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Promoting the social and emotional wellbeing of vulnerable pre-school children (0-5 yrs): UK evidence review.

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EXECUTIVE SUMMARY

INTRODUCTION

Aims and objectives

This review was undertaken to support the development of guidance on two related NICE intervention topics promoting the social and emotional wellbeing of vulnerable pre-school children aged 0-5. The intervention guidance will focus on the effectiveness of specific progressive interventions: home visiting and family based interventions; and early education and child care interventions.

This report provides:

- A systematic review of UK evaluation studies which considers the effectiveness of early years programmes and interventions designed to promote social and emotional health, and cognitive ability among vulnerable children and families.
- A systematic review of evidence on the factors influencing the effectiveness of delivery and implementation of interventions (including qualitative and process evaluations).

METHODS

Search methods and data extraction for systematic reviews

A single, full systematic search of key health and medical databases was undertaken for the systematic reviews. Articles relating to UK effectiveness and process evaluation studies of early years programmes and interventions designed to promote social and emotional development, and cognitive development among vulnerable children and families were selected. There was consideration of the study quality of each type of study design as per recommended NICE CPHE methods (NICE, 2009).

RESULTS

UK effectiveness studies

We identified 15 papers which met the inclusion criteria. The papers focused on home visiting interventions (nine papers) and interventions based in early years education settings (two papers). In addition four papers from the

National Evaluation of Sure Start were included. Evaluations which did not contain data relating to the effectiveness of the intervention were excluded from this section. All studies were conducted in the UK and the authors used various criteria to select vulnerable populations, which often used demographic and socioeconomic characteristics to define vulnerable/at risk populations. Most of these measures related to parents, including ethnicity, employment/salary measures, housing tenure, and parents' level of qualifications. The majority of studies selected their population from within one or more defined (deprived) geographical areas, with families not resident in that area excluded from the intervention. The studies included here are mostly of reasonable quality with all scoring [++] or [+], although there are limitations in terms of outcome measures, drop out and contamination, study design and data presentation as discussed for individual studies.

UK process evaluations

We identified 19 relevant studies which met the inclusion criteria for this review. The papers focused on home visiting interventions (n=10) and interventions based in early years education settings (n=8). One paper examined Sure Start local programmes which included both childcare settings and home visiting. Given the nature of the review question, a variety of evidence was considered: qualitative studies (n=11), process evaluations (n=3), and quantitative papers and mixed methods (n=5). To ensure evidence synthesised in this review was relevant to a target population, only UK evidence has been considered.

DISCUSSION

UK effectiveness studies

The evidence we present here is limited in terms of the relatively small number of papers identified and the challenges discussed above in terms of suitability and validity of outcome measures relating to the emotional and social wellbeing of vulnerable young children, saturation of outcome measures leading potentially to chance results, concerns over reporting and adherence to interventions, and contamination and loss to follow up in some cases. As a

result, these limitations should be thoroughly taken into account when making recommendations based on these studies.

UK process evaluations

The review findings suggest that while many people are aware of what interventions are being offered to assist vulnerable families with young children, some people were not aware of some of the services that were available. It highlights the role of outreach and marketing, and out-of-home interventions being visible and accessible. The scheduling of both home and educational interventions at a time to enhance attendance was seen as a key challenge. Personal circumstances, perceptions and beliefs also offer significant barriers to be overcome for some potential users. Findings from this review highlight that some staff were under pressure and were stressed with considerable and complex caseloads. Caseloads, working conditions, training, and support systems seem significant areas for consideration in optimum service delivery. The importance of inter-agency working and defining of professional roles also seem areas of importance in successful service provision.

EVIDENCE STATEMENTS

UK Effectiveness Studies Evidence statement 1:
Home visiting programmes

Evidence from seven studies (primarily of good quality) suggests that some home visiting programmes may be effective in directly improving social and emotional wellbeing of vulnerable children. The extent of effect depends to some extent on the type and nature of intervention being delivered, and the particular outcomes measures. Some outcome measures were indirectly linked to the social and emotional development and cognitive development of the child, concerned with parental support and home environment. Many of the outcomes were self reported introducing potential biases into the studies.

The heterogeneity of interventions across the small number of studies made it difficult to identify clear categories; and difficult to discern clear relationships between particular types of interventions and outcomes. However some distinction was evident. The more structured intensive interventions (with a focus on child-mother interaction) delivered by specifically trained nurses during first 18 months appears more likely to have positive effects (the Family Partnership Model). The lower intensity, less structured interventions involving lay providers (Home Start, peer mentoring) are less likely to have positive effect on the social and emotional wellbeing of vulnerable children.

- **Mackenzie et al. 2004 quasi experimental [+] / Shute and Judge 2005 quasi experimental [+]:**

Starting Well: "intensive home visiting" programme delivered by health professionals and health support workers to socioeconomically deprived parents of newborn children up to 24 months (Glasgow). Positive effect on home environment; but methodological limitations meant the studies provided little robust evidence of effectiveness on social and emotional wellbeing.

- **Barnes et al. 20006/09 cluster RCT [++]:**

Home Start: a volunteer home visitor programme offering 'unstructured' mainly social support to vulnerable families with newborns consisting of two or more visits over 12 months provided by lay, local volunteer mothers Positive effect on parent child relationship; no effect on maternal depression.

- **Ford et al 2009 RCT [+]:**

Small scale home visiting ('intensive compensatory education') programme consisting of weekly visits for 12 months delivered to three year olds by project workers (in economically disadvantaged area of Wales). The intervention was a parent delivered education programme aimed at improving school readiness. Positive effect on academic readiness and inhibitory control.

Barlow et al. 2007 RCT [++]:
Family Partnership Model: a home visiting programme consisting of 18 months of weekly visits from a specifically trained health visitor (in 2 UK counties). Positive effect on small number of outcomes, including maternal sensitively and infant cooperation.

Johnson et al. 2005 RCT [+]:
Avon Premature Infant Project: a home visiting programme with parental child developmental education and support (using counselling model) arms delivered over two years by nurses. At five year follow up a development advantage was identified, but at 2 years this was not evident.

Wiggins et al. 2004 RCT [++]:
Social Support and Family Health: a home visiting programme delivered by a health visitor providing 'supportive listening', weekly and then monthly over two years (in London: Camden and Islington). Possible effect on maternal health reported.

Cupples et al. 2010 RCT [++]:
Peer Mentoring Home Visiting Programme: a home visiting programme delivered by recruited existing mothers twice monthly during pregnancy and monthly for following year (in deprived post codes in Northern Ireland). Negligible effect on social and emotional wellbeing.

UK Effectiveness Studies Evidence statement 2:
Interventions in early years education settings

The two studies identified in this review provide insufficient evidence to judge the effectiveness of early education on the social and emotional development of vulnerable young children.

Weak evidence from the two studies suggests that early education interventions in early years settings does not have an effect in improving the social and emotional wellbeing of deprived children aged 2, as well as having little effect on further outcomes relating to both mother and child wellbeing (at child mean age 26 months). Only one of the studies considered outcomes directly related to the social and emotional development and cognitive development of the child and did not show significant effects. However contamination of the control groups (leading to small effect sizes) means the results of these studies are subject to substantial biases reducing reliability as any intervention effects may be masked.

Smith et al. 2009. Case control [+]: Early Education Pilot: which provided

free early years education to over 13,500 disadvantaged two year olds (in deprived areas of England) in a range of early years settings. No significant effect at age 3yrs.

Toroyan et al. 2003 RCT [+]: Small scale evaluation of the integration of education within day care facilities (enhancing child care in terms of qualified staff and child-staff ratio) (Early Years Centre). Qualified teachers aimed to integrate education into health and social care (London: Hackney). Increased child care provision may have led to increased maternal employment, but not household income.

UK Effectiveness Studies Evidence Statement 3:
National Evaluation of Sure Start

Moderate evidence from two studies (reported in four papers) shows that the Sure Start programmes are effective in improving some outcomes among 9 months and 3 year olds relating directly and indirectly to the social and emotional development and cognitive development of preschool children (including child positive social behaviour, child independence, better parenting, home learning environment).

There was variation in effects between subgroups and over time (evaluation periods). The earlier evaluation findings showed the small and limited effects varied with degree of social deprivation. Children from relatively more socially deprived families (teenage mothers, lone parents, workless households) were adversely affected by living in SSLP areas. Later evaluation results differed from the earlier findings in that beneficial effects could be generalised to all subgroups, including teenage mothers and workless households. The findings of the impact evaluation study reported the link between implementation (fidelity) and outcomes, and attributed improved outcomes to children being exposed longer to more mature local programmes *(see UK process studies: evidence statement 5 below).*

It is important to note that this evidence relates to the effect of Sure Start Local Programmes as a whole. Although Sure Start Local Programmes (SSLPs) had common aims set by central government, the types and mix of interventions were not necessarily common between delivery sites. It is likely that interventions included home visiting, early education and day care, and the education /day care components were strengthened after the initial phase (although the evaluation was not depended on these being present). There are a broad spectrum of outcome measures but not all of these relate directly to emotional and social wellbeing.

Belsky et al. 2006 Quasi-experimental [++]
Melhuish et al. 2008 Evaluation [++]
Melhuish et al 2008 Quasi-experimental [+]
Melhuish et al. (2005) Evaluation [+]

NB: Further evaluation of NESS has now been conducted:
http://www.ness.bbk.ac.uk/impact/documents/RB068.pdf

UK Process Studies: Evidence Statement 1
Engaging families and the take up of early interventions services

Moderate evidence suggests that the uptake of early interventions amongst vulnerable families is influenced by mothers' perception of benefits, timely provision of information about the interventions, personal circumstances and views, the reputation of the services, recruitment procedures, perceptions about quality of interventions and their physical accessibility.

The perceived benefits for parents in their child attending childcare/early education were described in terms of building networks, providing an opportunity to take a break from parenting and a facilitator for employment (Avis et al. 2007 interviews [+], Smith et al. 2009 mixed methods [+], Toroyan et al. 2004 mixed methods [-]).

Five papers reported that a perceived lack of need influenced parents' decision not to take up home visiting. In some cases their needs were seen as being fulfilled by support from friends, family, or other services (Barlow et al. 2005 interviews [+], Barnes et al. 2006, quantitative, Barnes et al. 2009 mixed methods, [+], Murphy et al. 2008 interviews [-], MacPherson et al. 2009 interviews [+]). The "wrong type of support" was described by one paper with parents needing practical support rather than other support (Barnes et al. 2006, quantitative).

Parental lack of knowledge regarding the content and potential benefits of available services was reported (Avis et al. 2007 interviews [+], Coe et al. 2008 interviews [+], Flying Start evaluation 2009 interviews [+], Kazimirski et al. 2008 interviews [-]). One good quality paper described how mothers were unclear regarding what a programme offered, with women not understanding or not remembering information. Some women reported that the offer of the programme might have been preferred after the birth of their baby (Barlow et al. 2005 interviews [+]).

Two papers described the influence of personal choice with some women changing their minds or not being interested in a programme (Barnes et al. 2006, quantitative, Barnes et al. 2008 mixed method [+]), and one good quality paper highlighted that needs changed over time. Waiting lists for interventions meant that some women no longer needed the service when it was offered to them (MacPherson et al. 2009 interviews [+]).

Three papers of mixed quality described the influence of personal circumstances and views in influencing uptake. These included personal and family reasons and perceived cultural and language differences (Kazimirski et al. 2008 interviews [-], Flying Start evaluation 2009 interviews [+], Coe et al. 2008 interviews [+]).

Personal choice may also be influenced by the confidence levels of parents, (Avis et al. 2007 interviews [+], Coe et al. 2008 interviews [+]). Two papers described personal time factors could present barriers to uptake; with difficulty fitting the intervention into a personal routine or multiple demands (Avis et al. 2007 interviews [+], Coe et al. 2008 interviews [+]).

Four mixed quality papers highlighted the importance of marketing, outreach, and recruitment processes for programmes. Studies suggested the use of key workers and targeted publicity, door knocking, making use of referral partners and on-going invitations (Avis et al. 2007 interviews [+], Kazimirski et al. 2008 interviews [-], Smith et al. 2009 mixed methods [+], Tunstill et al. 2005 interviews [-]). Two good quality papers suggested the influence of the reputation of early education programmes in uptake. The reputation and feedback from other parents could be influential, and also a perceived stigma that services were “for certain groups” (Avis et al. 2007 interviews [+], Coe et al. 2008 interviews [+]).

Two good quality papers described parental worries regarding the cleanliness of venues, staff prying into their personal lives and concerns for their child (Avis et al. 2007 interviews [+], Smith et al. 2009 mixed methods [+]).

The importance of the location of a service was discussed in three papers. The papers highlight that the accessibility of a site is important, with settings being visible and accessible to the public through adequate positioning on a busy street and clearly sign posted. There was the suggestion that associating the nursery service with nearby schools made the programme appear more “official” to parents and provided continuity of services (Coe et al. 2008 interviews [+], Kazimirski et al. 2008 interviews [-], Flying Start evaluation 2009 interviews [+]).

UK Process Studies: Evidence Statement 2
Parents experience of services and ongoing engagement in early interventions

Moderate evidence suggests that ongoing engagement with early interventions amongst vulnerable families is influenced by perceived benefits to children, perception of a quality service, timing of the programme, the involvement of parents and personal reasons.

Three good quality papers described that parents who took up the childcare/early education interventions valued the approach, and believed that it was beneficial to their children. Parents continued to use services as they valued how the programme was delivered, structured, and the way information and advice was given in a non-intrusive manner. Perceived benefits for children were the ability of children to mix, play, and learn with other children (Avis et al. 2007 interviews [+], Flying Start evaluation 2009 interviews [+], Smith et al. 2009 mixed methods [+]).

Three papers suggested that parental perception of quality of provision influenced ongoing engagement. It was reported that smaller groups are preferable to parents, but if the staff and venue were perceived to be of high quality, maintaining smaller group sizes was of less importance (Flying Start evaluation 2009 interviews [+], Kazimirski et al. 2008 interviews [-], Smith et al. 2009 mixed methods [+]).

Three papers of good quality suggested that feedback to parents is an important factor in the success of an early education intervention. One paper highlighted a need to make parents feel more comfortable with taking part in activities that were designed for parent and child (Flying Start evaluation 2009 interviews [+], Kazimirski et al. 2008 interviews [-], Smith et al. 2009 mixed methods [+]).

Three papers suggested that a lack of programme flexibility precluded some parents from engaging with programmes. Some parents indicated that they would value events outside of typical centre hours, with a desire for increased programme flexibility particularly amongst students and part-time workers (Avis et al. 2007 interviews [+], Flying Start evaluation 2009 interviews [+], Coe et al. 2008 interviews [+]).

Three papers highlighted that making a large time commitment to in-home

support programmes could be a barrier to engagement (Barlow et al. 2005 interviews [+], Kirkpatrick et al. 2007 interviews [+], Wiggins et al. 2004). One paper reported that parents did not like the frequency of visits or fragmented visits (Barnes et al. 2009 mixed methods [+]). The timing of visits was noted as a problem in one study with mothers feeling disrupted by the timing and scheduling of visits (MacPherson et al. 2009 interviews [+]). Two studies, one of good quality and one of poor quality reported that flexibility on the part of the visitor to the needs of the client to ensure the service was delivered at a suitable time was key (Barnes et al. 2008 mixed method [+], Murphy et al. 2008 interviews [-]).

It was suggested that a home visitor should be proactive in recognising warning signs of losing a client, offering the family a break from the programme, changing the content delivered, and working with families to meet their needs and achieve goals (Barnes et al. 2009 mixed methods [+]). One good quality paper highlighted that it made it easier for families to engage in other services once they were taking part in one programme (Kirkpatrick et al. 2007 interviews [+]).

Four papers described personal reasons for not engaging with a service such as losing interest in the programme, missing too many appointments, moving out of the area, infant illness and other commitments (Barnes et al. 2006, quantitative, Barnes et al. 2008 mixed method [+], Barnes et al. 2009 mixed methods [+], Wiggins et al. 2004 quantitative).

UK Process Studies: Evidence Statement 3.
Home based interventions and staff-parent relationships

Moderate evidence suggests that the nature of the relationship between staff and parents is an important factor influencing the ongoing engagement of vulnerable families in home based interventions.

The importance of building relationships was highlighted in six papers with regular interaction resulting in parents feeling at ease and being able to “open up”, and with home visitors acting as a mentor, friend, and teacher. Women reported that they liked that home-visitors did not impose their views, and took an honest, open, humane and egalitarian approach. Some younger women however reportedly viewed a health-visitor intervention as somewhat authoritarian, almost like advice from parents and some women were worried about how they may be perceived by home-visitors, believing that they were being checked up on, and were concerned about visitors passing judgment on

their lifestyle and parenting skills (Barlow et al. 2005 interviews [+], Barnes et al. 2008 mixed method [+], Barnes et al. 2009 mixed methods [+], Kirkpatrick et al. 2007 interviews [+], McIntosh et al. 2006 interviews [+], Murphy et al. 2008 interviews [-]). One good quality paper (Barnes et al. 2008 + mixed methods) found fathers were pleased with the programme but took a few sessions to become engaged.

