerates linguistic development – at least for healthy developing infants who are being raised in an environment with good linguist input. This is the first RCT of the approach. An earlier meta-analysis of studies investigating the effects of gesturing with infants (Johnston et al., 2005) identified 17 studies in which typically developing hearing children were exposed to pre-lingual signing or gesturing. None were RCTs, and other methodological weaknesses of included studies were also identified. It warned against drawing firm conclusions.

There are many evaluations of Bookstart, the majority of which are qualitative or focus on outcomes such as parental awareness, parental attitudes, library membership, increased reading with children, increased book ownership. A study of Bookstart Plus with 462 families in Northern Ireland is typical in the sense that it did not measure the impact on child outcomes, but it is unusual in its use of an RCT design, showing an improvement in parents' attitudes to reading and books (see box). There are also three (retrospective) QED studies of Bookstart (Regular) with quantitative outcomes (Wade and Moore, 1998, 2000; Hines and Brooks, 2005; Collins et al., 2005), although only the first of these tested the statistical significance of difference between intervention and comparison groups. It found that Bookstart children significantly outscored the comparison group at 5 and 7 years of age on teacher assessments of English, Maths and Science scores, and also on a range of SATS test elements, including a reading task, reading comprehension, writing, spelling and maths test. Meanwhile, an RCT of Let's Read in Australia involving 552 families from relatively disadvantaged communities, 324 of whom received the intervention, found no evidence of effectiveness in terms of vocabulary and limited evidence of effectiveness for phonological awareness (Goldfeld et al., 2011).

BOOKSTART PLUS

Bookstart Plus is a good example of a book-sharing initiative. It is an intervention for families with children aged two years to improve children's language and communication skills, and encourage positive parent-child interactions. On a standard visit, trained Health Visitors provide a pack of books and associated reading materials in a bag. To encourage parents to share books, stories and rhymes with their two-year-old child, they discuss and demonstrate the pack.

An RCT (O'Hare and Connolly, 2010) was conducted with 462 families in Northern Ireland to evaluate if the programme (a) improves parent attitudes to reading and books, (b) improves parent attitudes to sharing and reading books with their child, and (c) increases family use of the library. There was a significant positive effect on parent's attitudes to reading and books (d=0.192, p=0.034) only. Additionally, there was a marginally significant negative impact on use of libraries where families receiving the programme were less likely to visit the local library (d= -0.160, p = 0.055). This might be a short-term effect due to the receipt of books in the pack. An important consideration in interpreting the results is the high attrition (almost 44%). The study did not measure child outcomes.

5.3.4 Group-based programmes

Focus and content

Two programmes were identified in this category. Both programmes involve parents or caregivers and children aged 0-5 years meeting together in group settings where they are encouraged to interact in ways that support the child's learning. In **Kaleidoscope Play and Learn**, parents and caregivers (including grandparents, aunts, uncles, older brothers and sisters, good family friends) are taught about child development, skills that children need when they start school, and activities that they can do at home to support child's learning (including pre-literacy development) and turn everyday activities into learning opportunities. It also seeks to build supportive social networks. The programme is delivered in community settings (e.g. children's centre, school) to groups of 12-15 families who meet weekly for 90 minutes over the course of a year. **The Parents Early Education Partnership (PEEP)** Learning Together programme (see box) is similar in many respects but with less emphasis on extended family.

Delivery

Both programmes are implemented by practitioners who have relevant professional backgrounds and who are also trained in the programme in question. Thus, Kaleidoscope Play and Learn is delivered by facilitators who have experience of working with children and adults/parents, including in groups, and who have some knowledge of child development and community resources. For groups targeting particular ethnic communities, it is hoped facilitators would be fluent in the relevant language and from the relevant culture or neighbourhood. The supervisor or manager at the relevant organisation provides support. PEEP is delivered by practitioners from health, education, early years or family support backgrounds.

Evaluation of impact

Of these two programmes only PEEP has evidence from a comparison group evaluation (both QEDs). One study found improvements in children's verbal, comprehension, phonological awareness, and vocabulary outcomes, as well as in their self-esteem, but the other found mixed effects (see box). As regards Kaleidoscope Play and Learn, there is formative evidence only from a pre-post evaluation involving 61 caregiver-child pairs from 20 centres. The results were mixed but the study found an improvement in aspects of child social-

emotional and preliterate development, and a marginally significant increase in caregiver-child interaction (Organizational Research Services 2012).

PEEP (Parents Early Education Partnership)

The Learning Together Programme by Parents Early Education Partnership (PEEP) was developed in the UK and exemplifies a universal group-based intervention to help parents promote children's learning (including speech and language). It aims to encourage children's early development by supporting their parents rather than working primarily with the children. It works with parents of children up to 5 years of age from disadvantaged areas to help them support their children's learning and development. It focuses on children's self-esteem, attitudes to learning, their language, literacy, numeracy and physical development. The programme differs based on the child's age, involving age-appropriate activities and practices. For each of the age-specific curricula parents, children and siblings attend weekly group sessions that run for 33 weeks a year (during school term-time). The programme is conducted in community locations as such Sure Start centres.

A study by Evangelou and Sylva (2003) used quasi-experimental methods to evaluate PEEP for 3-4 year-olds, comparing 156 families who received the programme (in Oxford) with 86 families with similar demographic characteristics living in an area with a similar socio-economic profile but with no access to the programme. Separate models were tested for children who were aged 3 at the start and aged 4 at the start. Both of the PEEP programmes were effective and two years of the programme (PEEP for 3s and 4s) led to significant gains in progress in verbal comprehension (ES=0.26), vocabulary (ES=0.16), concepts about print (ES=0.22), early number concepts (ES=0.26) and self-esteem relating to cognitive (ES=0.20) and physical competence (ES=0.18).

In another quasi-experimental study, 301 families from the programme catchment area (in Oxford) were compared with 303 families in similar areas with no access to the programme (Evangelou et al., 2005). Children were under one year at recruitment and followed up until they were five years old, receiving the different PEEP programmes for 0-4 year olds. A sub-group of those families who attended at least one session of PEEP were compared with a matched sub-group from the comparison group. Results were mixed. There were few effects on parental outcomes (parenting, parent-child interaction, parent-child activities and quality of caregiving environment) or child socio-emotional development. The comparison group performed better on cognitive development outcomes (mental development, language, numeracy skills). When rates of progress between the two groups were compared, PEEP children made a significantly greater rate of progress between the ages of two and four years on in measures of vocabulary (ES=0.41), phonological awareness of rhyme (ES=0.35), phonological awareness of alliteration (ES=0.37) and understanding about books and print (ES=0.46). Between the ages of two and five years they made greater progress in vocabulary (ES=0.61), total phonological awareness (ES=0.44), letter identification (ES=0.65), and understanding about books and print (ES=0.5).

5.4 Selective prevention (targeting on the basis of general risk)

5.4.1 Home visiting programmes

Focus and content

Five of the seven home visiting programmes that were reviewed for this outcome area operate at a selective level. This includes PALS, which, as noted above, can also be used at the selective level. One version of PALS, **My Baby & Me**, targets 'high-risk' mothers (15 years or more, pregnant and without a high school degree), starting prenatally and continuing until children reach 2.5 years. **The Parent Child Home Programme** is for at-

risk low-income children aged 1-3 years and their parents, where 'at risk' is measured in relation to factors such as child IQ score under 100, single parent family, mother/father unemployed and poverty status (participants must display 5 of 8 factors). **Let's Play in Tandem** (see box) is for preschool children aged 3 years from socio-economically disadvantaged backgrounds. Similarly, **the Trafford programme** is for families with children aged 0-5 years (majority aged 18-36 months) with a high level of deprivation who are already receiving family support or where the child is identified by the Health Visitor as being at risk of developmental delay. **Child FIRST** is a home-visiting programme for low-income families with an infant aged 6-36 months at risk of emotional, behavioural or development problems. It aims to prevent or remediate serious emotional disturbance, developmental and learning problems, and abuse and neglect.

The features of home visiting programmes noted earlier in this chapter (section 5.3.2) are similar at the selective level as when applied universally. Interventions typically involve a curriculum. For example, the Parent Child Home Programme has a cognitive, social-emotional and parenting curriculum, along with home-based play and reading. Home visitors (paraprofessionals or trained volunteers, typically college-educated women or paid former participants) help parents realise their role as their children's first and most important teacher, generating enthusiasm for learning and verbal interaction through the use of developmentally appropriate books and toys. They seek to involve parents in the child's play and model positive behaviour, and motivate parents to participate and continue verbal interaction with their child when home visitors are not present. Child FIRST does not have a curriculum but rather provides content guided by parental need (it is a psychotherapeutic intervention).

There is a strong emphasis on promoting positive parent-child interaction. This is often achieved through coaching parents while they interact with their children. For example, Let's Play in Tandem involves educational games for children and their parents. The programme's activities are designed to facilitate one-on-one verbal interaction and allow mothers to provide scaffolding, including prompts, instructions and encouragement to their children. Practitioners deliver a pack of three activities at each visit, focusing respectively on pre-reading skills, numerical skills, and vocabulary and general knowledge. Families are supposed to engage in the activities at least once a week and encouraged to do so more often. In the Parent Child Home Programme, home visitors show the parent playful techniques of positive verbal interaction-conversation in ways designed to support weaving such interaction into the fabric of family experience. Child FIRST seeks to promote nurturing and responsive caregiving to enhance children's social-emotional and cognitive development. It involves parent-child psychotherapy, and encourages positive maternal child behaviours through parent-child play, reading and family routines.