Support was a theme described in six papers. Parents reported that having someone there to listen and provide additional support was beneficial, visitors offered assistance in difficult times, allowed parents to vent frustrations, and encouraged parents to develop life skills and confidence.

Parents valued the support of a peer home visitor, especially if they had little existing social support, with some women describing how they were reluctant to seek emotional support from family or friends (Kirkpatrick et al. 2007 interviews [+], Barnes et al. 2008 mixed method [+], MacPherson et al. 2009 interviews [+], McIntosh et al. 2006 interviews [+], Murphy et al. 2008 interviews [-], Wiggins et al. 2004).

UK Process Studies: Evidence Statement 4.
Professional roles and practices

Evidence suggests that issues relating to professional roles and working practices impact on service delivery and performance. Staff perceptions of the work being rewarding, the need for skilled staff, clarity about professional roles and inter-agency team working are seen as linked to the success of a programme. Concerns relating to high stress and complex workloads were highlighted, and the need for training and support.

Two papers indicate staff's belief in the programme was related to perceptions that the nature of the work was particularly rewarding. This was noted as a key factor for success (Kazimirski et al. 2008 interviews [-], Flying Start evaluation 2009 interviews [+]).

The level of skills amongst staff was noted as important to the success of programmes in four papers. Particular elements were: empowering users and staff; on-going monitoring; staff keeping families notified of services and the results of any outreach, and a supportive and flexible centre manager (Kazimirski et al. 2008 interviews [-], Mathers and Sylva 2007 quantitative, Toroyan et al. 2004 mixed methods [-], Tunstill et al. 2005 interviews [-]).

Also one paper highlighted that clear roles and responsibilities for staff must be in place to avoid the potential for staff to face conflicting management and loyalty pressures between their original home organisation and their new roles (Tunstill et al. 2005 interviews [-]).

Five papers described concerns from staff regarding home based programmes. Stress due to a larger caseload, stress related to the job, fatigue from extended hours of working and the complex nature of issues presented during home visits was described (Barnes et al. 2008 mixed method, [+], Barnes et al. 2009 mixed methods [+], Murphy et al. 2008 interviews [-], Smith et al 2007 interviews [+], Wiggins et al. 2004).

Three papers described how home visitors harboured frustrations with not being able to reach clients. They, struggled with losing clients they wished they could help, and had to balance the needs of varying clients and had concerns that interventions were too short (McIntosh et al. 2006 interviews [+], Smith et al 2007 interviews [+], Wiggins et al. 2004). One good quality paper highlighted the potential for professional roles to be undermined, with concerns apparent regarding role clarity especially when working in mixed teams. While mixed team working was perceived as advantageous in helping at risk families, there was a blurring of roles and boundaries which created confusion, and in some instances tension within teams (Barnes et al. 2008 mixed method [+]).

There were mixed views of supervision found in three further studies. One reported satisfaction with management, while another described a need for safer working conditions and better management. In Murphy et al. peer mentors reported that at times, they felt unprepared for some of the cultural and ethnic differences that they encountered in the home while visiting mothers, and felt they could not provide adequate support (Barnes et al. 2008 mixed method [+], Smith et al 2007 interviews [+], Murphy et al. 2008 interviews [-]).The need for visitors to be well supported by peers and supervisors was highlighted in one good quality study (Barnes et al. 2009 mixed methods [+]).

UK Process Studies: Evidence statement 5
Organisational and management issues

The evidence highlights the importance of good organisational management links and interagency relationships.

Specific features were highlighted:- partnership boards should have a balanced representation; multi-agency team work should be well established; and centres should function well with low staff turnover rates. It was suggested that good pre-existing relationships between local agencies were key, and that special attention should be paid to early clarification of the purpose.

Implementation of working partnerships with clear established pathways to other services were identified as helpful for families as well as staff (Kazimirski et al. 2008 interviews [-], Tunstill et al. 2005 interviews [-]).

The need for tailoring approaches and services to vulnerable families was reported as a factor in the success of programmes (Kazimirski et al. 2008 interviews [-], Murphy et al. 2008 interviews [-]).

Three papers highlighted the influence of the service funder and affiliation on provision. It was suggested that dedicated providers were more engaged. Funding issues, financial deficits, and funding freezes were highlighted as impacting on programme delivery (Mathers and Sylva 2007 qualitative, Toroyan et al. 2004 mixed methods [-], Tunstill et al. 2005 interviews [-]).

The Sure Start impact evaluation examined domains of programme implementation and proficiency. It found that there were modest links between programme implementation and effectiveness on child and parenting outcomes. Collectively the 18 programme-proficiency ratings (including ethos, identification of users, empowerment of users and staff) significantly discriminated between groups of more or less effective programmes for 9-and 36 month old child and parenting outcomes. Some effects attributable to specific programme features were noted with respect to maternal acceptance, nonverbal ability, and home learning environment. The authors suggest that the proficient delivery of services is important as well as what services are delivered in influencing the benefits for families. In particular empowerment of users and staff and identification of users impacted on effectiveness of programme for the family (Melhuish et al. 2007 quantitative).

ABBREVIATIONS

BAS	British Ability Scale
BMI	Body Mass Index
CARE index	Infant attachment and parent sensitivity measure
CBA	Controlled Before and After study
CI	Confidence Interval
CPHE	Centre for Public Health Excellence
CGS	Community Group Support
EPDS	Edinburgh Postnatal Depression Scale
EPPE	Effective Provision of Pre-school Education
GHQ12	General Health Questionnaire 12
HOME inventory	Home Observation and Measurement of the Environment
LEA	Local Education Authority
MCS	Millennium Cohort Study
NFP	Nurse Family Partnership
OR	Odds Ratio
PND	Post Natal Depression
RCT	Randomised Controlled Trail
RR	Relative Risk
SEN	Special Educational Needs
SHV	Support Health Visitor
SS	Sure Start
SSLP	Sure Start Local Programmes

GLOSSARY OF TERMS

Outcome measures:

Child wellbeing (parent reported).	Includes one validated tool to measure child temperament as reported by parents (Brief Infant and Toddler social and emotional assessment), others measures were not previously validated. Child injury also self reported by the parent.
Child development	Validated scales measuring child development assessed by a professional such as the British Ability Scale.
Child behaviour	Validated scales for measuring child behaviour assessed by a professional such as the Foundation Stage Profile.
ChiMat	Child and Maternal Health Observatory: provides information and intelligence to improve decision-making for high quality, cost effective services
Parent wellbeing (self reported)	Validated scales to measure self reported parental wellbeing such as the Parent Stress Index

Maternal depression /mental health	Validated scale to measure postal natal depression: Edinburgh Postnatal Depression Scale, plus other non validated tools.
Parenting	Both validated and non validated scales assessed by a professional to measure aspects of positive and negative parenting such as the Parenting Risk Index. Also tools allowing parents to self report parenting behaviours.
PREview	Work on the PREview is project being carried out jointly by MIRU and Chimat at the Yorkshire and Humber Public Health Observatory. It is investigating the evidence base and feasibility of a tool which will help health professionals target the Healthy Child Programme effectively so as to optimise child outcomes.
Social support (self reported)	Self reported measures of social support, some validated such as Duke's Functional Support Scale.
Family relationships (self reported)	Validated scales to measure self reported aspects of family relationships such as mother child relationship and father involvement in the family.
Home environment	Validated scales to measure the home environment in terms of its suitability to promote learning and development, such as the HOME Inventory
Parent behaviours (self reported)	Self reported rates of cigarette and alcohol consumption.
Breastfeeding/feeding practices (self reported)	Self reported rate/duration of breast feeding and other infant feeding practices.
Health	Validated tools to measure general health, such as the General Health Questionnaire.
Service use (self reported)	Self reported use of health and/or support services.

Research Terminology:

Effect size	A unit-free effect measure, indicating the size of observed effects. Effect sizes (e.g. Cohen's d) may be interpreted according to the following suggestions provided by Cohen, 1988): 0.2 = small effect, 0.5 = moderate effect, 0.8 = large effect size

Heterogeneity	The degree to which studies under review are different.
Meta-analysis	A statistical method by which the results of a number of studies are pooled to give a combined summary statistic.
Millennium Cohort Study	The Millennium Cohort Study (MCS) is a multi-disciplinary research project following the lives of around 19,000 children born in the UK in 2000/1. It is the most recent of Britain's national longitudinal birth cohort studies. The study has been tracking the Millennium children through their early childhood years and plans to follow them into adulthood.
Odds ratio	The ratio of the odds of an outcome in an exposed (or experimental) group to the odds of an outcome in an unexposed (or control) group. (An odds ratio of 1 would mean that the outcome under study is equally likely in both groups; an odds ratio greater than 1 would indicate that the outcome is more likely in the exposed group).
Relative risk	Ratio of the probability of an outcome occurring in an exposed (or experimental) group relative to a non-exposed or control group. (A relative risk value greater than 1 would indicate that the outcome is more likely in the experimental group).

INTRODUCTION

1.1. Aims and objectives

This review was undertaken to support the development of guidance on two related NICE intervention topics promoting the social and emotional wellbeing of vulnerable pre-school children aged 0-5. The intervention guidance will focus on the effectiveness of specific progressive interventions: home visiting and family based interventions; and early education and child care interventions.

This reports in two sections and provides:

- A systematic review of UK evaluation studies which consider the effectiveness of early years programmes and interventions designed to promote social and emotional health, and cognitive ability among vulnerable children and families.

- A systematic review of evidence on the factors influencing the effectiveness of delivery and implementation of interventions (including qualitative and process evaluations).

1.2 Research questions

The reviews of the evidence aim to address the following key questions:

- What are the most effective and cost effective home based/early education and childcare interventions for helping improve and maintain the social and emotional health of vulnerable young children (0-5)?
- What progressive home based/early education and child care are effective and cost effective at the different early life stages: 0-3 months, 3 months to 1 year, 1-2 years etc) for promoting the social and emotional health of vulnerable young children and their families?
- How can those vulnerable children and their families who might benefit from home based/early education and childcare interventions be indentified? What factors increase the risk of children experiencing social and emotional difficulties? What is the absolute risk of children experiencing difficulties relating to these different factors and their combinations?

- How can interventions reduce vulnerability and build resilience to help achieve positive outcomes? In particular, how can interventions help develop strong and positive child-parent attachment?
- What characteristics of an intervention are critical to achieving positive outcomes for vulnerable children and families?
- What lessons can be learned from current UK-based programmes aimed at promoting the social and emotional wellbeing of children under 5?

The following sub-questions will also be considered:

- What is the best way to ensure progressive interventions are sensitive to the specific cultural, ethnic or religious needs of children and their families?
- To what extent does effectiveness vary according to the child's gender and the family's ethnic, cultural and religious background?
- How can vulnerable children and families be reached? This includes those living in a range of different family environments (such as with a single parent or with an extended, disrupted, reconstituted or transient family).
- What conditions are necessary to ensure progressive home-based interventions aimed at vulnerable children and parents are implemented effectively? What factors help or hinder implementation?
- What is the relationship between progressive home-based interventions and other interventions and mainstream services – and with more specialist services which provide support for more complex cases (including child and adolescent mental health services [CAMHS] and safeguarding services)?
- What knowledge and skills do practitioners need to deliver interventions effectively? What skills mix is needed for an integrated approach involving different practitioners and services?
- What is involved in joint commissioning of progressive interventions?
- How do the various sectors involved benefit in terms of costs and improved outcomes – and over what timescale? (This includes health,

education, social care, the criminal justice and welfare and employment systems.)

- Are there any trade-offs between efficiency and equity that influence the cost effectiveness of progressive home-based interventions?
- What are the unintended (positive or negative) consequences of progressive interventions?

2. BACKGROUND

2.1 Logic model

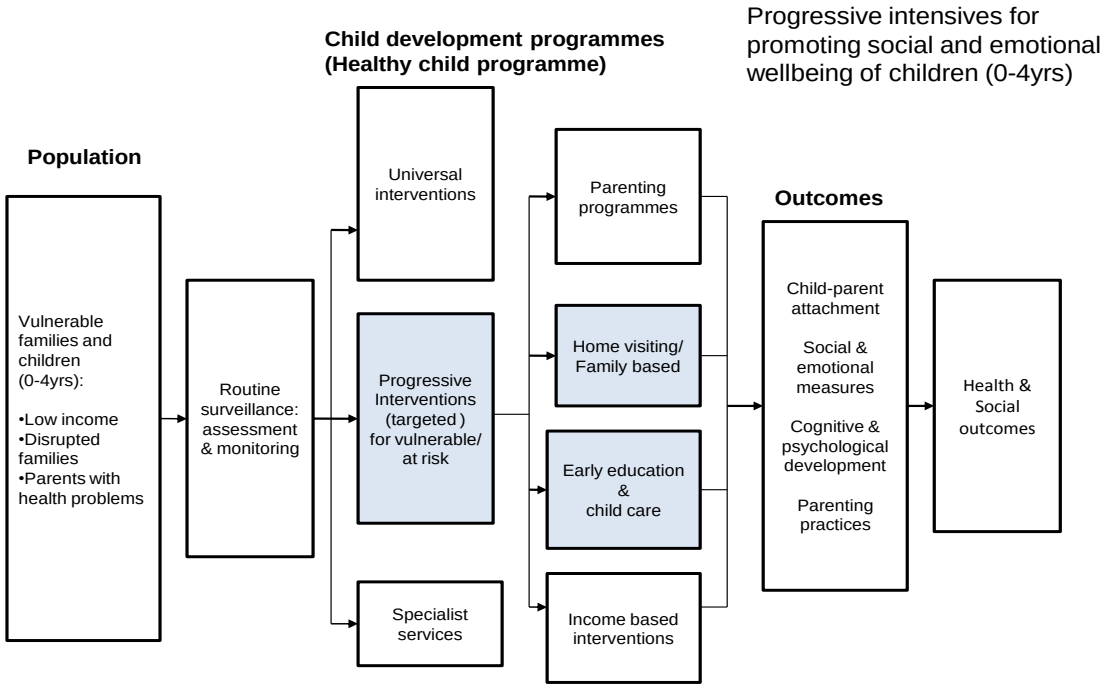
Social and emotional wellbeing and cognitive ability are about having the resilience, positive emotions, self awareness, social skills and empathy required to form relationships and deal constructively with adversity in daily life as well as develop one's full potential (Killoran et al 2010). Social and emotional wellbeing and cognitive development are inter dependent. Also cognitive ability (including educational attainment) is an outcome of social and emotional wellbeing (Killoran et al 2010). Together with environmental conditions, such individual attributes can act as protective factors (assets) that prevent behavioural problems and mental ill health, as well as optimise longer term health and social outcomes (Killoran et al 2010).

The diagram below (figure 2.1) shows the conceptual links between the needs of vulnerable children and families, intervention options and improved outcomes (Killoran et al 2010). This model is correct as of September 2010, but is to be subject to more development and refinement as this work progresses.

'Progressive' interventions are those which provide additional support designed to improve the social and emotional health and cognitive ability of vulnerable children and families. These intervention options include home visiting and family-based activities (such as those carried out as part of the family nurse partnership programme), and early education and child care (Killoran et al 2010).

The diagram shows how these interventions fit within the Healthy Child Programme (0–5 years) (Killoran et al. 2010). The Healthy Child Programme is described as ‘a progressive universal programme’ which aims ‘to promote and protect the health and wellbeing of children from pregnancy through to adulthood’. It is based on the principle of ‘progressive (or proportionate) universalism’, whereby: ‘the scale and intensity of provision of universal services is proportionate to the level of disadvantage’ (The Marmot review 2010). The Healthy Child Programme is delivered by a multidisciplinary team based in Sure Start Children’s Centres.

Figure 2.1 The conceptual links between the needs of vulnerable children and families, intervention options and improved outcomes (September 2010).



Universal assessment and monitoring identifies those children and families at risk of poor social and emotional wellbeing (or those already showing early signs of delay and difficulties including cognitive delay). Then a range of ‘progressive interventions’ are used to identify and address the causes of developmental problems and delay (such as lack of child-parent attachment).

They also aim to help develop the conditions (protective factors) that can build resilience and improve outcomes for the child and family (Killoran et al. 2010). This set of reviews of the evidence tests this model and underlying assumptions.

2.2 The need for guidance

Social and emotional health is about having the resilience, self-awareness, social skills and empathy that are required to form relationships and deal constructively with adversity as part of daily life. Around 7% of children aged 3 years can be expected to show moderate to severe behaviour problems. A further 15% will have mild difficulties (Richman et al. 1982). Emotional and behavioural problems in early life are predictors of poor outcomes, such as delinquency and substance abuse, in later years. About two-thirds of children aged 3 years who show significant emotional and behavioural problems continue to have difficulties at 8 or 12 years (Campbell 1995).

A positive child-parent relationship is particularly important for social and emotional development (for example, Fonagy et al. 2005). The degree of parental and family interaction – and how positive or negative it is – accounts for as much as 30–40% of the variation in antisocial behaviour among children (Patterson et al.1989). A range of preventive strategies can help improve the mental wellbeing of children and their families, by taking into account both the factors that increase the risk of poor mental health and those that help protect mental wellbeing. This includes activities to raise self-esteem and to improve the child-parent relationship (Barlow and Parsons 2009).

Intellectual development and social and emotional health are strongly influenced by a child's experiences during their preschool years. Those who experience poverty or neglect are likely to be at increased risk of learning, behavioural and health problems throughout their lives (Tierney and Nelson 2009). Participation in high quality early education and childcare can enhance the social and emotional health and cognitive development of children from low income families (Centre on the Developing Child 2007). The UK Effective Provision of Pre-school Education (EPPE) project showed that education

between 3 and 5 years leads to better intellectual development and improved independence, concentration and sociability (Department for Education and Skills 2005).

The costs of not intervening to ensure – or improve – the social and emotional wellbeing of children and families are significant for both them and wider society (Action for Children and the new economics foundation 2009). Some evidence shows that the health savings gained by intervening tend to be small compared to the benefits for the criminal justice system, education and welfare services (Scott et al. 2001). Social and emotional development is being assessed as part of the evaluation of Sure Start Children's Centres nationally. In 2008, these centres were benefiting a range of different groups on a more consistent basis. This compares to the situation in 2005, when the most vulnerable were not being reached effectively (Melhuish et al. 2008a). However, recent research suggests that vulnerable groups still face barriers when it comes to uptake of the services (particularly health support). Vulnerable groups include people from minority ethnic communities and lone and young parents (Audit Commission 2010).

3. METHODS

3.1 Search methods for systematic reviews

This section details the single search undertaken to identify papers for the systematic reviews. A single, full systematic search of key health and medical databases was undertaken for these systematic reviews and the review of systematic review level evidence, which is reported separately. Articles relating to UK evaluation studies of early years programmes and interventions designed to promote social and emotional development, and cognitive development among vulnerable children and families, were selected. The search strategy was developed by the ScHARR information specialist and was agreed with the NICE information specialist. An outline of the search strategy can be found in Appendix 4, the list of databases searched is given in Appendix 5.

The systematic review search strategy included a broad set of terms relating to child age, intervention and vulnerable population. Restrictions were applied to the search in terms of date (limited to 2000-2010 to manage the volume of literature). No restrictions were placed in terms of study type or country of origin. Only articles published in English were included. In addition, references were suggested by an expert reference group. The search results were downloaded into Reference Manager for sifting by the systematic reviewers.

Additional methods to identify evidence were undertaken as follows:

- Searching the reference list of included papers
- Cited reference searches on all of the included studies in the Web of Knowledge, Scopus and Google Scholar
- Additional searches on key UK programmes in Medline and the Web of Knowledge.

3.2 Inclusion and exclusion criteria

All of the retrieved literature was screened at title and abstract level for relevance, and those that were relevant were taken through to full paper appraisal.

The population groups that are covered in this work are children (aged 0-5) and their families who are deemed to be at risk – or showing early signs of having social and emotional, and cognitive difficulties based on a child development assessment and monitoring system (carried out as part of the Healthy Child Programme).

Risk factors may include having parents who: are on a low income, have low educational attainment, are unemployed, have experienced domestic violence, are bringing up a child (or children) on their own, are teenagers, have limited social support and social networks, have poor mental health, have long-term health conditions, misuse substances, have poor parenting skills, are illegal immigrants or their immigration status is uncertain. Children at risk may include those who: had a low birth weight, have been abused or neglected, have poor child-parent attachment, have poor cognitive skills, lack social and emotional wellbeing, have behavioural difficulties.

Two types of interventions are covered by the scope of this report:

- 'Progressive' interventions which provide additional support at home and are designed to improve the social and emotional health and cognitive ability of vulnerable children and families. This will include home visiting and family-based activities (such as those carried out as part of the family partnership programme).

- 'Progressive' early education and childcare interventions which are designed to improve the social and emotional health and cognitive ability of vulnerable children and families. This will include communication and language development and activities to prepare children for school.

The review excludes: papers reporting on the tools and methods used to assess the risk of social and emotional problems or a mental health disorder and to diagnose such problems, interventions promoting the social and emotional wellbeing of all children, clinical treatment including pharmacological interventions, support provided by specialist child mental health services and children in care services. The guidance may be relevant to these groups but will not cover their additional specific needs.

3.3 Data extraction strategy

Data relating to study design, outcomes, and quality (where applicable) were extracted by one reviewer and each extraction was independently checked for accuracy by a second reviewer. Disagreements were resolved by consensus and consulting a third reviewer where necessary. The data extraction tables for each section of the review are presented in Appendix 1.

3.4 Quality assessment criteria

In addition to extracting key information from included papers, for the sections of this report which used systematic review methods there was consideration of the study quality of each type of study design as per recommended NICE CPHE methods (NICE, 2009). All studies were graded by one reviewed and checked for accuracy by a second reviewer according to their study design as follows:

3.4.1. Quality assessment of quantitative studies

The CPHE Methods Manual (NICE, 2009) methodology checklist outlines four aspects to be evaluated when rating a quantitative intervention study: relating to the population; the method of allocation to the intervention; the outcomes; and the analyses:

Population:

1.1 Is the source population or source area well described?

1.2. Is the eligible population or area representative of the source population or area?

1.3. Do the selected participants or areas represent the eligible population or area?

Method of allocation:

2.1. How was selection bias minimised?

2.2 Were interventions and comparisons well described and appropriate?

2.3 Was the allocation concealed?

2.4 Were participants and investigators blind to the exposure?

2.5 Was the exposure to the intervention and comparison adequate?

2.6. Was the contamination acceptably low?

2.7. Were other interventions similar in both groups?
2.8 Were all participants accounted for in the study conclusions?
2.9 Did the setting reflect usual UK practice?
2.10 Did the intervention or control comparison reflect usual UK practice?

Outcomes:
3.1. Were the outcome measures and procedures reliable?
3.2. Were the outcome measurements complete?
3.3. Were all the important outcomes assessed?
3.4 Were outcomes relevant?
3.5. Was there a similar follow up time in exposure and comparison groups?
3.6. Was follow-up time meaningful?

Analysis:
4.1 Were exposure and comparison groups similar at baseline? If not were they adjusted?
4.2 Was intention to treat analysis conducted?
4.3 Was the study sufficiently powered to detect an intervention effect (if one exists)?
4.4. Were the estimates of effect size given or calculated?
4.5. Were the analytical methods appropriate?
4.6 Was the precision of intervention effect given or calculable: Were they meaningful?

In addition an overall measure of internal validity (bias) and external validity (generalisability) are given.

3.4.2. Quality appraisal of qualitative studies

There is no established hierarchy for evidence derived from sources such as qualitative research and surveys, with the strength of evidence depending on quality, quantity and relevance to the UK population and settings (NICE, 2009). The qualitative papers were therefore assessed taking note of the methodology checklist set out by NICE in the CPHE Methods Manual, rather than by a study design hierarchy.

The qualitative study check list considers issues of theoretical approach, data collection, trustworthiness, analysis, relevance and ethics as follows:

Theoretical approach:

1. Is the research approach appropriate?
2. Is the study clear in what it seeks to do?

Study design:

3. How defensible/rigorous in the research design/methodology?

Data collection:

4. How well was the data collection carried out?

Trustworthiness:

5. Is the role of the researcher clearly described?
6. Is the context clearly described?
7. Were the methods reliable?

Analysis

8. Is the data analysis sufficiently rigorous?
9. Is the data “rich”?
10. Is the analysis reliable?
11. Are the findings convincing?
12. Are the findings relevant to the study aims?
13: Conclusions: Is there adequate discussion of any limitations encountered?

Ethics:

14. How clear and coherent is the reporting of ethics?

3.5 Criteria for study grading.

After quality appraisal by study type, all the studies were placed in one of three grades based on the methodology checklists for each study design as described in Table 3.1. Finally, for reporting evidence statements the evidence was categorised as no evidence, or weak, moderate or strong evidence for or against the intervention in question following the CPHE methods guidelines (NICE 2009).

Table 3.1. Criteria used for study grading

Code	Quality criteria
++	All or most of the criteria have been fulfilled. Where they have not been fulfilled the conclusions of the study or review are thought very unlikely to alter
+	Some of the criteria have been fulfilled. Those criteria that have not been fulfilled or not adequately described are through unlikely to affect conclusions
-	Few or no criteria fulfilled. The conclusions of the study are thought likely or very likely to alter

3.6 Classification/grouping of the content of studies

UK effectiveness studies were grouped as to the location in which the intervention was delivered. The studies were divided into home visiting interventions or those conducted early years education settings. They were then further categorised by the particular programme being evaluated. UK process studies were also grouped as to the setting in which they were delivered, divided into home visiting interventions or those conducted early years education settings. Further categorisation was not undertaken as themes ran across the different interventions.

3.7 Summary of study identification

All search results were downloaded to Reference Manager. Potentially relevant papers were identified through the initial searches, and full papers were obtained. Citation searching of key papers as well as scrutinising reference lists and searching on key UK programmes was also carried out. Papers were also suggested by an expert reference group. We excluded 105 articles from the searches which were obtained as full papers but subsequently found to be outside of the scope of any of the review questions reported here or separately (see Appendix 3). For the UK effectiveness studies, fifteen effectiveness papers were identified through the database searches (nine of these were also identified by the expert reference group), with two additional papers identified through scrutinising reference lists. For the UK process studies, we identified 19 relevant studies which met the

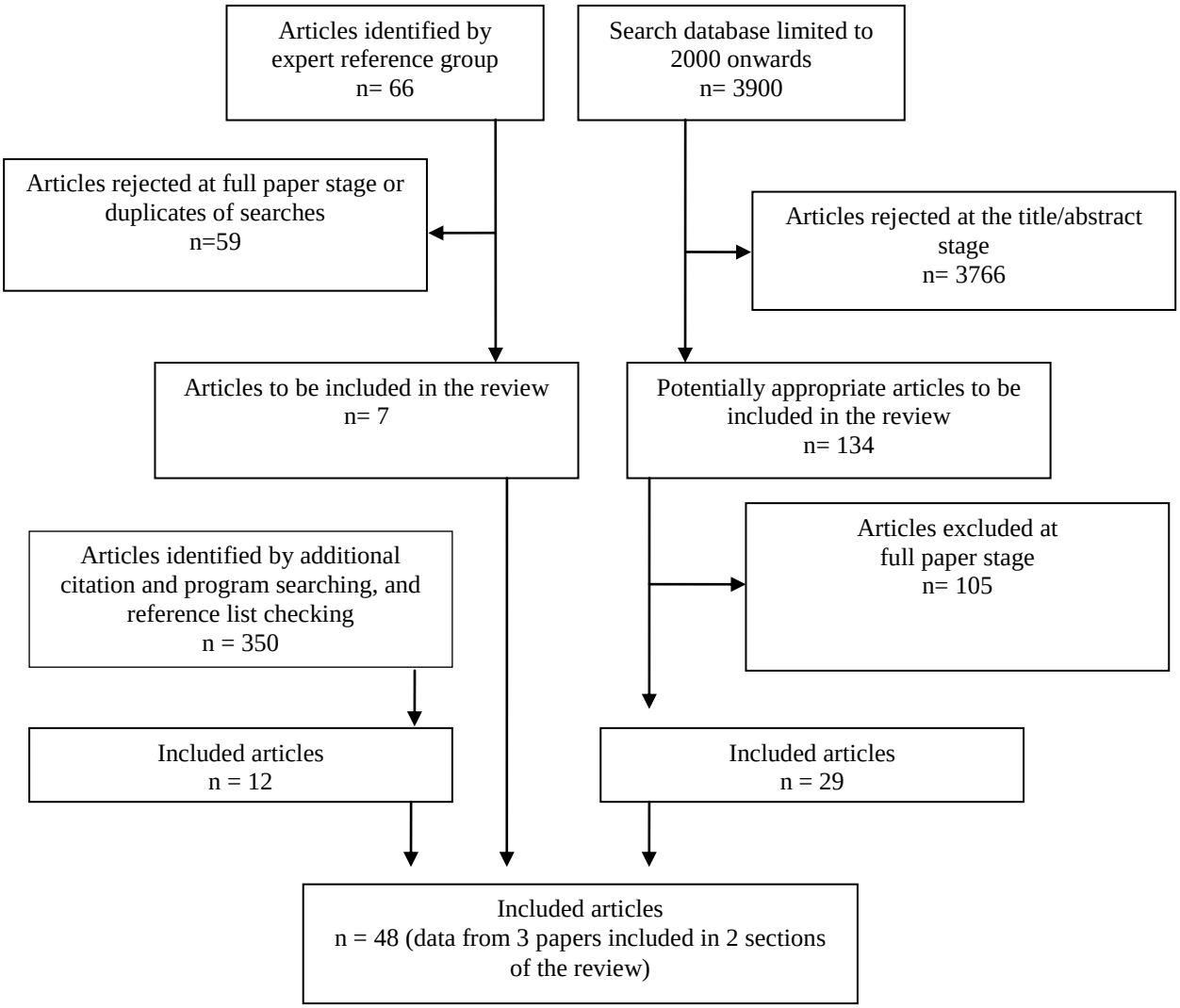
inclusion criteria for this review. The papers focused on home visiting interventions (n=10) and interventions based in early years education settings (n=9). Given the nature of the review question, a variety of evidence was considered: qualitative studies (n=11), process evaluations (n=3), and quantitative papers and mixed methods (n=5). A list of excluded papers and the reasons for their exclusion is given in Appendix 3. Table 3.2 details the included studies (including the review level papers which are reported separately).

Table 3.2. Summary of study identification

Source	Number of hits (all 4 reviews)	Papers included in UK evaluation review	Papers included in review of reviews	Papers included in implementation and process review
Searches				
Initial searches	3900	9	14	9
UK programme searches	158	0	0	3
Citation searches of included papers	162	0	0	2
Other sources				
Reference list of included papers	30	2	3	2
Expert reference group*	66	4	0	3
Total	4316	15	17	19 (3 also in UK evaluations review)

* Some of the papers identified by the expert reference group were also identified in the searches.

Figure 3.1. QUOROM Diagram.



4. SYSTEMATIC REVIEW OF UK EVALUATION STUDIES OF THE EFFECTIVENESS OF EARLY YEARS PROGRAMMES AND INTERVENTIONS DESIGNED TO PROMOTE SOCIAL AND EMOTIONAL WELLBEING AND COGNITIVE DEVELOPMENT AMONG VULNERABLE YOUNG FAMILIES.

4.1. Quantity of the evidence available

We identified 15 studies which met the inclusion criteria. The papers focused on home visiting interventions (nine papers) and interventions based in early years education settings (two papers). In addition four papers from the National Evaluation of Sure Start were included. Evaluations which did not contain data relating to the effectiveness of the intervention were excluded.

The evidence here is selected to be from the UK over the last 10 years only which reduces many applicability concerns, however applicability to population subgroups and different geographical areas must not be assumed, especially given the relatively small number of studies identified.

4.2 Populations and settings

This review was restricted to interventions conducted in home or early years settings (with children age 0-5 years). All studies were conducted in the UK and the authors used various criteria to select vulnerable populations, which often used demographic and socioeconomic characteristics to define vulnerable/at risk populations. Most of these measures related to parents, including ethnicity, employment/salary measures, housing tenure, and parents' level of qualifications. The majority of studies selected their population from within one or more defined (deprived) geographical areas, with families not resident in that area excluded from the intervention. Population summaries are given in Table 4.3. and full demographic data as described by the authors is given in the extraction table (Appendix 1).

4.3 Quality of the evidence available

Details of the study quality assessments are shown in Table 4.1. Criteria 2.4 which considers blinding has been shaded out as it was not addressed in any

of the included studies. Blinding is not usually practical for the types of interventions considered here. Allocation concealment was also not practical or relevant in most cases. The issue of intention to treat analysis is only relevant for the RCT studies and is therefore labelled as not relevant (NR) for other study designs.

4.3.1. Limitations of study quality

As discussed above, the main limitation of study quality at RCT level was blinding: for studies of health promotion interventions it is impossible to blind the participants and there are many practical challenges to blinding the assessors. This was not relevant to other study designs, and compared to the RCT other types of studies are fundamentally limited in their design which is often reflected in the quality scores.

In addition, some studies had small samples sizes, significant drop out over the course of the study, and/or contamination of the control groups, resulting in concerns over study power and the validity of the results presented. Some studies measured the social and emotional wellbeing of the child directly (for example in validated scales to measure child development or child behaviour) but, most studies also employed outcome measures that were indirectly related to the social and emotional wellbeing of the child as they considered related factors such as for example, the health of the child or family, the social and emotional wellbeing of the mother/parents, parenting, family relations, the home environment or parental behaviours. In addition some studies suffered from limited data analysis and/or poor presentation of data. All of these limitations on study quality are discussed in more detail below.