Programmes may provide additional activities. For instance, the Trafford Early Home Learning programme involves 10 sessions over 12 weeks, with a further two visits within the community (to the library and a day trip). The relationship-based component of Child FIRST that makes up the home visiting element is complemented by a system of care approach designed to provide comprehensive, integrated services and supports (e.g. early education, housing, substance abuse treatment) to the child and family as needed.

Delivery

Aspects of interventions range in length from 12 weeks to over two years and involve visits typically weekly or biweekly. Visits can range from about 30 minutes to two hours. For example, Let's Play in Tandem runs for 12 months, and each family is assigned a project worker who visits the family in the home each week for 90-120 minutes. My Baby & Me starts prenatally, lasting until the child is 2.5 years old, and involves 55 sessions. Some flexibility may be allowed with some programmes. For instance, the Trafford Early Home Learning programme involves weekly sessions lasting for around an hour, but session length varies depending on factors such as how the parent and child are feeling that day and parents' progression in supporting their child's learning. Child FIRST is designed to take place once or twice a week over an average period of 6-12 months, although the duration of involvement is determined by family needs and priorities.

The interventions are typically delivered by either trained practitioners or paraprofessionals or trained volunteers, and supervision is provided. For the Parent Child Home Programme, Programme Coordinators are college graduates who are sensitive to nuances of family relationships – there are also models of delivery involving paraprofessionals or trained volunteers. By contrast, in Child FIRST the home-based element is delivered by qualified mental health clinicians (trained by Child First) with at minimum a Masters level qualification in mental health.

Evidence of impact

There are comparison group evaluations showing a positive impact for all but one (Trafford Early Home Learning) of the selective home visiting programmes. One is PALS (see above). An RCT of My Baby & Me (based on the PALS curriculum) involving 361 high-risk mothers additionally found positive effects when children were 30 months for aspects of parent-child interaction (e.g. higher levels of contingent responsiveness and verbal stimulation relative to the control group) and some aspects of child development (e.g. expressive language, problem behaviour, social engagement) but not others (e.g. receptive language) (Guttentag et al., 2014). Critically, gains in maternal responsive behaviours mediated the effects of the intervention on child outcomes. The next is Let's Play in Tandem, an RCT of which showed a positive impact on children's knowledge, pre-reading and numeracy skills, listening and communication, responding to stimuli, writing, mathematics, personal and social skills, and inhibitory control (see box). There is also an RCT of Child FIRST, showing a positive impact on children's language and externalising (though not internalising) symptoms, and mixed evidence of effects on mothers' mental health (Lowell et al., 2011). Lastly, there are several RCT and QED studies of the Parent Child Home Programme, although results are mixed.

LET'S PLAY IN TANDEM

Let's Play in Tandem is a school-readiness programme for children aged 3 from socio-economically disadvantaged families. It aims to improve cognitive development and cognitive self-regulation. Children participate in educational games along with their parents, focusing on school readiness in terms of children's knowledge (name, address, colours), numeracy, listening and communication. Activities are designed to facilitate one-on-one verbal interaction and allow parents to provide scaffolding – prompts, instructions and encouragement to children. The programme runs for 12 months, and is generally delivered through Sure Start centres. Each family is assigned a project worker who visits the family in the home each week for 90 to 120 minutes. They deliver a pack of three activities to develop pre-reading and numerical skills, and promote vocabulary and general knowledge.

The intervention was found to be effective in a UK RCT (Ford et al., 2009) involving 60 children and their mothers, predominantly from families on unemployment or sickness benefits. In particular, children receiving the programme did significantly ($p<.05$) better on knowledge, pre-reading and numeracy skills as compared to those in the control group. Four months after the intervention, there were significant ($p<.05$) positive intervention effects on listening and communication, responding to stimuli, writing, mathematics, personal and social skills, and inhibitory control. No effect sizes were provided.

5.4.2 Individually delivered programmes

Focus and content

Reach Out and Read (see box) is a dialogic reading intervention focused on families from low-income groups.

Delivery

The programme is delivered during children's check-ups by paediatricians.

Evidence of impact

There is comparison group study evidence from multiple studies, all of which demonstrate a positive impact on aspects of children's language/communication and/or parent literacy behaviours (see box).

REACH OUT AND READ

Reach Out and Read is targeted at families with children between 6 months and 5 years of age, from low-income groups. It is delivered during children's check-ups by paediatricians. They encourage parents to read out loud to their children using dialogic reading techniques and provide developmentally appropriate guidance. They give a signed prescription for parents to read with their child for 10 minutes a day. Children are also given a book, and volunteers model shared book reading for parents. The programme aims to give each child a 10-book home library before they begin school. The number and frequency of visits is not specified. The combination of age-appropriate books, handouts and guidance is intended to provide families with the knowledge and tools needed to change attitude and behaviour about the importance of reading with children. This programme will increase the frequency of parent-child reading and facilitate toddlers' acquisition of receptive and expressive vocabulary.

There have been multiple comparison group evaluations of the programme, including at least three RCTs (Golova et al., 1999, sample size: 135 families; High et al., 2000, sample size: 205 families; Jones et al., 2000, sample size: 352 families) and four QEDs (Sharif et al., 2002, sample size: 200 families; High et al., 1998, sample size: 100 families; Sanders, Gershon et al., 2000, sample size: 122 parents; Mendelsohn et al., 2001, sample size: 138 families). All studies demonstrated evidence of a positive impact on aspects of children's language/communication (including receptive and expressive vocabulary) and/or parent literacy behaviours with their child (including home literacy orientation and joint parent-child reading). It should be noted that the Golova et al. (1999) study did not find an effect on child outcomes. Effect sizes were not reported in any study.

5.4.3 Group-based programmes

Focus and content

Three contrasting selective group-based interventions were identified. The first is **Bookstart Corner** (see box), another book sharing intervention. It is a group-based programme aimed at improving children's language and communication skills by encouraging parents and children to read together.

The second is **Incredible Years parent training (Toddler version)** (also considered in Chapter 4). The intervention targets parents with toddlers (aged 12-36 months). It teaches parents effective strategies to promote children's development and to manage problematic behaviour by applying age-appropriate behavioural principles and modelling techniques. It also includes sessions focusing on how parents can verbally scaffold their child's early language. The programme comprises weekly group-based two-hour sessions, involving about 8-14 parents per session. Sessions involve a mixture of group discussions, watching video vignettes to prompt the identification of key parenting principles, and using role-play to rehearse effective parenting skills. While group-based behavioural parenting programmes are known to be effective in preventing and treating childhood conduct disorder, there has been little evidence until now that they can improve other aspects of development, such as language. Yet, it is reasonable to expect that they will have benefits, especially for children from low socio-economic backgrounds. According to social learning theory, language is fostered via positive interactions with the environment, yet parents from low socio-economic backgrounds typically talk less to their children, providing learning environments that are less stimulating and

sensitive to their children's developmental needs on average. High levels of criticism have a negative impact on language development, as they do not promote the practice of verbal skills (Landry et al., 2012). Disadvantaged parents who use greater quantities of diverse vocabulary and a variety of positive conversational strategies (questions, encouragement) have been shown to buffer the negative effects of disadvantage (Hart and Risley 1995; Hoff 2003).

The third intervention that fits this category is **Sing & Grow**, a music therapy programme that uses interactive music-based activities to: encourage parents to connect with and take pleasure from their children; teach parents specific skills for fostering the children's behavioural, social and communication skills; promote positive parenting behaviours; and enhance parents' sense of parenting competence and mental health. Sing & Grow is targeted at at-risk families with children aged 0-3 years (based on disability, involvement in child protection system, parent mental illness, alcohol dependence, domestic violence, low-income).

Delivery

Bookstart Corner is delivered by Booktrust-trained practitioners in a small group setting, for example in children's centres. Incredible Years parent training is delivered by facilitators trained in delivering the programme and in receipt of regular support. Sing & Grow comprises 10 weekly 1-hour sessions conducted by music therapists in any community setting for groups of around 10 parents.

Evidence of impact

Evidence for the impact of Bookstart Corner is formative, suggesting greater parent engagement in their children's reading and wider learning activities (see box). The comparison group study evidence for IYPTP suggests that it does not improve parents' language interactions with their children. An RCT (Gridley et al., 2014) involving 89 participants in socio-economically deprived areas in Wales found fewer child-led language interactions (deemed by the authors to be positive because it suggests there was less passive interaction by parents). However, there were no statistically significant effects on parent-led language interactions, quantity and variety of language and use of critical language by parents, and the positive effect on parent encouraging language interactions was observed in the per protocol sample only. The authors concluded that the study provides limited evidence only that IYPTP enhances some aspects of parental language, arguing that the impact of parenting programmes may only be evident in the areas targeted (i.e. parenting behaviours) and that additional language content may be required to produce meaningful gains in parental language. In this respect they note the conclusion of Reese et al. (2010) – cited earlier in this chapter – that programmes tailored to promote language are more beneficial to parent-child language than programmes targeting other aspects of development. The evidence for Sing & Grow is formative, with several pre-post evaluations showing improvements in (i) parent sensitivity, engagement and parent-child interaction as well as (ii) child behaviour, communication and social-emotional skills (Nicholson et al., 2008, 2010; Salkeld and Hayward, 2013).

BOOKSTART CORNER

Bookstart Corner is a programme to improve children's language and communication skills by encouraging parents and children to read together. It is designed for children aged 12-24 months from socially disadvantaged backgrounds. Families attend four group-based sessions in the local children's centre where parents are offered intensive support to read with their children for pleasure and with confidence. They are given specifically-developed resources such as a rhyme sheet, some picture books with information sheets, a DVD for parents about sharing stories, a puppet, pad and crayons. The intervention is run by Booktrust, who provide specially trained practitioners.