Table 4.1. Quality rating of included papers

Key:
[++]: All or most of the criteria have been fulfilled. Where they have not been fulfilled the conclusions of the study or review are thought very unlikely to alter
[+]: Some of the criteria have been fulfilled. Those criteria that have not been fulfilled or not adequately described are thought unlikely to affect conclusions
[-] Few or no criteria fulfilled. The conclusions of the study are thought likely or very likely to alter
NA: Not applicable to the study design
NR: Not reported
Qual: Overall quality rating

	Barlow et al. 2007 RCT	Barnes et al. 2006 c RCT	Barnes et al. 2009 c RCT	Belsky et al. 2006 Quasi-experimental	Cupples et al. 2010 RCT	Ford et al. 2009 RCT	Johnson et al. 2005 RCT	Mackenzie et al. 2008 Quasi-experimental	Melhuish et al. 2008 Quasi-experimental	Melhuish et al. 2008Evaluation report	Shute et al. 2005 Evaluation report	Smith et al. 2009 Quasi-experimental	Toroyan et al. 2003 Case control	Wiggins et al. 2004 RCT
1.1	++	++	++	++	++	+	+	++	++	++	++	++	++	++	++
1.2	++	++	++	++	++	+	+	++	++	++	++	++	++	++	++
1.3	++	++	++	++	++	+	+	++	++	++	++	++	++	++	++
2.1	++	++	++	NA	++	+	+	NA	NA	NA	NA	NA	NA	+	++
2.2	+	++	++	++	+	++	++	+	+	+	+	+	+	++	++
2.3	++	++	++	NA	++	++	NR	NA	NA	NA	NA	NA	NA	++	++
2.4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2.5	++	++	++	++	+	++	-	++	++	++	++	-	-	-	++
2.6	++	NR	++	++	++	++	++	++	++	++	++	++	-	-	+
2.7	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	-	-	NR
2.8	++	++	++	++	++	++	-	++	++	++	++	-	++	++	++
2.9	++	++	++	++	++	++	++	++	++	++	++	++	++	++	++
2.10	++	++	++	++	++	++	++	-	++	++	++	++	++	++	++
3.1	++	++	++	+	++	+	+	-	++	++	++	-	++	-	+
3.2	++	++	++	++	++	+	+	+	+	+	+	+	++	+	++
3.3	++	+	+	+	++	+	+	+	++	++	+	+	++	-	+
3.4	++	+	+	+	++	++	++	-	++	++	++	-	++	-	++
3.5	++	++	++	++	++	++	++	++	++	++	++	++	++	++	++
3.6	++	+	+	++	+	+	++	++	++	++	+	+	+	+	++
4.1	++	++	++	++	++	++	-	++	++	++	++	-	++	++	++
4.2	++	NR	NR	NA	++	NR	++	NA	NA	NA	NA	NA	NA	NR	++
4.3	++	++	++	++	++	NR	++	NR	+	++	++	NR	++	++	++
4.4	++	++	++	++	++	++	++	-	++	++	++	++	++	++	++
4.5	++	++	++	++	++	++	++	++	++	++	++	++	++	++	++
4.6	++	++	++	++	++	-	NR	++	++	++	++	++	++	++	++
5.1	++	++	++	++	++	+	+	+	+	++	++	+	-	-	++
5.2	++	++	++	++	++	+	+	+	+	++	+	+	++	++	++
Qual	++	++	++	++	++	+	+	+	+	++	+	+	+	+	++

4.4 Outcome measures

Table 4.2. shows the type of outcome measure used in the included studies, whether a statistically significant difference in that outcome measure was seen, and if so, whether the difference resulted in an desirable (positive) change or not. Many studies used multiple outcome measures spanning a wide range of outcomes relating directly and indirectly to the social and emotional wellbeing of the child. Many studies used indirect measures of child social and emotional wellbeing such as child development scales (11 studies) and child behaviour scales (7 studies). Six studies also used self reported measures of child wellbeing (parents reporting on their child's wellbeing).

The majority of other outcomes related to measures of mother/parent wellbeing (including self reported wellbeing (8 studies) and measures of maternal/post natal depression (6 studies)), along with family relations (self reported, 7 studies), measures of the quality of the home environment for learning/development (9 studies), service use (10 studies) and parenting (6 studies). Measures of social support (5 studies), and self reported family/child health (6 studies) were also included, as well as parental behaviours such as breastfeeding (4 studies) and parental smoking or drinking (3 studies). Full details of the outcome measures used for each study are also given in the extraction table (Appendix 1).

Validated measures of child behaviour problems or cognitive development are the most robust outcomes directly relevant to child social and emotional wellbeing. Of the 11 studies, only seven reported on behaviour problems and three showed a positive association with the intervention (Ford et al, 2009, Melhuish et al. 2008a, Melhuish et al. 2008b). All 11 studies measured child cognitive skills but only one saw a significant positive association with the intervention (Ford et al 2009); However, no negative effects were seen for these outcomes. Parent reported measures of child wellbeing scored better with five of the six studies which reported this outcome showing a positive association with the intervention (Barlow et al. 2007, Shute et al. 2005, Toroyan e t al. 2003, Melhuish et al 2008b), but these measures are much less robust and open to many sources of bias. Of the nine papers which

included measures of the home environment (for learning and development) three showed positive associations with the intervention (Melhuish et al. 2008a, Belsky et al 2006, Melhuish et al. 2005) although some of these outcomes were self reported.

None of six papers reported a positive association between the intervention and maternal depression and two papers reporting a negative association (Mackenzie et al 2004, (Shute et al. 2005); however the former was conducted in a population for which the outcome measure was not validated, and the latter suffered large drop out from the study (only 57% provided follow up data) so these result are not reliable. Self reported measures are less reliable but measure wellbeing directly. However, self reported measures of parent wellbeing showed particularly poor results with most studies finding no association and one study's finding negative associations (Barnes et al. 2006) A second study also found a negative association for infant feeding (Wiggins et al 2004).

There were no notable trends to distinguish between the relative effectiveness of home based interventions and early education interventions, in terms of the likelihood of a positive (desirable) effect being observed. Only one measure showed a positive association with an early years intervention (self reported health, Toroyan et al. 2003), but very few papers in this category were identified. Overall, authors were not able to demonstrate significance for a substantial number of outcome measures and there are concerns, for a few papers, that the large numbers of outcome measures considered may have led to significantly positive associations occurring by chance.

Table 4.2. Outcome measures of included studies

Outcome type	Measure	[Typology*]1st Author, date (study design and quality)[direction of effect]	No. studies
Child wellbeing (parent reported)	Brief infant/toddler social and emotional assessment	[HV] Barlow 2007(RCT++)[not significant]	6
	Parent reported child wellbeing	[HV] Barlow 2007(RCT++) [positive] [HV], Shute 2005 (Quasi experimental+) [positive]	
	Child injury	[HV] Shute 2005 (Quasi experimental+) [positive] [EY] Toroyan 2003 (RCT+) [positive] [SS[Belsky 2006 (Quasi-experimental ++) [not significant] [SS] Melhuish 2008b (Evaluation++) [positive] HV] Wiggins 2004 (RCT++) [positive]	
Child development	Bayley Scale	[HV] Barlow 2007(RCT++) [not significant], [HV] Cupples 2010 (RCT++) [not significant]	11
	4 Counties Foundation Stage Profile	[HV] Ford 2009 (RCT++) [positive]	
	British Ability Scale	[HV] Johnson 2005 (RCT++) [not significant] [EY] Smith 2009 (Case Control+) [not significant] [SS] Melhuish 2008a (Quasi-experimental +) [not significant] [SS] Melhuish 2008b (Evaluation++) [not significant] [SS[Melhuish 2005 (Evaluation+) [not significant]	
	Movement ABC	[HV] Johnson 2005 (RCT++) [not significant]	
	Sure Start Language Measure	[EY] Smith 2009 (Case Control+) [not significant]	
	Griffiths Mental Development Scale	[EY] Toroyan 2003 (RCT+) [not significant]	
	Mother's perception of development	[EY] Toroyan 2003 (RCT+) [not significant] [SS[Belsky 2006 (Quasi-experimental ++) [not significant]	
	Language acquisition	[SS[Belsky 2006 (Quasi-experimental ++) [not significant]	
	Spatial and number skills		
Child behaviour	Infant Temperament Scale	[HV] Barlow 2007(RCT++)[not significant]	7
	4 Counties Foundation Stage Profile	[HV] Ford 2009 (RCT++) [positive]	
	Child Behaviour Checklist	[HV] Johnson 2005 (RCT++) [not significant]	
	Adaptive Social Behaviour Inventory	[EY] Smith 2009 (Case Control+) [not significant]	
	Behavioural problems	[SS] Belsky 2006 (Quasi-experimental ++) [not significant]	
	Child positive/negative social behaviour	[SS] Melhuish 2008a (Quasi-experimental +) [positive] [SS] Melhuish 2008b (Evaluation++) [positive]	
	Child independence	[SS] Melhuish 2008a (Quasi-experimental +) [positive] [SS] Melhuish 2008b (Evaluation++) [positive]	
Parent wellbeing (self reported)	Rosenberg Self Esteem Inventory	[HV] Barlow 2007(RCT++)[not significant]	8
	Parent Stress Index	[HV] Barnes 2006 (cRCT++) [negative], [HV] Barnes 2009 (cRCT++) [not significant] [HV] Cupples 2010 (RCT++) [not significant]	
		[HV] Cupples 2010 (RCT++) [not significant]	

	Mother's wellbeing self reported Social competence Mother's malaise/self esteem Maternal anxiety	[EY] Toroyan 2003 (RCT+) [not significant] [SS[Belsky 2006 (Case Control++) [not significant] [SS[Melhuish 2005 (Evaluation+) [not significant] HV] Wiggins 2004 (RCT++) [positive]	
Maternal depression/ mental health	Edinburgh Postnatal Depression Scale Maternal responsivity/acceptance	[HV] Barlow 2007(RCT++)[not significant] [HV] Barnes 2009 (cRCT++) [not significant] [HV] Mackenzie 2004 (Case control+) [negative – not validated]*** [HV] Shute 2005 (CBA+) [negative] HV] Wiggins 2004 (RCT++) [not significant] [SS[Melhuish 2005 (Evaluation+) [not significant]	6
Parenting	Adolescent Parenting Inventory Parenting scale of competence Confidence in parenting Supportive parenting/negative parenting Parenting risk index, Harsh discipline	[HV] Barlow 2007(RCT++) [positive] [HV] Barlow 2007(RCT++) [positive] [SS[Belsky 2006 (Quasi-experimental ++) [positive] [SS[Melhuish 2005 (Evaluation+) [positive] [SS] Melhuish 2008a (Quasi-experimental +) [positive] [SS] Melhuish 2008b (Evaluation++) [positive] [SS[Melhuish 2005 (Evaluation+) [not significant]	5
Social support (self reported)	Social support questionnaire Duke Functional Support Number of close friends and help from family	[HV] Barlow 2007(RCT++)[not significant] HV] Wiggins 2004 (RCT++) [not significant] [EY] Toroyan 2003 (RCT+) [not significant]	3
Family relationships (self reported)	Rust Inventory of Marital State Father/partner involvement Mother-child relationship Parent-child relationship Maternal attachment	[HV] Barlow 2007(RCT++)[not significant] [SS[Belsky 2006 (Quasi-experimental ++) [not significant] [SS] Melhuish 2008a (Quasi-experimental +) [not significant] [SS] Melhuish 2008b (Evaluation++) [not significant] [SS[Melhuish 2005 (Evaluation+) [not significant] [HV] Barnes 2006 (cRCT++) [positive], [SS[Melhuish 2005 (Evaluation+) [not significant] [HV] Cupples 2010 (RCT++) [not significant]	7
Home environment	HOME Inventory	[HV] Barlow 2007(RCT++) [not significant] [HV] Barnes 2006 (cRCT++) [negative] [HV] Barnes 2009 (cRCT++) [not significant] [HV] Mackenzie 2004 (Quasi-experimental +) [negative – not validated]*** [HV] Shute 2005 (CBA+) [not significant]	9

	Home learning environment Local area measure Home chaos	[SS[Belsky 2006 (Quasi-experimental ++) [not significant] [SS] Melhuish 2008a (Quasi-experimental +) [positive] [SS] Melhuish 2008b (Evaluation++) [not significant] [SS[Melhuish 2005 (Evaluation+) [not significant] [SS[Belsky 2006 (Quasi-experimental ++) [positive] [SS[Belsky 2006 (Quasi-experimental ++) [positive] [SS[Melhuish 2005 (Evaluation+) [positive]	
Neighbourhood	Mother's rating of area	[SS] Melhuish 2008a (Quasi-experimental +) [not significant] [SS] Melhuish 2008b (Evaluation++) [not significant] [SS] Melhuish 2005 (Evaluation+) [positive]	3
Parent behaviours (self reported)	Smoking rate, drinking	[EY] Toroyan 2003 (RCT+) [not significant] [SS] Melhuish 2008a (Quasi-experimental +) [not significant] HV] Wiggins 2004 (RCT++) [not significant]	3
Breastfeeding/feeding practices (self reported)	Breastfeeding length Infant feeding	[HV] Barnes 2006 (cRCT++) [not significant] [SS[Belsky 2006 (Quasi-experimental ++) [not significant] [HV] Cupples 2010 (RCT++) [not significant] [HV] Wiggins 2004 (RCT++) [negative]]	4
Health	General Health Questionnaire Health visitor data on child Self reported health infant/parent Hospital admissions	[HV] Barlow 2007(RCT++)[not significant] [HV] Barlow 2007(RCT++)[not significant] [EY] Toroyan 2003 (RCT+) [positive] [SS] Melhuish 2008a (Quasi-experimental + [positive] [SS] Melhuish 2008b (Evaluation++) [not significant] HV] Wiggins 2004 (RCT++) [positive] [SS[Melhuish 2005 (Evaluation+) [positive]	6
Service use (self reported)	Self reported	[HV] Barnes 2006 (cRCT++) [not significant] [HV] Cupples 2010 (RCT++) [not significant] [HV] Mackenzie 2004 (Quasi-experimental +) [positive] [HV] Shute 2005 (quasi experimental+) [positive] [EY] Toroyan 2003 (RCT+) [positive] [SS[Belsky 2006 (Quasi-experimental ++) [not significant] [SS] Melhuish 2008a (Quasi-experimental +) [positive] [SS] Melhuish 2008b (Evaluation++) [positive] [SS[Melhuish 2005 (Evaluation+) [positive] HV] Wiggins 2004 (RCT++) [positive]	10

*Typology: HV Home visiting; EY Early Years Education Interventions; SS Sure Start National Evaluation.** Direction of effect: Positive; statistically significant change in desired direction; Negative; statistically significant change in undesired direction: Not significant; no statistically significant change. *** Outcome measure not validated in population where effect was seen (British Asian).

Table 4.3. Typology, population, intervention and quality score of included papers

Study design (n)	Paper:(1st author, date, quality rating)	Typology*	Population (age of child at baseline)	Intensity/frequency of intervention
RCT (6)	Barlow 2007 [++]	Family Partnership Model (HV)	131 vulnerable pregnant women (children from birth).	18 months of weekly visits from trained health visitor (mean 41.2 visits).
	Cupples 2010 [++]	Peer mentoring (HV)	534 deprived first time mothers(gestation less than 20 weeks)	Home visits by non professional mentor twice monthly during pregnancy and monthly for the following year.
	Ford 2009[+]	Home education activities (HV)	60 economically disadvantaged families (children aged 3)	12 months. Project worker visited once a week for 90-120 minutes.
	Johnson 2005 [+]	Avon Premature Infant Project (HV)	Parents of 187 premature infants (new born)	Visits by trained nursery nurse or special educational needs nurse weekly for first few months, then once/twice month for a year, then monthly to two years.
	Toroyan 2003 [+]	Day care facilities (EY)	120 families in catchment boroughs, 61% means tested benefits (children mean age 26 months)	Mean attendance at day care 211 days.
	Wiggins 2004 [++]	Social Support and Family Health (HV)	731 Low income 56% (children aged mean 9 weeks)	Monthly home visits by health visitor for one year
Cluster RCT (2)	Barnes 2006 [++]	Home start (HV)	247 socially disadvantaged (children 0-8 weeks old)	Two or more home visits by volunteer over 12 months.
	Barnes 2009 [++]	Home start (HV)	247 socially disadvantaged (children 0-8 weeks old)	Two or more home visits by volunteer over 12 months

Case Control (1)	Smith 2009 [+]	Early Education Pilot (EY)	13500 disadvantaged (children aged 2)	7.5 hours of education per week for 38 weeks of the year.
Quasi experimental (4)	Mackenzie 2004 [+]	Starting Well (HV)	367 mixed population (children at birth)	"Intensive home visiting" no intensity details given.
	Shute 2005 [+]	Home visiting programme (HV)	N=359 disadvantaged area (age of child not clear)	"Intensive home visiting" no intensity details given.
	Belsky 2006 [++]	Sure Start National Evaluation (SS)	12575 families (children 9-36 months)	Sure start programmes – no specific intervention details.
	Melhuish 2008 [+]	Sure Start National Evaluation (SS)	12,575 families (children aged 3 years)	Sure start programmes – no specific intervention details.
Evaluation report (2)	Melhuish 2005 [+]	Sure Start National Evaluation (SS)	N=11316 (children aged 9 and 36 months)	Sure start programmes – no specific intervention details.
	Melhuish 2008 [++]	Sure Start National Evaluation (SS)	N=9192 (children aged 3 years)	Sure start programmes - no specific intervention details.