A non-controlled pre-post evaluation (Demack et al., 2013) with 65 pre-post responses from parents and practitioners was conducted in England. Significant gains were noted for parental encouragement/interaction ($d=0.76$, $p<0.01$), parent confidence and enjoyment ($d=0.49$, $p<0.01$), child engagement and enjoyment ($d=0.39$, $p<0.01$) and child interest ($d=0.43$, $p<0.01$). In addition, parent and practitioner responses indicated that subsequent to the Bookstart Corner sessions, parents were more likely to participate in local services such as the library, the Children's Centre (for boys) and the Bookstart Bear Club and rhyme/story time at either a Children's Centre or library. The intervention offers preliminary evidence that it can increase parental engagement.

5.4.4 Group-based programmes with adjunctive components

The Parent Corps intervention was described more fully in Chapter 4. It is applied with pre-school children in low-income areas and involves concurrent parent and child groups delivered by a mental health professional and teacher respectively. The second study cited in Chapter 4 also measured the impact of the programme on academic achievement. It found that relative to children in control schools, children in intervention schools had significantly higher kindergarten test scores for reading, writing, and maths ($d = 0.18$; $p = .03$) (Brotman et al., 2013). There was also an intervention effect on trajectories of academic performance ($d = 0.25$, $p = .01$). The results did not vary depending on the child's school readiness at baseline.

5.4.5 Multicomponent programmes

Focus and content

Eight of the interventions reviewed are multi-component, meaning that they have home- and community-based elements: **Early Head Start**, **Even Start**, **Getting Ready** (see box), **Head Start**, **HIPPY** (see box), **Infant Health and Development Programme (IHDP)**, **REAL Project (Raising Early Achievement in Literacy)** and **Sure Start**. They typically entail a combination of educational day-care along with a family education programme – often delivered through home visiting – in order to make the home environment more supportive of cognitive development.

All are selective, targeting children and families based on elevated risk (e.g. low-income families, low birth-weight premature babies, language delay). The majority start when the children are very young and last into and even beyond infancy (i.e. most run from 0-3/4/5 years – at least one starts prenatally – while others start later i.e. 3-4 and 4-5 years). They are based in the assumption that early, continuous, intensive, and comprehensive child development and family support services for young children will lead to better child development outcomes by age 5 years, and thereby help in breaking the intergenerational transmission of poverty, school failure and social exclusion.

All are concerned with helping parents to help children so that they will be ready for school – what some refer to as helping parents to become full-time partners in educating children. To that end they typically seek to help parents develop the knowledge and skills to promote multiple aspects of children's development, including cognitive, social, emotional, motor, linguistic and physical. This might include helping to improve

family literacy skills and provide basic education. As part of this, programmes may seek to build connections with educational institutions, including schools and further education establishments.

Typical components in these interventions include home visiting (often with a structured curriculum e.g. IHDP), parent groups (providing support with helping children to learn (e.g. HIPPY), or helping parents with parenting skills (e.g. Early Head Start), provision of or access to various mental health, nutritional, dental and medical services (e.g. Early Head Start), monitoring by nurses/social workers (e.g. IHDP), the provision of learning resources and books (e.g. REAL), and adult education (e.g. Even Start).

The nature and balance of the components varies between interventions. Some are primarily home visiting interventions with ancillary activities. HIPPY, for example, lasts for two years and involves 30-60 minute bi-monthly home visits, which include role-play and activities designed to help parents to understand activities from child's point of view. There is also a group that meets fortnightly in which parents learn how to use books with children, and there are literacy enrichment activities (arts/crafts), presentations by school staff and opportunities to discuss child-rearing practices.

In the IHDP, families also receive home visits. These are weekly home visits during the infant's first year of life, then fortnightly home visits during their second and third years of life. The home visitor follows a structured curriculum, providing guidance on age appropriate games and activities to parents, and helping parents manage infant behaviours. In addition, however, families attend a Child Development Centre, which provides parental education (to help parents help their children to learn) and learning activities for children to support children's cognitive, social, motor, and linguistic development through positive parent-child interactions. Parents also attend bimonthly support group meetings, starting after the infant's first birthday, to share information and support. Throughout the programme, families receive eight paediatric follow-ups by nurses and social workers to monitor child development and provide referrals to additional services if necessary.

A contrasting example is Even Start. This also provides parenting education, in which parents are taught how to support their child's education. However, additional elements include adult education and literacy, which includes supporting and educating parents to achieve basic qualifications, a direct intervention for children focusing on preparing them for school. Even Start sites must address each of these three core services and may also provide additional support services, such as transportation, child care, nutrition services, screening and referral for chemical dependency, referrals for mental health and counselling, and job referrals. On average, parents are involved in 95 hours of adult education and 35 hours of parenting education services per year. Children spend an average of 15.5 hours per month in early childhood education provided by Even Start programmes. A majority of families only participate for one year, and less than a quarter of families participate for more than two years.

Delivery

Programmes are mostly delivered by professionals with specific training in the programme involved. Experience is often considered to be important, as in some cases is knowledge of the area or the type of families involved. In the Infant Health and Development Programme, for example, home visitors are college graduates with previous home visiting experience, and centre teachers are qualified early years educators. Parent support meetings are organised by the Centre education director, who also supervises home visitors and Centre teachers. The initial IHDP package includes one year of telephone technical support plus additional documentation. In HIPPY, home visitors are paraprofessionals living in the same neighbourhoods as the parents with whom they work. Programme coordinators provide home visitors with training and supervision and typically have a background in early childhood education, social work, or social service administration.

Evidence of impact

Of the programmes in this category, six have evidence of a positive impact from comparison group evaluations (including RCTs and QEDs): HIPPY, Early Head Start, Getting Ready, Head Start, Sure Start, Infant Health and

Development Programme, and REAL. Comparison group evaluations of Even Start, on the other hand, show little effect. All of the studies except for two (a study of HIPPY and the REAL and Sure Start evaluations) were conducted in the USA. Between them they show improved parent outcomes, including: more involvement in and support of children's learning (e.g. reading more frequently with the children); improved knowledge of infant development; more positive parenting; and less use of punitive discipline strategies. Across the evaluations, improved child outcomes were also observed, including in the areas of language, reading, cognition, maths, socio-emotional development and behaviour. However, it should be noted that results within studies were sometime mixed.

HIPPY

Home Instruction Programme for Preschool Youngsters (HIPPY) is a good example of a programme with components at the school and home levels. It targets maths and reading skills, and classroom adaptation among children aged four years whose parents have limited formal education. HIPPY aims to create greater continuity between home and school by enhancing children's home learning environments. It consists of home visits and group meetings. Books and materials are provided through home visits, conducted by paraprofessionals who role-play how to use the materials. Home visits last 30-60 minutes and are conducted bimonthly over two years. Group meetings are designed to introduce activities and help parents to mingle, share concerns and participate in enrichment group activities such as arts and crafts projects, presentations by school officials regarding school policies, or discussions about child-rearing practices. They are held every other week with HIPPY parents, home visitors and programme coordinators.

There have been five QED studies (Barhava-Monteith et al., 1999, sample size: approximately 895 children (not clear); Bradley et al., 2002, sample size: 1032 children; Johnson et al., 2012, sample size unclear; Nievar et al., 2011, sample size at least 262 children) and one RCT (Baker et al., 1999; sample size: 247). They have mainly been conducted with different populations in the US, although one study was conducted in New Zealand (Barhava-Montheith et al., 1999). The results are mixed. For example, in the RCT, only one of the two cohorts showed that the programme was beneficial. In the first cohort, children receiving HIPPY scored significantly higher compared to their control counterparts on cognitive skills at the end of the programme (d=0.63, p=0.04), reading scores one year after HIPPY ended (d=0.75, p=0.03) and classroom adaptation (i.e. children's interest in learning and their behavioural and motivational readiness to learn) at the end of the programme (d=0.69, p=0.04) and at the one-year follow-up (d=0.68, p=0.02). By contrast, in cohort 2 children receiving HIPPY did not do any different from those in the control group. In a similar way, some of the other studies find impact on some measures of cognitive/reading outcomes, but other studies/measures do not demonstrate effectiveness. One QED (Nievar et al. 2011) found that there was a significant impact on parental involvement and efficacy (d=0.66, p=0.001), and some aspects of the home environment (learning materials: d =0.82, p =0.001; academic stimulation: d=0.73, p=0.001; modelling: d=0.41, p=0.04; and variety: d=1.30, p=0.001) but not on other measures (warmth, acceptance and learning stimulation). Additionally, those in the control group had a significantly better physical environment than those receiving HIPPY (d=0.66, p=0.006), and there was no impact on parenting stress or maternal depression.

GETTING READY

Getting Ready exemplifies an approach in which the centre-based element is not a structured curriculum but rather a set of strategies that pre-school teachers use in all interactions with the family. The programme targets children from low socio-economic backgrounds and their parents, and is intended to promote children's readiness for school. In a series of home visits (c. 8 per year on average over two years) and in all interactions with parents (e.g. parent-teacher conferences, drop-off and pick-up times, other structured and unstructured communications), teachers seek to promote parental engagement in caregiving and guidance (i.e. warmth and sensitivity, encouragement of autonomy, and support for learning and literacy). They use strategies such as affirming parenting competence, focusing parents' attention on child-related characteristics, providing developmental information in context, modeling appropriate interaction strategies, and suggesting or reinforcing possible parent practices to support development.