*Typology: HV Home visiting; EY Early Years Education Interventions; SS Sure Start National Evaluation.

4.5 Interventions

Interventions were coded in terms of their typology, population, intervention frequency/duration, and quality score (Table 4.3) as discussed in the methods (section 3.4, 3.5). The studies included here are mostly of reasonable quality with all scoring [++] or [+], although there are limitations in terms of outcome measures, drop out and contamination, study design and data presentation as discussed for individual studies below. Those studies which employed an RCT (or cluster RCT) design generally scored best overall on the quality rating scale, with five out of eight papers scoring [++] after making allowances for blinding etc. Studies which employed a case control, or mixed methods design were most likely to score [+]. Each type of study design included a variety of types of intervention and the populations varied in terms of their size and qualifying measures of vulnerability. Those studies of poorer design may create bias as it would be easier for them to generate positive results. It is therefore important to keep in mind the potential of study design to affect the quality of the results presented (that is; lesser quality designs may present less reliable results). Table 4.4 provides a summary of the significance and direction of effect for each outcome measure. The individual studies are discussed in detail below.

4.5.1 Delivery of the intervention

Starting Well was delivered by health professionals (dedicated health visitors) and paraprofessionals (including lay workers), (Mackenzie et al. 2004Shute and Judge 2005). The Family Partnership Model was delivered by specifically trained health visitors (Barlow et al. 2007), the Avon Premature Infant Project was delivered by nursery nurses or Special Educational Needs nurses who had received training in child protection and counselling (Johnson et al. 2005), and Social Support and Family Health was delivered by health visitors (Wiggins et al. 2004).

In contrast, Home Start (Barnes et al. 2006, Barnes et al. 2009) was delivered by trained volunteers, and Home Visiting (Ford et al 2009) interventions were delivered by trained volunteers or project workers who were not health professionals; although did have qualifications in the fields of childhood and/or

early education (Barnes, personal communication). The Peer mentoring home visiting programme (Cupples et al. 2010) was delivered by mentors (existing mothers who were not health professionals).

4.6 Intervention impact

The heterogeneity of the interventions' aim, design and outcome measures used preclude a meta-analysis of their results. We have therefore completed a narrative synthesis of the data, primarily in terms of study impact, design, type of intervention and outcome. The studies present varied levels of detail on the interventions and how they were implemented, the population under study, and the results they obtained. Where only brief details are presented here the authors did not give any further information on the intervention or population, or further detail of their results (including little or no statistical data in some cases).

4.6.1. Home Based Interventions

We identified nine papers, which reported on seven studies.

Family Partnership Model.

Barlow et al. 2007 (RCT [++]) conducted an evaluation of the Family Partnership Model with 131 vulnerable pregnant women in 2 UK counties (the authors do not state which counties). The intervention consisted of 18 months of weekly home visits from a specifically trained health visitor (mean 41.2 visits). The programme was compared to standard care which consisted of a mean of 9.2 home visits by a health visitor. The participants were followed up at 2 months, 6 months and 12 months using a CARE index evaluation of mother-infant video interactions.

The CARE index was used along with the following scales: General Health Questionnaire, Edinburgh Postnatal Depression Scale, Adult Adolescent Parenting Inventory, Parenting Scale of Competence/Confidence, What Being the Parent of a Baby is Like, Social Support Questionnaire, Rust Inventory of Marital State, Rosenberg Self Esteem Inventory, Generalised Stress Efficacy Scale, Parenting Stress Inventory, HOME inventory, Brief Infant-Toddler

Social and Emotional Assessment, Bayley Scales of Infant Development, Infant Temperament Scale, parent report of infant wellbeing, and health visitor child protection data.

Community midwives attached to 40 GP practices screened women for inclusion in the study. Of 433 screened by the midwife, 151 were excluded by researcher (no reasons for exclusion are provided, although women without a working understanding of English were excluded). There was a 3% drop out from the intervention and less than 10% attrition from follow up. Of the 131 who consented, 68 were randomised to the intervention and 63 to the control group. The study population were 36% single parent, 20% eligible for free school meals, 92.5% White, 16% home owners, 84% renting, 28% working, 42% caring for home, 13% unemployed, 6% disabled, 35% no educational qualifications, 18% aged over 17 years, 6% no support network, 27% unhappy childhood, 36% children with behaviour problems, 24% had social worker, 12% physical illness/disability, 64% had mental health problems, 18% partner with mental health problem, 55% had housing concerns, 36% unwanted pregnancy, and 30% previous attendance at court for self/partner for criminal reasons. The intervention and control groups were not statistically different across the whole range of demographic measures.

No statistically significant differences between the intervention and control groups were found at 2 months or 6 months. A couple of associations reached significance at 12 months; Women in the intervention group were more sensitive to their babies than those in the control group at 12 months ($p=0.04$) and their babies were more co-operative ($p=0.02$). There were no significant differences between the intervention and control groups on the HOME inventory measures, Bayley Scales of Infant Development, number of child protection issues, or number of children being removed from the home at 12 months. There was also no significant group, time, or time by group effects for parent-report measures at 12 months. The cost of providing the intervention was calculated as £3246 mean per infant greater than standard care. The authors state that the “programme seemed to have increased the number of

cases of abuse identified in the intervention group" although no data or further explanations of this statement are provided.

The study report provides good demographic details of the population under consideration, and has acceptable processes for randomisation (although only brief details are given on these processes). A wide variety of self (parent) reported outcome measures were used although these were appropriate in the situation and were supported by practitioner data relating to the child. The authors defend the large number of outcome measures as a response to the holistic nature of the intervention. Many of the outcomes favoured the intervention group but were not statistically significant suggesting that the study was underpowered. At 12 month follow up data was available for 90% of the baseline population which is an acceptable attrition rate over this time scale. At 12 months the study found a small number of positive associations between the intervention and outcomes in the intervention group (verse the control group) but due to the large number of outcome measures considered it is possible that the limited number of positive associations occurred by chance. This study therefore only provides tentative evidence for the possible benefits of intensive home visiting by health professionals on the social and emotional wellbeing of 0-18 month olds and their families.

Home Start.

Barnes et al. 2006 (Cluster RCT [++]) conducted an evaluation of Home Start involving 161 Home Start schemes (stratified by region), excluding any that were in Sure Start areas, and those that were new, experiencing organisation difficulties, or already developing and offering support for new mothers. Forty two Home Start Schemes (26%) agreed to take part. A Social Disadvantage Screening Index was used to identify at risk families from those who consented to take part in the study. Eligible participants were referred to their local Home Start scheme. Those who received two or more home visits were considered to have received the intervention. The volunteer home visitors, mainly parents form the local area, all received 10 half day sessions of training. The frequency and length of visits was decided by the parents and volunteer. 25 schemes were included in the intervention arm, with 17

comparator schemes. Subsequently one interventions scheme withdrew leaving 23. The inclusion criteria included pregnant women or new mothers within 8 weeks of birth, who were at least 18 years of age, were able to understand English and scored 9 or higher on the Social Disadvantage Index (N=274 intervention, 253 comparison).

Groups were subdivided, at a later stage due to many of those referred to the service in the intervention areas not being offered the intervention by Home-Start, into 3 arms; intervention, control ("usual care"), and not supported (living in the intervention area, but not supported). 92 of the 96 in the intervention group who received the support completed both research visits. 178 of the 274 referred to the intervention were not offered the support, due to capacity problems of the provision. Once this become evident the research team added a third (not supported group) and 130 of the 178 were approached for research visits (it was too late to include the remainder). Of the 130, 97 agreed but it was only possible to complete both baseline and 12 month visits for 66 of them. In the comparison group 196 of the 253 eligible agreed to the research visits and 179 completed both baseline and outcome visits. There were some demographic differences between groups; the intervention group had on average more children, more educational qualifications, fewer were in employment and fewer were white than the comparison group. The non-supported and intervention groups did not differ. Since this difference in recruitment was identified, a matched controlled group of 92 mothers was identified from the 179 of the comparison group who received both research visits for subsequent analysis.

The intervention group (n=96) had the following characteristics: mean age 29, had mean 2.3 children, mean area deprivation score 4.1 (SD 14.3), White mother 78%, single 18%, married, and living with spouse 50%. The mother's qualification level was degree 20%, A level 8%, GCSE 27%, other 32%, none 8%. The mother's occupation was professional 9%, intermediate 17%, lower supervisor/technical/semi routine/routine 22%, never worked/unemployed/ student 48%. The father's qualification was degree 15%, A level 8%, GCSE 29%, other 18%, none 13%. The father's occupation was professional 9%,

intermediate 22%, lower supervisory 44%, never worked/unemployed/student 12%. This group was compared with a group of matched controls to overcome initial differences between the populations in the intervention and control areas.

The evaluation interviews measured: HOME inventory, Parenting Stress Index, Maternal Social Support Index, length of breastfeeding time, healthy eating scale, and reported use of services. At 2 months mother's mean responsivity to infants (mean change 8.1, $p< 0.05$) involvement in infant activities (3.5, $p<0.01$) and mean total HOME involvement score (3.5, $p<0.01$) was lower for supported mothers than the control group. Supported mothers had more materials in the home for babies to play with (6.1, $p<0.05$). At 12 months maternal responsivity (10.1, $p<0.01$), learning materials available (8.1, $p<0.05$) and organisation of the home environment (4.9, $p<0.1$) was lower in the supported group. The authors report that Mothers in the control group overall made more positive changes than the intervention group. The only positive change associated with the intervention was that there was a greater reduction in parent-child relationship problems between 2 and 12 months for those receiving support ($p<0.05$). Other measures showed no difference between groups.

Again the authors report sufficient demographic details of the population and although there were concerns over differences between the intervention and control group. Only one of many outcome measures (reduction in parent-child relationship problems) showed a positive association with the intervention which raises concerns over whether this could be due to chance (as discussed for Barlow et al 2007, above). However, the one outcome measure showing the positive effect with the intervention (parent child relationship) is the one most directly related to the social and emotional wellbeing of the child which may allow the intervention to be considered in a slightly more positive manner in terms of its effectiveness in improving the social and emotional wellbeing of children of young parents aged 0-12 months and their families.

Participants were initially allocated to intervention or control depending on which area they were resident in (cluster trial), this was later adapted to produce matched controls to control for population differences between the areas for a second paper by Barnes et al. (2009 [++]). This time the focus is on preventing maternal depression. For this analysis the structured Clinical Interview for Diagnostic and Statistical Manual, Depression section from the Mood Disorders Module, Edinburgh Postnatal Depression Scale, Parenting Stress Index, Maternal Social Support Index, and Infant Characteristics Questionnaire were reported.

At 12 months the rate of major or minor depression from 2-12 months in the supported group was not significantly different from the control group. Almost one third experienced depression during the intervention period. Volunteer support had no identifiable impact on maternal depression from 2 to 12 months or on depression symptoms when infants were 12 months. The support offered varied between intervention sites and there were demographic differences in the intervention versus control group.

This second papers focused on maternal depression and found that the intervention did not significantly reduce the chance of depression for the first year after birth. In both of these reports, the authors suggest that it may be more beneficial for the intervention to be conducted by a professional rather than volunteer. This intervention suffered from a relatively high rate of refusal to accept support. The authors suggest that an intervention delivered by a professional may be seen as more valuable by the community and therefore the rate of refusal to be involved in the intervention may be reduced.

As discussed above, problems with participation refusal were overcome by creating a third arm of matched controls for the study. As this second paper focuses on maternal depression its conclusion are less directly related to child social and emotional wellbeing, although maternal depression is known to have an indirect effect on this.

Taken together these two papers (Barnes et al. 2006, Barnes et al. 2009) provide limited evidence to suggest that the Home Start intervention may have a positive effect on the emotional and social wellbeing of children of young parents aged 0 to 12 months and their families.

Peer mentoring programme. Home visiting plus telephone support.

Cupples et al. 2010 (RCT [++]) conducted an evaluation of a peer mentoring programme delivered in deprived post codes of Northern Ireland. The intervention consisted of a home visit or a telephone call by a mentor (non-professional) twice monthly during pregnancy and monthly for the following year. Mentors, aged less than 40 with one child under 10 years were recruited via advertisement, and received 6 hours initial training with further 2 hour training sessions 6-8 weekly. They were paid per hour (plus travel costs) and were in contact with a midwife throughout the course of the intervention. Despite this, the intervention experienced high number of mentor resignations (22 of the 32 had to be replaced). The mean number of visits was 8.5 (S.D. 9.3), although 16% of participants reporting having no visits at all. The control group received normal post-natal care (which is not further described).

Midwives recruited first-time mothers to the study at their first hospital antenatal visit. 534 fulfilled the inclusion criteria and were invited, of which 343 took part (172 in the intervention and 171 in the control group). The study population were English speaking, first time mothers, age 16-30 years (mean age 22 years), gestation less than 20 weeks, (mean gestation 14 weeks), with no previous miscarriage and no ongoing co-morbidity, living in postcodes of lowest tertile deprivation scores in Northern Ireland. 44% owned their home, 55% rented, 56% lived in a household where someone owned a car, and 50% in household where someone was unemployed. 13% had no educational qualifications, 55% A level, and 21% degree/professional qualification. 44% smoked, but 55% did not consume alcohol. In terms of pregnancy desire, 52% wanted to be pregnant later, 26% wanted to be pregnant then, 18% wanted to be pregnant sooner. Their mean maternal attachment score was 78.8, and their mean maternal self-efficacy score 33.4. The control group, who were not resident in target postcodes were not significantly different to the

intervention group. In the intervention group 32 were lost to follow up, 83 discontinued the intervention but took part in the follow up assessment, and 135 completed the follow up FU assessment. In the controls 19 were lost to follow up, and 145 completed the follow up assessment.

The evaluation was assessed using the following outcome measures: Bayley's Scales of Infant Development (BSID), Parenting Stress Index, questionnaires on parental self efficacy, maternal attachment and lifestyle, mothers physical mental wellbeing, infant feeding, the use of health and social care services (SF36), primary health records at a 9 month home visit, and routine hospital visits. At one year the primary outcomes were reassessed. Using non imputed data there were no significant differences between groups in Bayley's infant development scores or maternal physical or mental health scores (using SF36) (p values ranged from p=0.08 to p=0.98 for the different domains). There was borderline significance using imputed data which the authors describe as unlikely to be of clinical significance; For SF-36 the physical functioning domain showed a mean difference of -5.7 (95% CI -11 to 1.0) p=0.05. For the BSID, the motor quality domain showed a mean difference of -3.42 (95% CI -6.88 to 0.04) p=0.05). No other domains approached significance. There were no differences in infant growth, breast feeding, hospital admission, or changes in smoking alcohol or drug use. The authors report that the primary outcome measures were well validated but may not be sufficiently sensitive to detect intervention effects in the UK health care system. There may be the potential for longer-term rather than short term benefits.

The main outcome measures used here were Bayley's Scale of Infant Development which was assessed by observer blind to group allocation, and mothers health at one year, which was self reported but used SF-36, therefore improving its validity. The study reported sufficient detail on both the populations, but less information on how the intervention was actually carried out. Although it is stated that the control group lived outside the catchment area for the intervention, the RCT is not described as a cluster design. In terms of social and emotional wellbeing, the Bayley's scale is the most

relevant outcome measure, but only one domain of this approached statistical significance between the intervention and control groups, suggesting that the impact of the peer mentoring intervention on the emotional and social wellbeing of deprived new born children and their families (including mothers during pregnancy) is negligible.

Home Education Activities.

Ford et al. 2009 (RCT [+]) conducted an evaluation of a home educational activities programme (funded through the Sure Start scheme) in economically disadvantaged areas of Wales. Participants were recruited from districts identified by the local LEA as having markers of social deprivation. Head Teachers provided contact details for children on their enrolment lists and potential participants were invited by letter. This was a small scale study; the population (N=60, 90% White, 10% Asian.) included socio-economically disadvantaged families with children aged 3 years old. Half of the families were young single mothers, and the majority were in receipt of unemployment or sickness benefits. In 85% of families, the primary caregiver had left school at 16. English was the primary language in all homes. There were no significant differences between the intervention and control groups, with 16 boys and 14 girls in each. The control group had mean age 36.7 months and the intervention group mean age was 37.0 months. The intervention and control children attended the same part-time nursery. Children with a profile suggestive of developmental delay were excluded.

The intervention consisted of a parent-delivered education programme called “Let's Play in Tandem” which aimed to develop school readiness included pre-reading skills, numerical skills, and general knowledge. Children participated in the programme for 12 months and a project worker was assigned to each family who were visited once a week for 90-120 minutes. The family received a pack of 3 activities; one for vocabulary and general knowledge, one for pre-reading and one for numerical skills. The activities took at least 20 minutes each to complete. Regular newsletters and social events for parents were provided and parents were asked to keep a diary of progress. The intervention was delivered in 4 stages of 10 weeks and

participants were followed up at 12 months; 6 intervention families were lost to follow up. The control group were encouraged to attend other Sure Start interventions in the area. The evaluation measured nursery tests of academic ability (knowledge of name/address, colours, non-word repetition, perceptual discrimination, letter recognition, rhyme test, understanding size length quantity, and counting) using validated scales: the Schedule of Group Skills assessed by a project worker at baseline, and the 4 Counties Foundation Stage Profile measured at four months by a teacher.

The intervention group outperformed the control group on all measures of academic ability (reported as composite t test scores): name, address, colours (4.02), pre-literacy skills (5.18), basic numeracy (3.23), all $p<0.01$. Teacher ratings of listening and communication skills were also higher for intervention children compared to the controls $p<0.01$ and $p<0.05$. There were significant differences for the inhibitory control and vocabulary scale $p<0.01$ in favour of the intervention group, but no difference between groups for theory of mind test or digit forward recall. The authors suggested that there is a need to identify which parent behaviours are most influential and included pre-intervention assessments as outcome measures. They suggest the evaluation should include the research contribution of an entry level academic and consider the associations between cognitive abilities and child progress during subsequent years of schooling.

The paper includes an unusually complete account of the intervention but very little data on how the data was collected and analysed and only basic demographic information for the populations (although the authors state that interventions and controls were matched on a number of important variables (including age, gender, school attended, level of education of primary care giver and family income), little or no detail of these variables is given. The outcome measures at four months were teacher reported and intervention group consistently out-performed the control group across the range of measures (although this does not account for any teacher biases as teachers could not be blinded to the intervention). The authors state that the control subjects were encouraged to attend other Sure Start projects in the area

(before they entered the intervention a year later) but they do not report on what percentage of the control group chose to take up this offer, nor do they take into account the potential effects of attending other interventions. In terms of child social and emotional wellbeing, these outcomes measures are directly relevant measures of child development and the intervention is positively associated with each outcome measure, therefore this study provides reliable evidence that this intervention is likely to have a positive effect on the emotional and social wellbeing of pre-school children (aged 3) and their families.

Avon Premature Infant Project.

Johnson et al. 2005 (RCT [+]) conducted an evaluation of the Avon Premature Infant Project. Infants were recruited at birth to the study which had two intervention arms: in the first "Portage" arm, parents received a developmental educational programme consisting of activities to introduce parent to aspects of their child's development using a method of teaching described as a task analysis approach. The second arm "Parent advice" was a parental support intervention consisting of a series of seminars and individual and group work using a supportive counselling model. Both interventions were carried out by either a nursery nurse or SEN nurse who had received training in child protection and counselling with structured weekly supervision from a clinical psychologist. Nurses in both arms of trial received training in the parent advice intervention. Interventions began on discharge home from hospital and visits were weekly for the first few months, and then 2-4 weekly for a year, and then monthly up till around 2 years (as requested by parents). The control group received standard care which is not further described. The intervention lasted for 2 years and participants were followed up for 5 years.

The study population consisted of parents of (n=187) infants born at less than 33 weeks gestation. The mean maternal age was 26.9 years, with half of the infants being an only child (50%), and half of the families having a non-manual SES (45%). There was 68% car use by the mother, and 9% were single mothers. No further demographic details are given. Control infants were of normal gestation and therefore considered to be less vulnerable. 334 parents

were recruited to the study, 328 were randomised, and 284 entered the study. 240 participants were available for follow up at 2 years, and 187 at the 5 year follow up. There were baseline differences between the groups in social and demographic factors including maternal age, non-manual occupations, use of a car, and living with both parents.

Evaluation measures included the British Ability Scales, Movement ABC, and Child Behaviour Checklist. There were no significant differences between any of the groups on cognitive development scores (BAS), verbal reasoning, or spatial ability at five year follow up, and no significant difference between groups in motor development or child behaviour. The developmental advantages which had been reported at two years were therefore not persisting at 5 years. The authors suggested that interventions which commence after birth rather than after discharge from hospital may be more advantageous as this may have resulted in a delay of 2 or 3 months between birth and the start of the intervention for some families.

This intervention was followed up for five years which is exceptional within the studies reported in this review. However, as a result of this long duration the rate of drop out was substantial with only 66% being available for follow up at 5 years and as a result, previously significant associations seen at two years did not persist at 5 years. There were statistically significant differences between the responders and non responders at five years in terms of their general quotient score at 2 years (higher in responders), socio economic status (manual worker) (lower in responders) and car use (higher in responders) (all $p<0.001$). The outcome measures were directly relevant to child development and behaviour but did not show any positive associations between the intervention and improving social and emotional wellbeing suggesting that this intervention is an ineffective way of improving the social and emotional wellbeing of deprived premature children (and their parents) in the first five years of life. However, this follow up was over five years and it may be that many other interventions would lose significance if the populations were followed up over five years as follow up times for other studies presented here were much shorter.

Starting Well.

Two authors reported on Starting Well Interventions.

Mackenzie et al. 2004 (Quasi experimental [+]) conducted an evaluation of the intensive home visiting programme Starting Well. A dedicated health visitor approached all families with newborn children for consent, yielding a total of 627 participants (50% of all births), these were assigned to the study population groups (n=367 intervention, 260 control). 359 participants completed both baseline and 6 month assessments, 294 completed all three assessments to 18 months. These sub-samples represent 57.3% and 46.9% of the initial sample, respectively.

The project team for each area consisted of a health visitor coordinator, Starting Well health visitors and health support workers (lay), plus a bilingual worker in one area. Health visitors use a number of standardised tools to structure their visits. They included: a core visiting schedule (number of visits and age-related health topics), a family health plan, and a family support scale (staff assess vulnerability of families at different stages). The project team members received intensive training on a wide range of issues including child development & protection, domestic violence, speech and language, and accreditation on a Triple P Programme (an Australian parenting programme). The local Implementation Groups included representatives from statutory and voluntary sectors, and from the community. The project remit, as defined by the authors included the “identification and addressing of community level issues pertaining to child and family health” (no further detail or description of this is given). An annual budget of £20,000 was used to support activities of local organisations that joined a Starting Well Affiliation Scheme. The Community Support Facilitator provided a bridge between the home visiting teams & local implementation groups. Control families were located outside the Starting Well area and received statutory health visiting (which is not further described), they were not significantly different to the intervention population.

Characteristics of the intervention population were: minority ethnic mother 16%; mother no qualifications 24%; no car in household 43%; not homeowner 63%; workless household 36%; higher income households (>£1000/month after tax) 28% (there were no statistically significant differences between the intervention and control group). They were assessed on a maximum of 3 occasions: immediately after birth, and at 6 and 18 months. The evaluation measures included Quality of the home environment (HOME inventory), maternal depressive symptoms (Edinburgh Postnatal Depression Scale), child dental registration and measures of maternal service satisfaction. Lower rates of depressive symptoms were seen among intervention mothers at 6 months but not at 18-months. There was no improvement in the quality of the home environment at 6-months but a small (non significant) positive effect at 18-months ($p = 0.88$) Higher levels of client satisfaction were associated with levels of health visitor support and higher levels of dental registration at both assessments. Minority ethnic mothers achieved lower HOME scores and were more likely to suffer from high levels of depressive symptoms (but HOME inventory and EPDS are not yet validated in British Asian cohort). The authors stated that they needed more sophisticated multi-level analyses to help tease out the relative contribution of individual & area- level factors to outcomes. More longitudinal data and analysis would be necessary to determine the longer-term clinical and social significance of these intermediate outcomes and to assess the extent to which a 'step-change' in child health has been achieved. They also suggested it may be valuable to determine whether or not Starting Well had a direct influence on more child-centred outcomes such as readiness for school in general or cognitive development in particular.

Again this document is a large evaluation report.. There is substantial information on the study population and the effectiveness study is backed up by a significant amount of contextual data. However, the study design is not as rigorous as that for an RCT and as a result of this the paper scores less well on the quality grading scale. Some of the outcomes measures used were not validated in the whole population which questions the validity of the results. Also the most relevant outcome measures were measures of maternal

depression and home environment, which although related to, are not direct measures of child social and emotional wellbeing.

Shute & Judge 2005 (quasi-experimental [+]) also reported on an evaluation of a Starting Well home visiting programme (based in a disadvantaged area of Glasgow). They describe Starting Well as an intensive home-visiting service delivered by a team of trained health professionals and lay workers. It includes topic-specific initiatives (home safety, encouraging and modelling play), enhanced support for minority ethnic families, and the Positive Parenting Program. In addition to the home visiting support, the intervention includes methods for building links between the community and pre-school agencies and developing new resources. Families within the eligible geographical boundaries were recruited by project health visitors. 50% of eligible families opted to join the intervention from the control area which the authors state was "proportionally more so from the intervention area". Three health visiting teams providing "normal care" formed the comparison group (N = 359, 213 intervention, 146 control); no details of the normal care are given. The programme duration was 6 months.

The intervention participants were recruited from disadvantaged areas and their characteristics were: mean 39 weeks gestation, mother age 29, mother's self esteem score 21, 2 children in household, 50% male, 49% female participants, 49% first time mothers, low birth weight 9%, 12% single parents, 16% minority ethnic mothers, 34% mother smoker, 24% mother no qualification, 43% no car in household, 63% not homeowner, 36% workless households, and 28% "higher income" households (not defined). The intervention group was more disadvantaged on most measures (with significant difference for percentage of higher income + ethnic minority mothers) than the control group. There was a significant difference at baseline in terms of higher income households (49% controls versus 28% intervention p<001).

The evaluation measured: HOME Inventory, Edinburgh Postnatal Depression (PND) Scale, and mother self reported child Dental Registration. No difference

between groups was seen on scores above the Edinburgh Postnatal Depression Scale threshold for postnatal depression (zero difference CI -8.1 to 7.6). Controlling for background characteristics intervention group mothers were less likely to be above the threshold for PND (OR 0.23 p=0.02). A significantly greater number of children in the intervention group were reportedly registered with a dentist (p=0.001 CI 9-28.3). No significant difference was found for the infant/toddler HOME Inventory scores between interventions and controls (p=0.07 CI -0.06 to 1.94). Ethnicity and background characteristics relating to material resources were important predictors of outcome. The authors acknowledge that it is unclear which part of the package produced the effect, and that there are possible opt-in and completion biases. Importantly, only 57% provided follow up data.

This study is limited by differences between the intervention and control group (although these were later controlled for) and a substantial drop out rate, with only 57% providing follow up data at 18 months. Also only 50% of those eligible for the intervention chose to take part. Some of the outcome measures are not related directly to wellbeing (e.g. dental health) and others relate to the mother or the home environment rather than directly to the social and emotional wellbeing of the child (although they are related factors).

These two papers together provide little robust evidence for the effectiveness of this Starting Well intervention in improving the health and social wellbeing of socially deprived children directly, although there was some effect on maternal depression..

Social Support and Family Health.

Wiggins et al. 2004 (RCT [++]) conducted an evaluation of Social Support and Family Health in the London boroughs of Camden and Islington. The programme included two interventions. The Support Health Visitor (SHV) intervention consisted of the offer of monthly home visits by an SHV for 1 year. The structure of the visits was informal, with a focus on listening to the woman and exploring any issues she wanted to discuss. The women could request more or less frequent visits and could also ask that the visits took

place at an alternative venue (no further details are given regarding this). Interpreters were provided for the intervention visits where necessary. The Community Group Support (CGS) intervention arm of the study consisted of the offer of support from one of eight local community groups in the voluntary and charitable sector that provide support and services to postnatal women and their babies. The nature of the intervention was dependent on the standard services operated by each group. These included drop-in activities, home visiting and telephone support. Routine NHS health visiting services were available to women in the control group and both intervention arms. In the study area these health visiting services involved the postnatal home visit when the baby was 10–15 days old and clinic support thereafter; subsequent home visits were not routinely made, except for women deemed to be at moderate or high risk. Women in all three trial arms were able to access available local community group services (standard health visitor services).

The study population consisted of women living in the boroughs who gave birth in the first nine months of 1999 (N=731). Housing tenure, lone parenthood and parity were used as stratifying factors. Follow up was conducted at 12 and 18 months post randomisation with 90% at 12 months and 82% at 18 months. The population characteristics were: first time mother 49%, mean 30 years at birth of baby, mean baby age at baseline 9 weeks, mother 'White' 58%, lone parent 27%, education less than 16 yrs 11%, weekly household income less than £200 56%, and living in public housing 69%. Participants were allocated to the three arms of the trail at random: support health visitor intervention n=183, community group services intervention n=184, and control group n=364.

The evaluation measured childhood injury, maternal depression (Edinburgh Postnatal Depression Scale), smoking, GCHQ12, Duke UNC functional support social support scale, health service use, infant feeding, child use of medication, self reported assessment of mother's health and child's health, and experiences of motherhood.

There was no evidence that either intervention reduced depression RR 0.86 (CI 0.62-1.19) for SHV and RR 0.93 (CI 0.69-1.27) for CGS. Maternal smoking levels were not significantly reduced RR 0.86 (0.62-1.19) for SHV and 0.97 (CI 0.72-1.33) for CGS. Maternal anxiety about child health and development reduced for women in SHV intervention group only (RR 0.7 CI 0.51-0.95). At first follow up SHV women had made more use of a health visitor for their own needs than the control group (RR 2.87 CI 1.25-6.58), and fewer SHV children had been taken to the GP or hospital doctors and more had visits from health visitors at home (RR 0.77 CI 0.62-0.97 & RR 2.41 CI 1.02-5.71). At second follow up a greater number of GCS intervention women were concerned about their child's eating habits than the control group (RR 1.49 CI 1.06-2.09), more SHV women than the control group had talked on the telephone to health visitors and seen a social worker(RR 7.29 CI 2.06-25.77 and RR 4.64 CI 1.22-17.71), and fewer women from both intervention groups made use of a midwife compared to controls (RR 0.35 CI 0.15-0.82 & RR 0.43 CI 0.2-0.91). The proportion of children with injuries requiring medical attention was not significantly different between groups and there were no significant differences in child health or infant feeding outcomes. The authors commented on the low uptake of the community group intervention and stated that having two interventions reduced the power of the study.

The population characteristics were well reported in this study as were the methods of allocation and data analysis which were consistent with minimising bias throughout. The range of outcome measures were varied including mostly self reported measures (and maternal depression was measured at three time points using two validated scales), but all outcome measures were associated factors rather than direct measures of child social and emotional wellbeing. The primary outcome of this study focuses on the mother's wellbeing, and is therefore strongly associated with child wellbeing despite not being a direct measure. Therefore this study provides good evidence for the indirect effect of Social Support and Family Health on the social and emotional wellbeing of children in their first year of life (as well as a more direct effect on their mother's wellbeing).

Summary

We identified seven studies of home visiting interventions. Overall, these studies provide little evidence to support home visiting interventions to improve both child and maternal wellbeing. Several studies included a wide range of outcome measures of which only a couple indicated a positive association between the intervention and child emotional and social wellbeing, other studies were not able to show any positive associations. Although there were some direct measures of child emotional and social wellbeing (child behaviour for example) many outcome measures were less directly linked to child wellbeing (e.g. maternal depression, quality of home environment), however, these factors will all have an indirect effect on child wellbeing to varying extents.

UK Effectiveness Studies Evidence statement 1:
Home visiting programmes

Evidence from seven studies (primarily of good quality) suggests that some home visiting programmes may be effective in directly improving social and emotional wellbeing of vulnerable children. The extent of effect depends to some extent on the type and nature of intervention being delivered, and the particular outcomes measures. Some outcome measures were indirectly linked to the social and emotional development and cognitive development of the child, concerned with parental support and home environment. Many of the outcomes were self reported introducing potential biases into the studies.

The heterogeneity of interventions across the small number of studies made it difficult to identify clear categories; and difficult to discern clear relationships between particular types of interventions and outcomes. However some distinction was evident. The more structured intensive interventions (with a focus on child-mother interaction) delivered by specifically trained nurses during first 18 months appears more likely to have positive effects (the Family Partnership Model). The lower intensity, less structured interventions involving lay providers (Home Start, peer mentoring) are less likely to have positive effect on the social and emotional wellbeing of vulnerable children.