An RCT involving 21 schools in the US (217 children, 211 parents, and 29 Head Start teachers) found that children aged 3-4 years at the outset who received the Getting Ready intervention demonstrated significantly greater language and literacy skills relative to peers in a control group based on measures of teacher-rated oral language use (d=1.11), reading (d=1.25), and writing (d=.93) (Sheridan et al., 2011). Gains were greater among children where there was a developmental concern on entry to preschool. Other RCTs of the programme in the US have examined the impact on (a) children's social and emotional functioning as rated by teachers, with positive results (Sheridan et al., 2010), and (b) independently-observed learning-related social behaviours, with mixed evidence of impact but a positive impact on some measures especially for children with depressed mothers (Sheridan et al., 2014).

5.5 Indicated prevention (targeted on the basis of signs of child development problems)

5.5.1 Individually delivered programmes

Focus and content

We identified three individually delivered programmes in this category. The first is **Language for Learning** (see box). It is for children aged 4 years with delayed language development and involves one-to-one sessions in the home during which parents are supported to help their child's language. Its origins are instructive. It was preceded by Let's Learn Language, a six-week group-based programme for parents and children aged 18 months identified as being at risk of language delay owing to the absence or near absence of spoken words.[21] The programme promoted child centred interactions, which take the child's lead and parents "modelling" language when responding to their children. A cluster RCT in Australia involving 301 children (Wake et al., 2011) found little evidence that Let's Learn Language improved language or behaviour either immediately (at age 2 years) or at age 3 years: there were no statistically significant benefits for expressive or receptive language, vocabulary or internalising/externalising problems. The authors concluded that more intensive interventions delivered later may be preferable, for two reasons. First, many children identified early with language delay go on to spontaneously develop normal language. Second, longer interventions (e.g. over 10-

[21] The intervention is a modified version of the nine-week Hanen *You Make a Difference* programme.

12 weeks) may provide sufficient exposure to consolidate the responsive interaction strategies. Hence Language for Learning is one-to-one, longer and for older children.

The second intervention is the **Lidcombe programme**. This is a parent training programme for parents of children aged six years and under with speech delays that aims to integrate language learning into everyday interaction and reduce speech delays. During the first stage of the intervention, there are weekly clinic-based training sessions delivered by trained speech and language therapists through modelling and observation and feedback of intervention strategies. Session length is not specified. The duration of stage one is based on need. After stuttering has ceased or is at a low level, clinic visits become less frequent, with the aim of reduced stuttering for one year.

The third intervention, Home Talk, is for parents of children aged two years with delayed language development. It seeks to improve children's language skills by increasing parent/carer knowledge, skills and confidence in supporting language development through everyday interactions and activities at home. There are six one-hour home visits. A language-rich activity forms the core of each session (e.g. book-sharing or making a photo book) and parents are actively involved in the session by the worker. Toys and resources related to the session may be left with the family between visits to reinforce learning. At the end of the programme, families are helped to access other relevant services.

Delivery

Language for Learning is delivered by teaching assistants (under the supervision of qualified speech and language therapists). In the RCT study, language assistants were psychology and sociology graduates, provided with one-day training and two half-day workshops. The Lidcombe programme is delivered by trained speech and language therapists. Home Talk is delivered by a Sure Start children's worker who has enhanced skills and training in facilitating language development and support from a Speech and Language Therapist.

Evidence of impact

There is comparison group study evidence in the form of one RCT of Language for Learning, showing a positive impact on two important predictors of subsequent literacy but no impact on the primary outcomes of receptive and expressive language (see box). An RCT in New Zealand of the Lidcombe Project found a highly significant difference in terms of reduced stuttering favouring the intervention at six months post intervention (Jones et al., 2005). Home Talk has formative evidence from an evaluation with 16 families in Nottinghamshire, in which standardised measures were applied before and after the intervention and then four months later. Results were positive; for example, 12 children's (75%) language skills developed at an accelerated rate and had caught up with age expectations by three years of age.[22]

[22] http://archive.c4eo.org.uk/themes/earlyyears/vlpdetails.aspx?lpeid=432.

LANGUAGE FOR LEARNING

Language for Learning is for children aged 4 years old who display delayed language development, and seeks to improve their language by the age of 5-6 years. It focuses on supporting parents in the home to administer language learning with the help of teaching assistants. The intervention lasts for 30 weeks and is delivered in three separate blocks of teaching/instruction (six weeks each) with two rest periods in between. Sessions are one-to-one, tailored to the child's needs, and take place in the child's home. Each session includes activities for the parent and child together, and there are home practice activities designed to be completed daily by parents with children. Intervention content relates to three areas: (1) vocabulary and grammar and helping the child to identify word features, sentence structures and grammatical markers; (2) narrative skills targeted through shared book reading which teaches story grammar; and (3) phonological awareness/preliteracy skills, such as awareness of rhyme, phoneme identity (the awareness of phonemes, which are single units of sound e.g. 'hat' has three phonemes – 'h', 'a' and 't') and letter sound connections (knowing that a certain letter sounds a certain way).

An RCT of Language for Learning was conducted in Australia with 200 children aged 4 years (99 intervention group, 101 control), with the post-test conducted when the children were 5 years old (Wake et al., 2013). There was no statistically significant effect on receptive and expressive language (primary outcomes) but there was a significant positive impact on phonological awareness skills (ES=.60, p<.05) and letter knowledge (ES=.30, p<.05), which are important predictors of subsequent literacy. Research is ongoing to see if these gains lead to better literacy and expressive language. The study was conducted in eight of the 31 local government areas in Greater Melbourne, including six from the most disadvantaged 33%.

5.5.2 Multicomponent programmes

Focus and content

This review has considered two programmes in this category, both for young children with language delay: **It Takes Two to Talk (ITTT)** (see box) and **Target Word (TW)**. These are arguably a later form of intervention than other interventions in this chapter, pushing more from the indicted prevention into treatment, but they included nevertheless because they are useful for learning about the range of interventions available. TW is specifically designed for parents of children under the age of 30 months who are using few words or who, by the age of 24 months, are not using several two-word combinations. Although these children understand what they are told, have good play and turn-taking skills, and can learn everyday routines, their vocabulary is limited. Both programmes involve the combination of weekly small group sessions for parents (6-8 for ITTT; 5-7 sessions for TW) and home visits (3 for ITTT; 2 for TW). During each home visit the speech-language pathologist videos the parent and child interacting, before the parent and pathologist watch the video together to identify lessons for how the parent can help to improve their child's language.

Delivery

Both interventions are delivered by trained Hanen[23] speech-language pathologists.

[23] The Hanen Centre is a charitable organisation that provides training and resources to help parents with young children who have delays in language development: www.hanen.org.

Evidence of impact

ITTT has evidence from several comparison group studies showing a positive impact on how mothers interact with their children and aspects of children's language development (see below). TW is a variation of ITTT but does not appear to have been evaluated separately.

IT TAKES TWO TO TALK

It Takes Two to Talk is aimed the parents of young children aged 0-5 years of age who have been identified as having a language and communication delay. A pre-programme consultation for parent and child with a Hanen certified speech-language pathologist is followed by 6-8 training sessions for parents in small groups, where parents learn practical strategies to help their children learn language naturally throughout their day together. The speech-language pathologist also visits the parent and child on three occasions, during which time they videotape the parent practising strategies to help their child achieve specific communication goals. The parent and speech-language pathologist then watch the videotape together to see what is helping the child and what the parent can modify to help even more.

The content includes identifying what motivates the child to interact so that parents know how to start conversations, helping the child take turns and keep conversations going, following the child's lead to build their confidence and encourage them to communicate, and playing with and speaking and reading books to child in a way that helps the child to learn language / new words.

There have been three RCTs, all with waitlist control groups. The first two studies (Girolametto, 1988; Tannock et al., 1992) found that mothers in the intervention group were more responsive and less directive. The children initiated more topics, were more responsive to their mother's preceding turns, and used more verbal turns than the control group children. However, developmental improvements in children's communicative and linguistic abilities were comparable in both groups (i.e. indicating no impact on child outcomes).

In the first study (Girolametto, 1988) there were 20 children aged 1-5 years with developmental delays – cerebral palsy, chromosomal abnormalities or Down syndrome. In the other study (Tannock et al., 1992), the 32 children who participated were on average 2 to 3.5 years and at risk of language delays (diagnosed with Down syndrome) or with confirmed receptive or expressive skills. The third study (Girolametto et al., 1996) had a heightened focus on giving parents 10 specific words to repeat frequently during interactions with the child. These words were individually selected for each toddler. Toddlers in the intervention group used more target words in naturalistic probes (i.e. when researchers asked the children about their environment), used more words in free-play interaction, and were reported to have larger vocabularies overall as measured by parent report. A more recent observation study (Pennington, 2009) of 11 children found similar improvements for children with cerebral palsy. A focus group study (Pennington and Thomson, 2007) with therapists working with parents of children with identified motor disorders reported that the programme was effective in helping parents develop a facilitative communication style.

5.6 Summary

The review identified several brief interventions designed to promote parent-child interactivity with a view to improving children's language and communication in particular but also other aspects of children's readiness for school. They are based on the notion that during the early years, a child's home and parents are the main agents of influence. Programmes have been identified at the universal, selective and indicated levels.

Speech, language and communication interventions that take place between parent and child have been shown to have positive outcomes. This is supported by the systematic review level evidence cited earlier in the chapter (section 5.2.2). Although the age-range of interventions was between 0-5 years, in practice the

majority were for children aged over 2 years. The nature and quality of the studies varied considerably, including both comparison group level and formative evidence, and results were often mixed within and between studies, but certain programmes and types of programme can be effective in both engaging parents to interact with their children in a way that promotes speech and language and in improving related child outcomes.