- **Mackenzie et al. 2004 quasi experimental [+] / Shute and Judge 2005 quasi experimental [+]:**

Starting Well: “intensive home visiting” programme delivered by health

professionals and health support workers to socioeconomically deprived parents of newborn children up to 24 months (Glasgow). Positive effect on home environment; but methodological limitations meant the studies provided little robust evidence of effectiveness on social and emotional wellbeing.

- **Barnes et al. 20006/09 cluster RCT [++]:**

Home Start: a volunteer home visitor programme offering 'unstructured' mainly social support to vulnerable families with newborns consisting of two or more visits over 12 months provided by lay, local volunteer mothers Positive effect on parent child relationship; no effect on maternal depression.

- **Ford et al 2009 RCT [+]:**

Small scale home visiting ('intensive compensatory education') programme consisting of weekly visits for 12 months delivered to three year olds by project workers (in economically disadvantaged area of Wales). The intervention was a parent delivered education programme aimed at improving school readiness. Positive effect on academic readiness and inhibitory control.

Barlow et al. 2007 RCT [++]:

Family Partnership Model: a home visiting programme consisting of 18 months of weekly visits from a specifically trained health visitor (in 2 UK counties). Positive effect on small number of outcomes, including maternal sensitively and infant cooperation.

Johnson et al. 2005 RCT [+]:

Avon Premature Infant Project: a home visiting programme with parental child developmental education and support (using counselling model) arms delivered over two years by nurses. At five year follow up a development advantage was identified, but at 2 years this was not evident.

Wiggins et al. 2004 RCT [++]:

Social Support and Family Health: a home visiting programme delivered by a health visitor providing 'supportive listening', weekly and then monthly over two years (in London: Camden and Islington). Possible effect on maternal health reported.

Cupples et al. 2010 RCT [++]:

Peer Mentoring Home Visiting Programme: a home visiting programme delivered by recruited existing mothers twice monthly during pregnancy and monthly for following year (in deprived post codes in Northern Ireland). Negligible effect on social and emotional wellbeing.

4.6.2. Early education interventions

We identified two studies looking at the evaluation of interventions conducted in early years education settings.

Early Education Pilot

Smith et al. 2009 (Case control effectiveness data in mixed method study [+]) conducted an Evaluation of the Early Education Pilot. The pilot provided free early years education to over 13,500 disadvantaged two year olds between 2006 and 2008. The main purpose of the pilot was to improve children's social and cognitive outcomes, and to positively impact on children's parents and wider family. The intervention consisted of 7.5 (or in a small number of local authorities 12.5) hours of early years education per week for 38 weeks of the year. The pilot places were available in a variety of early years settings e.g. nurseries, play groups and with childminders.

Participants were selected on the basis of being disadvantaged: living in a target area (33%), being a low income family (19%) and being a lone parent (15%). The pilot children were more 'disadvantaged' than the general population of two year olds. A considerable proportion of families lived in the 20% most disadvantaged areas of the country (73%). There were many more lone parents amongst pilot families than the general population, and a higher prevalence of longstanding illnesses and disabilities amongst parents and children. Pilot children were identified as having more additional needs than the general population (most commonly difficulties with speech and language). Parents were informed about the pilot from a variety of sources, mostly from professionals or the early years setting. The population consisted of a random sample of children living in relatively deprived areas of England where the pilot was not operating, with a relatively large ethnic minority population. There were some baseline differences between groups (with fewer in control group on housing benefit).

The baseline child development assessment was conducted at age 2 and was assessed again at age 3. The evaluation measured development using the British Ability Scales, Sure Start Language Measure, and Adaptive Social Behaviour Inventory. There were no significant differences between the groups at age 3 on any measure. Sub-group analysis according to the quality of the educational environment scores indicated that settings with an Infant Toddler Environment Ratings Scale score of 4 or higher had a significant

impact on child language development compared to settings with lower scores, and also a significant relationship between quality of setting and improvements in the parent-child relationship. The authors hypothesised that lack of effect could be due to differences in delivery between areas or that more than half of the comparison group also used formal childcare.

The authors present full data on the demographic factors of the study population and there were no significant differences between the intervention and control groups. This is a large research report and a lot of data relating to the evaluation of the pilot is presented; only that relating to effectiveness is discussed here. The main outcome measures used here were validated measures of child ability and behaviour; as no positive associations were found between the intervention and the outcome measures these findings do not support the Early Education Pilot as an effective way to improve social and emotional wellbeing in disadvantaged two to three year olds. The problems with this study appear to be because half of the general population (serving as the control group in this study) accessed some kind of formal child care, thus contaminating the control group and masking any effects which the intervention may have had.

Child care facilities.

Toroyan et al. 2003 (RCT [+]) conducted an evaluation of child care facilities for all families living in the catchment area within the London Borough of Hackney. The intervention was delivered over 18 months at an Early Years Centre by qualified teachers with integration of education into health and social care. Full or part time places were available, as was extended care outside normal hours. The intervention exceeded national requirements for staff qualifications and staff to child ratios. The mean time children attended the centre was 211 days. The comparison group received “normal provision” and 43% of the control group attended some type of centre based child care.

A total of 123 families were eligible (who lived within the catchment area), 120 gave consent and were randomised (N=143 children, 64 intervention, 79 control). For the intervention group, 53% of mothers were in paid employment,

the mean age of mothers was 31 years, 42% had a total weekly household income of less than £200 (the authors give no other income information), 61% were claiming means tested benefit, 60% had non white ethnicity, 21% were smokers, the mean general health questionnaire score 11.9, and 49% were living with a partner. For the intervention group children, the mean age was 26 months, the mean birth weight was 3200g, and the mean Griffiths scale quotient was 106.6. The control group were not significantly different on any of these measures.

The evaluation measured: maternal paid employment, smoking, educational courses attended by the mother, household income, self reported family health, reported number of close friends and help from family, child measures of Griffiths Mental Development Scales, child injuries needing medical attention, child infection/illness, child contact with a health professional, whether the child's health promotion reviews were up to date, occurrence of otitis media, whether the child's immunisations were up to date, and the mother's perception of whether the child was not developing normally.

Mothers in the intervention group were less likely to have a weekly household income of above £200 (risk ratio 0.88 CI 0.7 to 1.09). Fewer children in the intervention group had experienced an infection the previous week (RR 0.91 CI 0.72 to 1.16), but were more likely to have middle ear infection (RR 1.74 CI 1.02-2.96) and have visited a health practitioner in the previous month (RR 1.58 CI 1.05-2.38). The authors also present additional associations, but comment on the imprecise effect estimates of these. The risk ratio of mothers in intervention group versus control group being in paid work was 1.23 (CI 0.99 to 1.52), this result is compatible with chance. The mothers in the intervention group worked more hours per week than the control group; mean difference 7.57 (CI 2-13.75) and mental development was slightly higher in the intervention group (adjusted mean difference 2.89, CI-1.64 to 7.41). Therefore the provision of child care may have lead to increased maternal employment but did not have an effect on household income. The power of the study was constrained by sample size leading to imprecise effect estimates, and the authors suggest that as many of control group were in child care (although

part time) the associations may have been further diminished by this control group contamination. The population characteristics are well defined in this study and there were some differences between the intervention and control groups in terms of maternal employment and child mental development at baseline. As in the previous study the control group was contaminated by the routine provision of alternative child care which would have the ability to mask any effects the intervention may have. The study employed a wide range of outcome measures but these were at best, indirectly related to the emotional and social wellbeing of the child, and many were self reported (and therefore had the potential to introduce bias into the study). Therefore this study does not show any reliable associations between the provision of additional childcare facilities and the social and emotional wellbeing of socially deprived children (with a mean age of 26 months).

Summary

We identified two papers looking at the effectiveness of interventions conducted in early years education settings. In both of these studies a significant percentage of the children in the control groups received some element of formal child care introducing bias into the control group and making it difficult to assess the effects of the specific intervention as any positive effects are at risk of being masked by the contamination of the control group. Due to contamination of the control groups these studies cannot provide reliable evidence to suggest that interventions conducted in early years settings have the potential to improve child and maternal wellbeing in deprived populations. In addition, although Smith et al. (2009) used direct measures of child emotional and social wellbeing (child development and behaviour scales) the outcome measures in Toroyan et al. (2003) were less directly linked to child wellbeing (e.g. maternal depression, quality of home environment) and were often self reported, increasing further the chance of bias within the study, and therefore reducing the reliability of these results.

UK Effectiveness Studies Evidence statement 2:
Interventions in early years education settings

The two studies identified in this review provide insufficient evidence to judge the effectiveness of early education on the social and emotional development of vulnerable young children.

Weak evidence from the two studies suggests that early education interventions in early years settings does not have an effect in improving the social and emotional wellbeing of deprived children aged 2, as well as having little effect on further outcomes relating to both mother and child wellbeing (at child mean age 26 months). Only one of the studies considered outcomes directly related to the social and emotional development and cognitive development of the child and did not show significant effects. However contamination of the control groups (leading to small effect sizes) means the results of these studies are subject to substantial biases reducing reliability as any intervention effects may be masked.

Smith et al. 2009. Case control [+]: Early Education Pilot: which provided free early years education to over 13,500 disadvantaged two year olds (in deprived areas of England) in a range of early years settings. No significant effect at age 3yrs.

Toroyan et al. 2003 RCT [+]: Small scale evaluation of the integration of education within day care facilities (enhancing child care in terms of qualified staff and child-staff ratio) (Early Years Centre). Qualified teachers aimed to integrate education into health and social care (London: Hackney). Increased child care provision may have led to increased maternal employment, but not household income.

4.6.3. Sure Start National Evaluation Reports

We also identified four papers reporting on two impact studies of the national evaluation of Sure Start Local Programmes (SSLP). These papers look at the whole programme evaluation which had common aims set by central government. It does not evaluate the impact of the different interventions within the programme, although all sites were expected to provide the six core services of outreach or home visiting; family support; support for good quality play, learning, and childcare experiences; primary and community health care;

advice about child and family health and development; and support for people with special needs. But no details on these individual interventions are given.

Belsky et al. 2006 (Quasi-experimental [++]) reports on part of the National Evaluation of Sure Start Programmes. The Sure start areas were stratified by region, with 150 of the 260 areas randomly selected for the study. Families with 9-36 month old children in a Sure Start programme area (N=12575 at baseline) were compared to non-Sure Start families (N=1509 at baseline). The study population were; 73% White child, 79% English only spoken, 85% mother aged under 20 years. The equivalised weekly income of household divided into fifths was; 17.6% less than £126, 17.4% £126-167, 20% £168-216, 16.5% £217-338, and 19.9% above £338. Mother's education was degree or Higher Education 16%, A-level 22%, GCSE 23%, other 7.4%, and none 29.4%. Mother's occupation was professional or management 13.6%, intermediate 14%, small employer 2%, lower supervisor/technical 5%, semi-routine 27%, routine 17.9%, and 19.4% were unemployed. The final population included in the analysis were 3927 intervention and 1101 control; differences between the intervention and control group were not statistically significant.

The evaluation measured; Mother's area rating, observer's area rating, total support services used, total usefulness of support, Mother's malaise, supportive parenting, negative parenting, home learning environment, involvement of father, home chaos, birth weight, duration of breast feeding, frequency of child accidents, child hospital admissions, child social competence, child behavioural problems, child language expression and comprehension, and child spatial and number skills.

Mothers of children aged 9 months reported less home chaos (-0.33 $p<0.001$ 95% CI -0.48 to -0.18) in the intervention compared to the control group. Mothers of children aged 36 months in Sure Start areas reported greater parental acceptance (avoidance of scolding, spanking and restraining) than the control group (0.13 $p<0.001$, 95% CI 0.06 to 0.19). Some sub population differences were identified, for example, for teenage mothers and non

teenage mothers (better parenting, and better social function in children of non teenage mothers (not significant)) and single parents who did not work (lower verbal ability (not significant)) but there were no other significant group differences. There were some positive differences (fathers involvement, mother's area rating, children having accidents) associated with the programme being led by a health agency versus other agency but again these were not significant. An RCT was ruled out by the funding body, and due to the wide geographical spread of Sure Start some programmes had diverse elements. The authors conclude that the SSLPs seem to benefit relatively less socially deprived parents (with greater personal resources) but have an adverse effect on the most disadvantaged children. They point out that most families in socially deprived SSLP and comparison areas were disadvantaged and that the results show the small and limited effects of SSLPs varied with degree of social deprivation. Children from relatively more socially deprived families (teenage mothers, lone parents, workless households) were adversely affected by living in SSLP areas.

This paper draws on the national evaluation of Sure Start and as such has access to exhaustive demographic data as well as data on a large range of outcome measures which is summarised here. The large scale of this national study allows biases to be minimised. However study quality is limited as the funders refused to allow a RCT to be conducted which would have further reduced potential biases and given more reliable results. The evaluation draws on a wide range of outcome measures including direct measures of child social and emotional wellbeing (behaviour and development scales) as well as further indirect measures relating to maternal wellbeing, parenting and the area of residence, which have the potential to impact on the social and emotional wellbeing of the child. The fact that the benefits of the programme were greatest for those relatively well off, means that the effect on the emotional and social wellbeing of deprived children is limited.

Melhuish et al. 2008a conducted a Quasi-experimental study [+] as part of the National Evaluation of Sure Start (SS). Participants were randomly selected within SS areas, the most deprived areas were later excluded as no

comparison data could be found for these. Matched control areas were identified from the Millennium Cohort Study (MCS) by propensity score matching in non Sure Start areas using Indices of Multiple Deprivation and census. Of 12,575 infants aged 3 years and their families, 5883 were used in the analysis following exclusion of the most deprived areas. These were compared to 1879 infants in non SS areas.

The intervention population characteristics were: 50% male, 84% White, 89% English home language, 10% teenage mother, and 47% “below poverty line”. The mothers occupation was; 32% unemployed, 9% routine, 12% semi-routine, 9% lower supervisory, 7% small employer, 9% intermediate, and 23% management/professional. 26% were lone parents and 28% lived in a workless household. (This evaluation involved a follow up at age 3 for many of the 9 month old infants included in the first part of the Sure Start evaluation reported in 2006 study above.)

The evaluation measured; child immunisation, accidents, BAS naming vocabulary, child positive social behaviour, child negative social behaviour, independence, parenting risk index, home learning environment, father involvement, maternal smoking, life satisfaction, BMI, family service use, and mother’s rating of area. After adjustment for pre-existing background characteristics of children, families and areas, there were significant differences between groups which favoured the intervention for five of the 14 outcomes: higher child positive social behaviour ES 0.19 $p<0.0001$, higher child independence ES 0.17 $p<0001$, reduced parenting risk index (less negative parenting) ES 0.44 $p<0.0001$, better home learning environment ES 0.27 $p<0.0001$, and higher family’s service use ES 0.53 $p<0.0001$. Effects were stable for all populations and in all the Sure Start areas. There were no significant effects on vocabulary, negative social behaviour, father involvement, maternal smoking, maternal life satisfaction, BMI, mother’s rating of area or immunisations. 17% of the sample were lost to follow up, and there was no evidence of adverse effects. The authors point out that the results differ from the early part of the Sure Start evaluation in that it found no evidence of no subgroup –specific SS effects; beneficial effects could be

generalised to all subgroups including teenage mothers, and workless households. The authors report that conducting an RCT was not permitted by the funder.

Melhuish et al. 2008b is also reported as an impact evaluation report [++] from the Sure Start evaluation. This report states that the study population consisted of 11,118 children/families in the Sure Start project areas at 9 months of age were randomly selected to be approached to participate (9192 participated). 1879 Millennium Cohort Study (MCS) children provided a comparison group. There are some demographic differences between the MCS and SS populations, with the SS population having: more workless households, more lone parents, more White families, and more households where English was the only language. The characteristics of the study population were: not lone parent 74.1%, working household 71.7%, and workless household 28.3%., the highest education level in the household was: degree 28.2%, A level 30%, O Level 23%, other 7.9%, none 10.9%. No other demographics are reported at 3 years old.

The evaluation measured: childhood immunisations, children who had accidents, child positive social behaviour, child negative social behaviour, independence/self regulation, parenting risk index, home learning environment, father involvement, currently smoking, life satisfaction, BMI, service use, mother's area rating, and BAS naming vocabulary (cognitive and language development). Of the 14 outcomes 7 were significantly different between groups: and more SS children had; all immunisations (OR 1.46 CI 1.06-2.01 p=0.02) no accidents (OR 0.73 CI 0.58-0.93 p=0.009) child positive social behaviour (OR 0.38 0.009-0.67 p=0.01) independences/self regulation (OR 0.32 0.18-0.47 p<0.0001) better parenting risk index (OR -0.9 CI -1.11 to -0.69 p<0.0001) better home learning environment (OR 1.30 CI 0.75-1.86 p<0.0001) and better service use (OR 0.98 CI 0.86-1.09 p<0.0001). All these positive outcomes were based on parent self-report and the effects did not vary significantly across demographic subgroups. There was no evidence of adverse effects.