5.6.1 Self-administered programmes

The single intervention identified in this category (Hear and Say Reading) was universal and involved a videotape explaining dialogic reading to parents that is self-administered with limited supplementary support by telephone and, in one version, two group-based sessions. There is formative evidence for its effectiveness. A study comparing three different delivery models found that dialogic reading and children's language use improved in all conditions but the effect was strongest in the group with in-person instruction.

5.6.2 Home visiting programmes

Home visiting typically involves weekly visits over several months, with a curriculum and a focus on child development, parent-child interaction, and helping children to learn, often through coaching parents while they interact with their children. The type of people who deliver them varies but includes professionals, paraprofessionals and volunteers. They mostly operate at the selective level, for children with elevated, general risk. There are comparison group evaluations for six of the seven interventions that were identified, with the majority showing positive results. One, which concerned a universal/selective intervention designed to promote responsive parenting (PALS), found evidence from two RCTs of improvements in various aspects of parenting, including maternal responsiveness and verbal scaffolding, with increased responsiveness contributing to greater growth in infants' social, emotional, communication and cognitive competence. Additionally, an RCT of My Baby & Me, which has the PALS curriculum at its core and operates at the selective level, found positive effects on parent-children interaction (e.g. contingent responsiveness, verbal stimulation) and some aspects of child development (including expressive language) albeit not others (e.g. receptive language). An RCT of Child FIRST showed a positive effect on children's language. Evidence for a programme designed to promote school readiness for children aged three years from socially disadvantaged families (Let's Play in Tandem) includes a positive impact on a range of child outcomes, including pre-reading skills, listening and communication. The evidence for Parents as Teachers is mixed. Evidence for the other intervention in this category is formative.

5.6.3 Individually delivered programmes

Book-sharing interventions are designed to encourage parents to use dialogic booktalk/reading with their children. They typically involve providing families with resources (books, tips on reading with children, vouchers for books) and light-touch support to help parents read with their children. At the universal level, three interventions were identified. All are delivered through 'well-child' visits and have been subjected to comparison group studies. One (Let's Read) had no effect on vocabulary and a limited impact on phonological awareness. Bookstart Plus was found to improve parents' attitudes to reading books but child outcomes were not measured. A retrospective QED of Bookstart (Regular) found a positive impact on academic scores (including literacy and writing) when children were aged 5-7 years. There is stronger evidence at the selective level, albeit for one programme, where multiple comparison group evaluations of Reach Out and Read, delivered by paediatricians during check-ups, all demonstrated a positive impact on home literacy orientation, parent-child reading and children's language and communication (e.g. receptive and expressive vocabulary).

Baby sign interventions involve encouraging the parent/carer to communicate with their preverbal infant using symbolic gestures. An RCT of a programme to promote baby signing applied at the universal level found no effect on language outcomes.

At the indicated level, we identified three programmes, two of which have had comparison group studies. One programme (Language for Learning) is for four-year-olds displaying delayed language development. It is delivered to parents and children together by teaching assistants and lasts 30 weeks. A comparison group evaluation found no effect on receptive and expressive language but a positive impact on phonological awareness skills and letter knowledge, both of which are important predictors of subsequent literacy. An intervention for reducing stuttering (The Lidcombe Programme) was also found to be effective through a comparison group evaluation. There is formative evidence for Home Talk, with a small study showing that by age three years the majority of children had caught up with expectations regarding language skills.

5.6.4 Group-based programmes

Two centre-based universal programmes involve parents (or caregivers) and children aged 0-5 years meeting together in group settings where they are encouraged through techniques such as modelling and peer support to interact in ways that support the child's learning (both during and between sessions). Both are long-term, involve weekly meetings and are delivered by trained professionals. There is comparison group evaluation evidence for one of the interventions (PEEP), but mixed findings. One study found significant gains in various outcomes, including verbal comprehension, vocabulary, and concepts about print, but the other study found few effects on parent or child outcomes (the comparison group performed better on cognitive development outcomes, including mental development, language, and numeracy skills). Formative evidence for the other intervention (Kaleidoscope Play and Learn) produced mixed evidence, including an improvement in children's preliterate development and a marginally significant increase in caregiver-child interaction. There is formative evidence at the selective level for the positive impact of a group-based book-sharing intervention (Bookstart Corner) on parental engagement in children's reading and wider learning activities, and for the impact of a music therapy intervention in terms of improving parental sensitivity, parent-child interaction and children's behaviour and social-emotional skills. An RCT of a selective group-based parenting programme for children aged 12-36 months (Incredible Years training (Toddlers)) found no effect on parents' language (i.e. how they verbally scaffold children's early language).

5.6.5 Group-based programmes with adjunctive components

A single selective intervention (Parent Corps) was identified in which parent and child groups run concurrently, with some joint sessions. The parent groups are delivered by trained mental health professionals, while the child groups are provided by classroom teachers. Comparison group study evidence in the shape of a single RCT found evidence of a positive effect on reading and writing test scores in Kindergarten (aged 5-6 years).

5.6.6 Multicomponent programmes

Multicomponent interventions typically combine home- and community-based elements (e.g. home visiting plus day-care or a parent group). They are designed to enhance children's readiness for school, in part by helping to make the home environment more supportive of children's development (e.g. linguistic, cognitive, social, emotional). Most of the interventions reviewed are selective as they all target families based on elevated risk (e.g. low-income). The majority start when children are infants or toddlers and last several years. Most are delivered by professionals who have received additional training in the specific intervention. There are comparison group evaluations showing positive effects for six of the eight interventions in this category, including HIPPY and Getting Ready. Evidence within studies was sometimes mixed but overall it suggests that such interventions can be used to improve parents' involvement in and support of their children's learning and improve various child outcomes, including language and reading.

For children with language delay (i.e. indicated), there is evidence from comparison group studies for the effectiveness in terms of parent-child interaction and aspects of children's language development of a programme (It Takes Two to Talk) that involves parent groups group-based intervention supplemented with

home visits in which a speech and language specialist helps parents to apply strategies that will improve their child's language skills (It Takes Two to Talk). The effectiveness of such interventions is supported by the Roberts and Kaiser (2011) systematic review cited earlier in the chapter.

5.6.7 Conclusion

There is reasonably strong evidence for home visiting programmes (largely selective), most of which have comparison group studies demonstrating effectiveness in areas such as parent responsiveness and aspects of children's development (e.g. pre-reading skills). Evidence from comparison group studies of multicomponent interventions (also largely selective, and involving home and community-based elements) is mixed but on balance can be seen to help parents support their children's learning and improve some child outcomes (including language and reading). There is also comparison group evidence for a multicomponent indicated programme for children with language delay that has a group-based element for parents supplemented by home visits. There is formative and to a lesser extent comparison group evidence to support the use of book-sharing interventions in which dialogic reading/booktalk is encouraged, although the impact on parenting behaviours is measured more than the impact on children's language and communication skills. Finally, the evidence reviewed suggests that baby signing applied at a universal level does not have an impact on children's language development, and that behavioural parenting programmes may need additional subject-specific content if they are to have a positive impact on parents' use of language in interactions with their children.

Chapter 6 Conclusions

6.1 Introduction

6.1.1 Focus

The remit for this rapid review was the identification of methods of working to improve parent-child interaction with the overall goal of improving children's attachment, socio-emotional and behavioural functioning and/or their language and communication. The review focuses explicitly on interventions for children within the conception to 5 year age range that are aimed at improving interaction between the parent and child. It is concerned with interventions that can be applied at the universal and targeted levels, where the latter refers to children with elevated risk or children displaying problems in a given area but not a disorder. We were particularly interested in interventions that are either available in the UK currently or could be potentially in the future. The review excludes interventions that are aimed at improving these aspects of children's functioning without addressing the parent-child interaction.

The review included interventions across the evidence spectrum, ranging from those with formative evidence of impact only to those with consistent evidence of impact from multiple randomised controlled trials. The aim of this was to give a sense of the range of opportunities for early intervention in this area and to provide commissioners with preliminary data that will help them to distinguish between interventions that are suitable for possible roll out, interventions that have been found not to work and should arguably therefore no longer be implemented, and interventions that seem promising and warrant investment so that they can be further developed and evaluated. This approach is captured in the concept of an 'innovation to impact pipeline', meaning that innovations can be refined (e.g. in relation to the logic model, or the materials, training and support the facilitate implementation) and subjected to progressively more demanding tests of evidence of impact as they develop.

6.1.2 Organising framework

This report has been organised using a framework designed to help readers to navigate their way around the wide range of interventions that were identified and to make sense of the diverse range of evidence about their impact. Thus, programmes were categorised initially according to their outcome area of focus (parental sensitivity and attachment, social-emotional development, and language and communication), then in terms of three levels of prevention (universal, selective and indicated), and finally in relation to eight intervention types (media-based, self-administered, home visiting, individually delivered, based on live demonstration, group-based, group-based with adjunctive components, and multicomponent). For the sake of simplicity the evidence of impact for interventions has been classified using two categories, namely studies that use a comparison group and those that do not but have preliminary or early (referred to in the report as 'formative' evidence). Chapter 1 outlines how these map onto the EIF standards of evidence.

The distinction between levels of prevention is important because interventions need to be matched to the relevant level of need. The contextual factors that families bring will range from the highly individual, including their own early life experiences, attachment patterns, mental health problems, social support and willingness to engage, through to wider economic factors, such as income, housing and the neighbourhood environment. Each parent and child will bring a unique configuration of factors, and it is therefore essential that commissioners considering using any of the interventions or types of intervention cited in the report base their implementation decisions on an assessment of whether the children or families in question meet the relevant target group criteria. This will ensure that families can be matched in terms of their level of needs and the programmes that are available.

6.1.3 Links to the Healthy Child Programme 0-5 and Early Years Foundation Stage

The Healthy Child Programme (HCP) is the key universal public health service for improving the health and wellbeing of children, through health and development reviews, health promotion, parenting support, and screening and immunisation programmes. Its goals are to identify and treat problems early, help parents to care well for their children, change health behaviours, and protect against preventable diseases. The programme is evidence-based and aims to prevent problems in child health and development, and contribute to a reduction in health inequalities. The HCP is published in two volumes – 'Pregnancy and the First Five Years of Life', and 'From 5 to 19 Years Old'. The current programme for 0-5 year-olds is led by health visitors, but is also delivered through integrated services that bring together Sure Start children's centre staff, GPs, midwives, community nurses and others. Many of the interventions identified in this review can potentially be delivered as part of the HCP 0-5.

The HCP 0-5 years is based on the evidence available at the time of the last update in 2009 (see Barlow et al. 2008). As local authorities take on the commissioning of the HCP 0-5 years and its delivery via the universal health visiting service, it is important that it is underpinned by the latest evidence. As stated in Chapter 1, the current review has been undertaken in parallel with a rapid review by the same team of the evidence to update the HCP 0-5 year-olds (Axford et al., 2015). The latter focused primarily on evidence from systematic reviews, although recent primary studies were also sought for a limited number of areas in which there was insufficient evidence yet available from secondary sources (including attachment, parenting support, and speech and language development). Although the HCP update did not explicitly focus on methods of promoting parent-child interaction, there were a number of areas of overlap between the two reviews, notably the areas cited above. We believe that there were no areas of discrepancy between the two reviews and that the conclusions of this report are consistent with those of the HCP evidence update.

The Early Years Foundation Stage (EYFS) sets the standards for the learning development and care of children from birth to five years. It applies to all early years providers, including schools, pre-schools and childminders. It promotes teaching and learning to ensure children's school readiness, and emphasises the importance of working in partnership with parents and carers and supporting them in guiding their children's development at home. Providers are expected to offer activities and experiences for children in a range of areas, some of which are of particular relevance to his review: communication and language; personal, social and emotional development; and literacy. As with the HCP 0-5 years, several of the interventions or types of intervention identified in this review could potentially be delivered by early years providers as part of the EYFS.

6.1.4 What this chapter does

Drawing on the set of interventions discussed in the report, this final chapter first summarises the key methods of working to enhance parent-child interaction in terms of improving parental sensitivity and attachment, emotional and behavioural development, and language and communication skills. The chapter then discusses the findings and sets out some implications for policy and practice. These include commenting on issues such as what interventions can be delivered to families by staff with varying levels of skills and qualifications, what level of support from more highly trained workers is appropriate to support these staff, and the workforce and commissioning structures needed to ensure that children are identified appropriately and have access to the right intervention at the right time.

6.2 Overview of findings about what works

The review aims to identify what works in terms of prevention and early intervention to enhance parent and child interaction and the development of language, communication and social and emotional skills for children from conception to 5 years. At the end of each outcome chapter (Chapters 3-5) the findings have been summarised in terms of what works for that outcome. Below we provide an overall summary for each type of

intervention (i.e. across all outcomes).

6.2.1 Media-based programmes

Media-based interventions are all delivered at a universal level. There is a lack of evaluations of such interventions (e.g. newsletters, apps, DVDs) in relation to parent sensitivity and attachment. One programme was identified that used newsletters and that had one comparison group study, which showed an improvement in some aspects of early parenting associated with attachment security but no impact on parent empathy towards children's needs (child outcomes were not measured). In relation to socio-emotional outcomes, there is comparison group study evidence for the impact of one intervention but, importantly, it is strongest when there is additional support. Thus, there is evidence from several studies for the impact of one intervention (including newspaper, TV, radio, flyers) on aspects of parenting and child behaviour, especially when supplemented by additional support for parents.

Overall, we conclude that there is promise in media-based approaches but much more evaluation and learning is required about what works when.

6.2.2 Self-administered programmes

Self-administered programmes were identified in relation to the outcomes of social, emotional and behavioural development and language and communication skills. Regarding the former, the only evidence for a universal DVD-based programme was obtained from an RCT in which the programme was administered in two group-based sessions. An indicated programme for parents of children with identified behavioural difficulties was found to be effective in three comparison group studies focusing on the outcome of child behaviour. This is supported by a systematic review of targeted self-administered parenting programmes for parents of children with behaviour problems, which found that overall they had a positive impact. In relation to children's language and communication, there is formative evidence for the positive impact of a universal video-based programme on dialogic reading and children's language use (especially when supplemented with in-person instruction).

Overall, we conclude that this is a promising type of approach, particularly for children with early signs of behavioural difficulties, but also that such programmes appear to be more effective when supplemented with additional support.

6.2.3 Home visiting programmes

The review identified numerous home visiting interventions. In relation to attachment and parental sensitivity, there was mixed evidence, including comparison group and formative evidence that some selective interventions have a positive impact on the parent-infant relationship (e.g. responsiveness, attachment), parent mental health (e.g. anxiety) and child development (e.g. behaviour). As regards language and communication skills, there is also evidence from comparison group evaluations showing the positive impact of several universal and selective home visiting interventions, including on parent responsiveness and verbal scaffolding, and children pre-reading skills, listening and communication.

Overall, we conclude that this is an important and widely applied type of intervention because it has been found in a number of studies to be effective. However, the evidence is quite mixed and more needs to be done to determine the key features of effective practice and how to deliver these in wide replication.

6.2.4 Individually delivered programmes

There is comparison group study evidence for individually delivered interventions at the indicated level for parental sensitivity and attachment and for children's social, emotional and behavioural development. There is some evidence to support the use of parent-infant psychotherapy to improve secure attachments in infants

who may have experienced traumatic events such as abuse, and who consequently display attachment, or emotional and behavioural problems. This is supported by systematic review level evidence. There is also comparison group study evidence – also at the indicated prevention level – for the impact on parent-child interaction and child behaviour of programmes that target families with complex problems (e.g. parents misusing substances or maltreating their children) and/or with children who have behaviour problems.

In relation to children's language and communication skills, the review covered several book-sharing interventions in which parents are encouraged via well-child visits to use dialogic booktalk/reading. There is mixed evidence for the impact of this approach at the universal level: a comparison group study of one intervention did not measure child outcomes but found an impact on parents' attitudes to reading books; another measured child outcomes and found no effect on vocabulary but a limited effect on phonological awareness; a further study found an effect on school performance, including reading and writing. The evidence for dialogic reading interventions is arguably stronger at the selective level, where there are comparison group studies showing a positive effect of an intervention delivered by paediatricians during check-ups on home literacy orientation, parent-child reading and children's receptive and expressive vocabulary. At the indicated level, there is comparison group study evidence of a positive effect of an intervention for children aged four years with delayed language development on phonological awareness skills and letter knowledge (both important predictors of subsequent literacy), and of an intervention to reduce stuttering in children with language delay. An RCT of baby signing implemented at the universal level found no effect on child language outcomes.

Overall, we conclude that parent-infant psychotherapy is a promising method for improving attachment security in high-risk families. We encourage its careful use alongside the gathering of more and better evidence of its effectiveness. Further, there are several individual parent training interventions that are effective in improving parenting and child behaviour in families with complex needs and/or children with serious behaviour problems. Booksharing interventions that promote dialogic reading also appear promising in terms of promoting children's language and literacy development but more evidence of their effectiveness is needed.

6.2.5 Programmes involving live demonstration

Interventions in this category were found in relation to parental sensitivity and attachment and social, emotional and behavioural development. There is comparison group evidence that if a clinician demonstrates a newborn infant's behavioural capacities to parents (a universal intervention) it can increase parental sensitivity. At the selective level, the evidence for VIPP is stronger for improving parental sensitivity than it is for improving secure attachment, while VIPP-SD has a positive impact on children's behaviour for sub-groups only. A systematic review found a small-to-average effect size for the impact of video feedback on child behaviour, and a positive effect on parenting behaviours (e.g. sensitivity, responsiveness, verbal and non-verbal communication).

In relation to infant massage, two interventions that use the technique were reviewed, both working with depressed mothers and both with comparison group evidence suggestive of a positive impact (on depression in both studies, on mother-infant interaction in one study). A systematic review concluded that infant massage does not have an impact when applied universally and that there is more potential for change with higher-risk groups of parents (identified on the basis of, for example, socio-demographic characteristics or depression status). No live demonstration interventions were identified for children's language and communication skills, although other types of intervention in that outcome area may incorporate the technique.

Overall, we conclude that techniques involving live demonstration have considerable potential for improving parent-child interaction and associated outcomes for families where there is elevated risk, for example owing to poverty or maternal depression.

6.2.6 Group-based programmes

There are a growing number of preparation for parenthood programmes that operate at the universal and selective levels. However, there is a lack of evaluation of their impact on parent sensitivity and attachment, with the exception of one universal programme, where comparison group studies have found a positive impact on fathers' parent-child dysfunctional interactions, paternal reports of infant 'soothability', and child behaviour problems. Another universal group-based programme, designed to enhance caregiver skills in reading infant cues and responding sensitively, was found to be as effective as home visiting in improving attachment security and maternal sensitivity (yielding small effects). At the selective level there is evidence from a small comparison group study for the impact of group-based intervention on parent-child interaction, and from a pre-post study for the impact of another group-based intervention on parents bonding with and showing warmth towards their baby.

In relation to children's socio-emotional development, there is limited evidence of the effectiveness of group-based parenting programmes at the universal and selective levels: most programmes lack comparison group studies, and when such studies have been conducted they show mixed effectiveness but generally more evidence of impact for parenting and parent-child interaction than for child behaviour outcomes. At the indicated level, however, for parents whose children show early signs of emotional and behavioural problems, there is evidence from multiple comparison group studies that group-based parent training programmes, led by professionals, can have a positive impact on parenting and child behaviour. There is extensive systematic review level evidence demonstrating the effectiveness of such interventions, and a small number of interventions are particularly strong in this respect.

There is limited evidence for group-based interventions that support parent-child interaction in order to improve children's language and communication. The evidence is mixed for the impact for two long-term universal centre-based interventions in which parents/carers are encouraged through techniques such as modelling and peer support to interact in ways that support the child's learning (both during and between sessions). One had two comparison group studies: one study showed a positive impact (e.g. verbal comprehension, vocabulary, concepts about print), whereas the other found few effects on parent-child interaction and the comparison group outperformed the intervention group on cognitive development skills and language. The second intervention had formative evidence only, showing mixed outcomes. Moreover, there is only formative evidence for the positive impact of a group-based dialogic reading intervention on parents' engagement in their children's reading and wider learning activities. An RCT of a selective group-based parenting programme for children aged 1-3 years found no effect on how parents verbally scaffold children's early language.

Overall, we conclude that preparation for parenthood programmes offer promise in terms of improving parental sensitivity and attachment but that more evaluation is needed. Some group-based parent training programmes have a very strong evidence base and are proven to improve parenting and reduce child behaviour problems in families where there are early signs of emotional and behavioural problems.

6.2.7 Group-based programmes with adjunctive components

Group-based programmes with adjunctive components were only identified in relation to the outcome of social, emotional and behavioural development. There is comparison group study evidence of a positive impact on parenting practices and child behaviour for selective group-based parenting programmes that involve adjunctive components targeting the child. One universal programme in this category found an impact in terms of more positive parenting and less inconsistent discipline but a mixed impact on child behaviour.

Overall, we conclude that there is some evidence for group-based programmes with adjunctive components but that more studies are needed to determine the added value of the additional components.

6.2.8 Multicomponent programmes

With one exception programmes fitting this category were only identified in relation to the outcome of language and communication skills, and (also with one exception) target families based on elevated risk (e.g. low income). They typically combine home- and community-based elements and are designed to enhance children's readiness for school, in part by helping to make the home environment more supportive of children's development. There are comparison group evaluations showing a positive effect for the majority of the interventions in this category. Evidence within studies was sometime mixed but overall it suggests that such interventions can improve parents' involvement in their children's learning and also improve various child outcomes, including language and reading.

There is also evidence from comparison group studies for the effectiveness in terms of parent-child interaction and aspects of children's language development of an indicated group-based intervention for parents and children supplemented with home visits in which a speech and language specialist helps parents to apply strategies designed to improve their child's language skills. This is supported by a systematic review, which found that parent-implemented language interventions are effective for young children with language impairment.

Overall, we conclude that multicomponent interventions that target families with elevated risk and involve home- and community-based elements can be effective in helping parents to support their children's learning.

6.3 Discussion and implications

This review has covered a lot of material in terms of the number and diversity of interventions and studies. But what does it all add up to? What should be done with the information? Why does it matter? This section seeks to address such questions and provide some pointers for commissioner and practitioners.

6.3.1 Included interventions

In terms of the included interventions, it is clear that a diverse range of interventions can contribute to the three outcomes of interest. Not only is there diversity in terms of the broad types of intervention (home visiting, individually delivered, in vivo etc.) but within these there is variation in terms of dimensions of delivery such as duration, setting and intensity. Further, various types of intervention have been shown to be effective; that is, it is not the case that, say, only home visiting works, or that multicomponent interventions do not work. As such, it might reasonably be expected that in any location a range of different types of intervention might be needed. This said, it should be noted that over two-thirds of the interventions in the report fall into three of the eight intervention type categories – group-based, individually delivered, and home visiting – and that in two of the eight categories there are fewer than five interventions – self-administered and media-based.

The interventions also operate at different levels of prevention. One in four are universal whereas three in four are targeted. Of the targeted interventions, the majority (half overall) are aimed at children with elevated risk while the remainder (a quarter overall) are for children with identified problems. There is overlap between the categories in the sense that some interventions operate at more then one level, and determining which level an intervention fits best is sometimes difficult. Nevertheless, in any given area a range of universal and targeted services will be needed, and this report shows that there are a good number of interventions that could fulfil this role.

There is also a noticeable correlation between the level of prevention and the type of intervention. On the whole, the group-based interventions are used as part of both universal and selective approaches, while many of the programmes being delivered on a one-to-one basis target parents (or children) experiencing problems (i.e. indicated). Dyadic interventions (e.g. being delivered to parent and child together) were on the whole

being used on a targeted (selective or indicated) basis.

It is also worth noting that although most of these interventions were delivered during the postnatal period, in the case of interventions targeting parental sensitivity and attachment some were also delivered at least partially in the antenatal period (e.g. preparation for parenthood programmes, home visiting, and some parent-infant psychotherapy programmes).

6.3.2 Evidence

In terms of the evidence, this again varies considerably. About a fifth of the interventions do not have comparison group evaluations but rather have pre-post or more qualitative evidence of impact. Of the four-fifths of interventions that have been subjected to comparison group studies, 10 show evidence of no impact.[24] With the exception of multicomponent interventions, where all of the evidence in this review is from comparison group studies, for each intervention type there are comparison group and formative evaluations showing a positive impact. In other words, within each category there are programmes on different parts of the evidence spectrum. For example, some group-based parenting interventions have stronger evidence of impact than others. A note of caution is needed, because as stated in Chapter 1, the evidence for each programme needs more detailed scrutiny by the EIF Evidence Panel. The aim of this is to make a judgement about the overall amount of evidence of impact, taking into account the results and quality of all relevant evaluations.

In addition, subject to further scrutiny and due diligence by the EIF, this review has identified discrete programmes – or types of programme – that have been demonstrated to have a positive impact on the outcome(s) of interest in more then one comparison group study. With the caveats stated above, there is a strong case for commissioners and practitioners to think seriously about implementing some of them, whether in the context of the HCP 0-5 or the EYFS. A good example would be the Incredible Years group-based parenting programme, which can be targeted at parents of children aged 3-4 years with behaviour problems. There is strong evidence that it is effective at reducing conduct problems (and ultimately preventing conduct disorder).

The review also identified interventions for which there is as yet no evidence either way regarding effectiveness, because they have not been evaluated. This applies, for example, to some of the newer interventions that make use of social media or online methods. These have not been included in this review, but commissioners should bear this in mind when reviewing existing provision and deciding what new services to commission.

Lastly, it is worth acknowledging the difference between impact on parents (i.e. parent outcomes) and impact on children (i.e. child outcomes). Given the subject covered by this review, there are good grounds for arguing that we should have most confidence in interventions that demonstrate an impact on parent and child outcomes – in other words, those that improve parenting behaviour and how parents interact with their children (e.g. increased sensitivity and responsiveness, use of language) and also have a demonstrable effect on children's attachment, or behaviour, or language and communication skills. The strongest evidence would be for studies that have tested this relationship using statistical methods ('mediator analysis') and established that the route via which the programme affects child outcomes is through changing parenting behaviours. In reality few studies actually do this (not just of interventions covered by this review but generally). There are

[24] This includes studies that find sub-group effects only but no main effects.

interventions covered by this review that have evidence of an impact on parenting behaviour / parent-child interaction and child outcomes. However, in many cases studies only measure impact on parents but not impact on children (or vice versa), or they measure both but don't find an impact on child outcomes even though they have an impact on parent outcomes (or vice versa).

6.3.3 Identifying the right children and families

As stated earlier, the interventions included in this review operate at different levels of prevention. It is therefore important that care is taken to ensure that interventions are targeted appropriately. A number of factors need to be carefully addressed in terms of matching individual women, children and families with services. It is important to bear in mind that not all families will benefit from a service that is on offer. For example, there is some evidence that infant massage programmes are beneficial for disadvantaged mothers and those who are experiencing postnatal depression; they are not, however, effective when applied at the universal level (arguably because of a 'ceiling effect', whereby aspects of parenting and/or child development are already healthy and there is relatively little room for improvement) and nor are they sufficiently intensive on their own to support women experiencing more diverse problems. Further, families change, and maintaining engagement requires the skilful working of practitioners with the family.

6.3.4 Care pathways

As noted earlier in this chapter, the Healthy Child Programme 0-5 provides the overarching service context for the provision of many of the interventions that have been identified as part of the current review. One of the implications of this is that HCP 0-5 years provides seven timepoints at which the wellbeing of the pregnant women or the parent-infant interaction can be assessed using universal services such as midwifery and health visiting to identify women and children who may be in need of additional support:

- Booking-in visit at 12 weeks
- Promotional interview 28 weeks
- New baby review 14 days postnatal
- Promotional Interview, eight weeks postnatal, and Comprehensive Health Review
- Review at three months
- One year health review
- Two-and-a-half year review

Some interventions that have been identified by this review could potentially be provided as part of care pathways for the referral and management of women from booking-in onwards, and more could be applied during the postnatal period. Best practice requires that protocols for these care pathways involve: a clearly defined multidisciplinary group of practitioners with responsibility for the care pathway; infrastructure to support its delivery; and training to ensure that the relevant staff have the skills to identify and engage families and also to motivate and work therapeutically with them.

The HCP recommends that midwives use the booking-in visit to (a) promote well-being and (b) identify families in need of additional services, and that Health Visitors use Promotional Interviews at 28 weeks antenatal and eight weeks postnatal to promote well-being and to identify families in need of additional support. The use of additional standardised tools to screen for depression (e.g. the Edinburgh Postnatal Depression Scale (EPDS) to

identify the level of postnatal depression if evidenced by the Whooley questions[25]) or to identify specific problems (e.g. Parent-Infant Interaction Observation Scale (PIIOS) to assess parent-infant interaction) is also recommended. The standard health reviews that are recommended by the HCP (e.g. New Baby Review three months, one year and two-and-a-half year reviews) can also be used to promote well-being and identify additional need, and in particular children who may be showing signs of early problems and that make them eligible for one of the interventions identified in this review.

In addition, there are review points in the Early Years Foundation Stage (EYFS) where practitioners can assess the progress of parents and children with a view to securing additional support if needed. Thus, in addition to ongoing assessment (also known as formative assessment), when the child is aged two years practitioners must review their progress and, if necessary, develop a targeted plan to support parents/carers. Some of the interventions described in Chapter 5 in particular could be suitable for delivery as part of such a plan.

6.3.5 Workforce skills and training

While the review examined a small number of media-based (4) and self-administered (4) programmes, most of the interventions for all three outcomes were delivered either individually or in groups, by a range of practitioners, many of whom were professionals who underwent additional training (often a day or two) and received ongoing support (e.g. by email and telephone). Even the self-administered and media-based interventions that have been evaluated often work best with practitioner support. In the vast majority of cases the people delivering interventions were professionals, although a small number of programmes involved delivery by volunteers and/or previous participants in the programmes.

Inevitably this has implications for training and support, whether for professionals or volunteers. Thus, health visitors continue to be one of the core group of practitioners working to deliver many of the interventions aimed at promoting attachment and socio-emotional outcomes with families in the middle tier, and many of the interventions identified by this review could be included in the Healthy Child Programme 0-5 years. Midwives and health visitors have a key role to play in the delivery of interventions targeting families in the middle tier of need, and many of the methods identified could potentially be part of the core training of health visitors. Although health visitors are or could be involved in delivering some of the interventions aimed at improving language and communication (and other aspects of children's readiness for school), some of the centre-based methods that were identified could be delivered by Early Years Practitioners and Teachers, as part of the EYFS.

It is widely acknowledged in the field of implementation science that support from more highly trained workers and supervision are key to effective working with families and to the effective delivery of programmes (e.g. Fixsen et al., 2005; Metz et al., 2013). The training and support that enable professionals and volunteers to deliver interventions with fidelity, including many of the ones described in this review, are often supplied direct by the purveyors of the intervention materials. Programme purveyors often require that practitioners receive ongoing support via regular supervision. Some methods of supervision (e.g. 'restorative supervision') have been shown to be effective in ensuring the wellbeing of both service providers and recipients (Wallbank 2012). Indeed, many of the interventions that were identified as part of this review have ongoing monitoring

[25] The Whooley depression Screen involves two questions: (1) During the past month have you often been bothered by feeling down, depressed, or hopeless? and (2) During the past month have you often been bothered by little interest or pleasure in doing things? If the answer to both is 'yes' then more detailed questioning is considered necessary.

and support built into them. On the whole, supervision should be provided by staff who have skills in supporting parents with a range of difficulties, some of which may be complex, and who are able to help practitioners to a) recognise recurrent difficulties in a situation; b) to reflect on their practice; c) to support the family to change. This typically involves and experienced mental health practitioner such as a psychologist or psychotherapist.

In our view there is a need to ensure a good skill-mix across local authorities. For example, local authorities could ensure that key members within each health visiting and social work team have the skills to use in vivo techniques or to deliver specified parent training programmes.[26] Since the engagement and retention of families is known to be challenging but important in order to achieve desired outcomes, health visitors and other staff could also be trained in the use of techniques such as Promotional Interviewing (see CPCS.org.uk), which will help them with this task.

6.3.6 Limitations

This review has two main limitations that need to be taken into account when interpreting the findings. First, although efforts were made to ensure that the literature search was systematic, this was a rapid scoping review, and it is likely that there are other interventions that could potentially also be included. Second, an assessment against standards of evidence of the quality and weight of evidence of impact for interventions cited in this review is ongoing as part of the work of the EIF Evidence Panel, so it is not possible in this report to give interventions a firm rating. Instead, a simple distinction has been made between interventions with comparison group study evidence of impact and those with formative evidence of impact from pre-post studies or other non-comparison group methods.

[26] Most of the methods of working that have been highlighted here have affordable UK-based training programmes available, many of which provide on-going support to practitioners.

Appendix A: List of Intervention Databases Searched

The following databases (listed alphabetically) were searched for interventions that met the inclusion criteria.

Best Evidence Encyclopedia:
http://www.bestevidence.org/

Blueprints for Health Youth Development:
http://www.blueprintsprograms.com

Centre for Excellence and Outcomes (C4EO):
http://www.c4eo.org.uk/themes/general/localpracticeexamples.aspx?themeid=10

Collaborative for Academic, Social, and Emotional Learning (CASEL):
http://casel.org/guide/

Centre for Analysis of Youth Transitions (CAYT):
http://www.ifs.org.uk/centres/caytRepository

Child Trends LINKS (Lifecourse Interventions to Nurture Kids Successfully):
http://www.childtrends.org/whatworks/

Coalition for Evidence-Based Policy:
http://evidencebasedprograms.org/wordpress/

Databank of Effective Youth Interventions:
www.nji.nl/jeugdinterventies

Evidence Informed Policy in Education in Europe (EIPEE):
http://eppi.ioe.ac.uk/webdatabases/Intro.aspx?ID=23

Evidence for Policy and Practice Information and Co-ordinating Centre (EPPI-Centre):
http://eppi.ioe.ac.uk/cms/Default.aspx?tabid=56

EU-Compass for Action on Mental Health and Well-being:
http://ec.europa.eu/health/mental_health/eu_compass/index_en.htm
https://webgate.ec.europa.eu/sanco_mental_health/

European Alliance for Families:
http://europa.eu/epic/practices-that-work/index_en.htm

Investing in Children: *Website no longer available (2018)*

Netherlands Youth Institute:
http://www.youthpolicy.nl/yp/Youth-Policy/Youth-Policy-subjects/Netherlands-Youth-Institute-Effective-youth-interventions

National Registry of Evidence-based Programs and Practices (NREPP):
http://www.nrepp.samhsa.gov/

Promising Practices Network (PPN):
http://www.promisingpractices.net/programs.asp

Partnership for Results (PRF):

http://www.partnershipforresults.org/programs.html

What Works Clearing House (WWCH):
http://ies.ed.gov/ncee/wwc/findwhatworks.aspx

Appendix B Levels of intervention[27]

It is helpful to distinguish between six levels of intervention, as follows:

1. Promotion interventions
Usually targeted to the general public or a whole population. Aims to enhance individuals' ability to achieve developmentally appropriate tasks (developmental competence) and a positive sense of self-esteem, mastery, well-being, and social inclusion and to strengthen their ability to cope with adversity. Focus is on healthy outcomes like competence and well-being rather than on prevention of illness and disorder, although it may decrease the likelihood of disorder.

> Example: Programmes based in schools, community centres, or other community-based settings that promote emotional and social competence through activities emphasising self-control and problem solving.

2. Universal preventive interventions
Targeted at the general public or a whole population that has not been identified on the basis of individual risk. The intervention is desirable for everyone in that group.

> Example: School-based programmes offered to all children to teach social and emotional skills or to avoid substance abuse. Programmes offered to all parents of children aged 10-11 years to provide them with skills to communicate to their children about resisting substance use.

3. Selective preventive interventions
Targeted at individuals or a population sub-group whose risk of developing mental disorders is significantly higher than average. The risk may be imminent or it may be a lifetime risk. Risk groups may be identified on the basis of biological, psychological, or social risk factors that are known to be associated with the onset of a mental, emotional, or behavioral disorder.

> Example: Programmes offered to children exposed to risk factors, such as parental divorce, parental mental illness, death of a close relative, or abuse, to reduce risk for adverse mental, emotional, and behavioural outcomes.

4. Indicated preventive interventions
Targeted at high-risk individuals who are identified as having minimal but detectable signs or symptoms foreshadowing mental, emotional, or behavioural disorder, or biological markers indicating predisposition for such a disorder, but who do not meet diagnostic levels at the current time.

> Example: Interventions for children with early problems of aggression or elevated symptoms of depression or anxiety.

5. Treatment
Targeted at people who are identified (either by themselves or by others) as currently suffering from a recognisable disorder (i.e. case identification). Recipients enter treatment with the expectation of receiving some form of relief from the disorder. Includes interventions to reduce the likelihood of future co-occurring disorders.

[27] Taken from Chapter 3 of *Preventing Mental, Emotional, and Behavioral Disorders Among Young People: Progress and Possibilities* **(**Mary Ellen O'Connell, Thomas Boat, and Kenneth E. Warner, Editors; Institute of Medicine; National Research Council, 2009).

6. Maintenance
Focus is on recipient's compliance with long-term treatment to reduce relapse and recurrence, and provision of after-care services to recipient, including rehabilitation.

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