This study draws on the national evaluation of Sure Start and therefore (as was the case for Belsky et al.) has access to exhaustive demographic data as well as data on a large range of outcome measures. The evaluation draws on a wide range of outcome measures including direct measures of child social and emotional wellbeing (child positive and negative social behaviour, and child development scales) as well as further indirect measures relating to maternal wellbeing, parenting and the area of residence, which have the potential to impact on the social and emotional wellbeing of the child.

Previously Melhuish et al. (2005) reported a cross sectional impact study [+] as part of the National Evaluation of Sure Start. Potential study participants were identified with assistance from the Child Benefit Office (Inland Revenue). The study had a goal to recruit 12000 nine month olds and 3000 three year olds from 150 Sure Start areas and 50 soon-to-be Sure Start areas. The response rate was 84% resulting in 11316 Sure Start and 389 control 9 month olds/3 year olds.

The characteristics of the study population were as follows: Ethnicity of child was 76%/80.6% White, 5.2%/4.8% mixed, 1.2%/0.8% Indian, 5.9%/5.1% Pakistani, 2.5%/1.4% Bangladeshi, 1.5%/1.1% Black Caribbean, 4.3%/3.5% Other Black, 3%/2.7% other. In total 82.2%/84.3% were English speaking only, and 86.4%/86.8% mother not teenager at child's birth (13.6%/13.2% teenager). For household income the percentages were as follows: top quintile (£338+) 21.8%/15.8%, 2nd quintile (£217-338pw) 18.1%/28.1%, mid quintile (£168-217) 22.3%/18.6%, 4th quintile (£125-168) 18.9%/18.8%, bottom quintile (<£126 per week) 18.9%/18.7%. Maternal education was 14.1%/18.9% degree/Higher Education, 23.3%/23.5% A level, 24.1%/25.8% GCSE, 7%/8.8% other, 28.3%/23% none. Maternal occupation status was 17.3%/14% management/professional, 14.7%/13.2% intermediate, 2.2%/3.1% small employer, lower supervisory/technical 5.3%/5.8%, 27.9%/28.3% semi-routine, 18.6%/20.1% routine, 17.2%/15.5% unemployed. Maternal work status was not in employment 66.9%/66.1%, employed part time 11.7%/14.0%, and employed full time 21.4%/20%.

The intervention measured: child cognitive and language measures using subscales from the BAS, parental report of behaviour (hyper-activity, pro-social behaviour, independence, emotional regulation, overall behaviour difficulties), child physical health (birth weight, breastfeeding, accidents, hospital admissions by parental report), observed maternal responsivity, observed maternal acceptance, mothers report of household chaos, home learning environment, parent-child conflict, parent-child closeness, harsh discipline, father involvement (all mother report), mother's malaise, mother's self-esteem, local area ratings, and the type and number of services used.

The results showed only limited evidence of Sure Start impact. Beneficial outcomes were limited to sub-populations, and although some effects were beneficial, others were developmentally adverse. In all cases the effect sizes were small. The significant effects favouring Sure Start in 9 month olds were children admitted to hospital OR 1.25 (CI 1.03-1.52 $p<0.05$) in the unadjusted and adjusted analysis, and home chaos, adjusted and unadjusted analysis OR -0.31 (CI -0.46 to -0.15) (adjusted values given).

The significant effects favouring Sure Start in 3 year olds were adjusted mother area rating poorer in SS (% difference -0.74 (CI 1.46-0.02) $p<0.05$) and total service used (% difference 10.3 (CI 1.01-19.72) $p<0.05$). There was less negative parenting in SS areas (mother reported) -1.23 (CI -2.31-0.15) $p<0.05$. There was also variation in effectiveness of the interventions between delivery sites with 22.5% performing better than expected and 23.5% more poorly than expected.

As for the subsequent national evaluation reports discussed above, this paper draws on extensive demographic data and a broad spectrum of outcome measures (both directly and indirectly related to child emotional and social wellbeing). Again only a subset of the outcome measures showed a positive associations with the intervention and there were variations across the different settings questioning the validity of the results overall. Melhuish et al. (2007) also reported the links between implementation/fidelity and impact in

relation to exposure and reaching the most deprived groups. This paper is reported in section 7 of this report.

Summary

We identified four papers reporting on the National Evaluation of Sure Start. Due to the nature of Sure Start programmes, which had common aims set by central government but which could decide locally how these were to be achieved, , these papers could not consider the effect of any individual interventions delivered within the Sure Start programme. The studies consider a wide range of outcome measures relating directly and indirectly the social and emotional wellbeing of pre-school children. The studies consider a wide range of outcome measures relating directly and indirectly the social and emotional wellbeing of pre-school children. The studies considered different age groups as the evaluation progressed but associations were not always maintained over time. Questions over the effectiveness of the Sure Start programme for the most deprived children were raised in the early stage of the evaluation (Belsky et al., 2006), but later were not evident (Melhuish et al., 2008).

UK Effectiveness Studies Evidence Statement 3:
National Evaluation of Sure Start

Moderate evidence from two studies (reported in four papers) shows that the Sure Start programmes are effective in improving some outcomes among 9 months and 3 year olds relating directly and indirectly to the social and emotional development and cognitive development of preschool children (including child positive social behaviour, child independence, better parenting, home learning environment).

There was variation in effects between subgroups and over time (evaluation periods). The earlier evaluation findings showed the small and limited effects varied with degree of social deprivation. Children from relatively more socially deprived families (teenage mothers, lone parents, workless households) were adversely affected by living in SSLP areas. Later evaluation results differed from the earlier findings in that beneficial effects could be generalised to all subgroups, including teenage mothers and workless households. The findings of the impact evaluation study reported the link between

implementation (fidelity) and outcomes, and attributed improved outcomes to children being exposed longer to more mature local programmes *(see UK process studies: evidence statement 5 below).*

It is important to note that this evidence relates to the effect of Sure Start Local Programmes as a whole. Although Sure Start Local Programmes (SSLPs) had common aims set by central government, the types and mix of interventions were not necessarily common between delivery sites. It is likely that interventions included home visiting, early education and day care, and the education /day care components were strengthened after the initial phase (although the evaluation was not depended on these being present). There are a broad spectrum of outcome measures but not all of these relate directly to emotional and social wellbeing.

Belsky et al. 2006 Quasi-experimental [++]
Melhuish et al. 2008 Evaluation [++]
Melhuish et al 2008 Quasi-experimental [+]
Melhuish et al. (2005) Evaluation [+]

NB: Further evaluation of NESS has now been conducted:
http://www.ness.bbk.ac.uk/impact/documents/RB068.pdf

5. SYSTEMATIC REVIEW OF UK EVIDENCE ON THE FACTORS INFLUENCING THE EFFECTIVENESS OF THE DELIVERY AND IMPLEMENTATION OF INTERVENTIONS DESIGNED TO IMPROVE WELLBEING AMONG VULNERABLE CHILDREN AND FAMILIES.

5.1 Quantity of the evidence available

We identified 19 relevant studies which met the inclusion criteria for this review (full data extractions of these papers are presented in appendix 1). The papers focused on home visiting interventions (n=10) and interventions based in early years education settings (n=8). One paper examined Sure Start local programmes which included both childcare settings and home visiting.

Given the nature of the review question, a variety of evidence was considered: qualitative studies (n=11), process evaluations (n=3), and quantitative papers and mixed methods (n=5) (table 5.1). To ensure evidence synthesised in this review was relevant to a target population, only UK evidence has been considered.

Table 5.1 Studies by data type/collection method

Qualitative	
Avis et al. 2007	Interviews
Barlow et al. 2005	Interviews
Flying Start 2009	Interviews
Kazimirski et al. 2008	Limited interview data as part of mostly descriptive evaluation
Kirkpatrick et al. 2007	Interviews
MacPherson et al. 2009	Interviews
McIntosh et al. 2006	Interviews
Murphy et al. 2008	Interviews
Smith et al. 2007	Interviews and focus groups
Tunstill et al. 2005	Interviews
Quantitative process evaluation	
Barnes et al. 2006	Telephone survey (quantitative data only provided)
Mathers & Sylva 2007	Rating scales for quality of provision (researcher observed)
Melhuish et al. 2007	Rating scale for service provision (staff completed)
Mixed methods	
Barnes et al. 2009	Interviews + survey
Barnes et al. 2008	Interviews + survey
Coe et al. 2008	Interviews + geographical patterning
Smith et al. 2009	Interviews and quantitative data
Toroyan et al. 2004	Survey, interviews, observation
Wiggins et al. 2004	Survey including free text + numerical data (paper predominantly reports an RCT)

5.2. Populations and settings

This review was restricted to interventions conducted in the home or early year settings. The scope and protocol excluded group-based parenting activities. All studies were conducted in the UK and the authors used various criteria to select vulnerable populations, often using demographic and socioeconomic characteristics to define vulnerable/at risk populations. Interventions were offered throughout the UK including, England, Scotland, and Wales.

The views of service users and non-users, service providers, and wider stakeholders are incorporated in this thematic synthesis. The views of parents were collected in eight papers. Three papers examined views of staff or explored concepts around processes or service delivery. Finally, views of both parents and staff were reported in eight papers (Table 5.2).

Table 5.2. Study populations

Parents	Sample	Participant Characteristics
Avis et al. 2007	60 parents, guardians, or care givers identified as frequent or non-frequent users	Parents, guardians or caregivers who were frequent or non-frequent users of Sure Start services in the East Midlands.
Barlow et al. 2005	19 women (6 women refused interview and completed questionnaire only)	Pregnant women identified as vulnerable by a midwife who had not taken up the offer of a home visiting programme, two counties Southern England.
Barnes et al. 2006	Interviews with 128 women	Pregnant or recently pregnant women who had initially accepted but later declined a home visiting programme, non Sure Start areas England.
Coe et al. 2008	24 interviews completed through participatory methods, plus researcher-led interviews with 70 parents	Parents who did not use Sure Start services, Midlands city.
Flying Start 2009	Interviews within 5 of the 22 partnerships	User and non-users of flying start nurseries, Wales
Kirkpatrick et al. 2007	20 interviews with those who completed programme	Recently pregnant women identified as vulnerable who had completed a home visiting programme, Oxfordshire/Buckinghamshire.
MacPherson et al. 2009	55 mothers were interviewed (23 in home-start; 13 refusers; 19 not offered)	Mothers of infants aged 12 months who scored 9+ on the Social Disadvantage Index ,who had completed a home visiting support programme.
Smith et al. 2009	1,400 interviewed with further in-depth interviews with 54 respondents	Parents who had taken up the offer of a pilot early education (aged 2) place. Parents had been selected for the free place using criteria

		of living in a target area, being a low income family, or being a lone parent.
Staff/services		
Kazimirski et al. 2008	33 interviews in 6 local authorities	Staff involved in setting up and delivering outreach services, six local authorities.
Mathers & Sylva 2007	Observational data from 810 children attending 100 nurseries who were 20-42 months	Neighbourhood Nursery centres
Melhuish et al. 2007	150 SSLP areas were randomly sampled across 9 government office regions in England	Sure Start programmes
Parents and staff		
Barnes et al. 2009	Forms from FNs. Client interviews n=154; telephone questionnaire with clients n=98; 42 moms who left programme; case studies with 9 exemplars; interviews with 44 FN and 10 supervisors, and 4 staff who left; interviews with 35 local commissioners of services; staff diaries from 38 FNs and 10 supervisors; interviews with 10 project leads; analysis of documents and plans	Families in receipt of the Nurse-Family Partnership service (with infants 6-12 months old and various ages), mothers who had terminated involvement in the programme. Nurses, supervisors, staff who had left the programme, local commissioners of services, local project leads, England.
Barnes et al. 2008	Interviewed 10% of clients who were involved with the family-nurse partnership	Staff involved in the Family-Nurse Partnership programme - Family nurses, supervisors, staff from DCSF, DH and the Social Exclusion Unit, project leads, project managers, programme administrators. Enrolled clients during their pregnancy and shortly after birth, partners of clients, mothers of clients, parents who had left the programme. Local stakeholders (health visitor service, teenage pregnancy service, social services). Mix of urban and rural areas England.
McIntosh et al. 2006	14 out of 16 health visitors, and purposively selected cases from their case loads (n=20). 13 Mothers available for 2nd follow up.	Health visitors providing an intensive home visiting intervention. First time and experienced mothers who were taking part in the programme with infants aged between 3-4 months and 9-10 months. Two deprived areas of a city, Scotland.
Murphy et al. 2008	Semi-structured interviews with women (n = 11) who were offered peer mentor support lay-workers (n = 11) who provided mentoring midwives (n = 2) who supervised the programme	Women receiving a peer-mentoring programme (nine months from the start of the programme). Lay workers and midwives supervising the lay workers. Socially disadvantage areas, Northern Ireland.
Smith et al. 2007	health visitors: n= 10 health support workers: n=6 service users: n= 7	Sure Start service providers (health visitors and support workers). Sure Start service users.
Toroyan et al. 2004	Head of centre was interviewed Staff employees completed	Mothers using an out-of-home day care centre, Hackney, London. Staff employed at

	questionnaires n=11 Mothers in control n=10 Mothers in intervention n=11	the centre and the centre manager. Families receiving the intervention were randomly selected from eligible applicants (no details regarding eligibility criteria).
Tunstill et al. 2005	Programme managers, n=138 staff, n=155 Chief execs, n=15 parents, n=77 community members n=12	Sure Start programme managers and staff, Chief Executives, other community members and other stakeholders. Parents using the programme.
Wiggins et al. 2004	CGS: Community group support n=165 (only 35 used support) SHV: Support health visitor n=180 (172 used service) Control (standard care) n= 364	Women receiving a postnatal support or community group intervention 12 and 18 months since the start of the study. Health Visitors providing the home support intervention and staff of community group services (such as the National Childbirth Trust, Parentline, Home-Start, a Families and Refugee centre).

5.3. Quality of the evidence available

There is no established hierarchy for evidence derived from sources such as qualitative research and surveys, with the strength of evidence depending on quality, quantity and relevance to the UK population and settings (NICE, CPHE, 2006). The qualitative papers were therefore assessed taking note of the methodology checklist set out by NICE in the CPHE Methods Manual, rather than by a study design hierarchy. Details of the study quality assessments are shown in table 5.3. There are currently no available NICE criteria for assessing papers that report process or survey papers so these have not been included in the table.

Table 5.3. Quality rating of included papers qualitative data

	Avis 2007	Barlow 2005	Barnes 2009	Barnes 2008	Coe 2008	Flying start 2009	Kazimirski 2008	Kirkpatrick 2007	MacPherson 2009	McIntosh 2006	Murphy 2008	Smith 2007	Smith 2009	Toroyan 2004	Tunstill 2005
1.	++	++	++	++	++	++	+	++	++	++	+	++	++	+	++
2.	++	++	++	++	++	+	+	++	++	++	+	++	++	++	+
3.	++	++	++	++	+	0	+	++	++	++	+	+	++	++	++
4.	++	+	++	++	+	+	0	+	++	++	++	++	0	0	++
5.	+	+	+	+	++	++	+	+	+	0	++	+	+	0	0
6.	++	++	++	++	++	0	+	0	+	++	++	++	++	++	++
7.	+	+	++	++	0	+	+	+	+	++	+	0	++	++	0
8.	+	0	0	0	++	+	0	0	++	0	0	0	+	0	0
9.	++	+	+	+	+	+	0	+	++	+	+	+	+	+	0
10	+	0	0	0	+	0	0	0	-	0	+	0	0	0	0

11.	++	++	++	++	++	+	0	++	++	++	0	0	++	0	0
12.	++	++	++	++	++	++	++	++	++	++	++	++	++	++	++
13.	+	++	++	++	+	0	+	++	++	++	0	+	0	0	0
14.	++	++	0	0	+	0	+	0	++	++	++	++	++	++	0
Rating	**+**	**+**	**+**	**+**	**+**	**+**	**-**	**+**	**+**	**+**	**-**	**+**	**+**	**-**	**-**

++ All or most of the criteria have been fulfilled. Where they have not been fulfilled the conclusions of the study or review are thought very unlikely to alter

+ Some of the criteria have been fulfilled. Those criteria that have not been fulfilled or not adequately described are thought unlikely to affect conclusions

- Few or no criteria fulfilled. The conclusions of the study are thought likely or very likely to alter

5.4. Limitations on study quality

The main limitations on study quality were in relation to the numbers of papers that reported a single method of data collection. While the assessment of qualitative studies is an area of considerable debate, the use of multiple data collection methods is often considered to be a way of providing additional depth to findings. Mixed method papers generally reported poor quality qualitative data, with a tendency to focus on the quantitative findings and add a small number of participant quotes with little discussion of data analysis strategy or qualitative data set. There was also some inconsistency in describing the theoretical underpinning to studies, with some papers not including any information regarding any particular perspectives held by the study authors, or describing a theory approach which did not seem to be borne out by the data analysis strategy. Also, a number of papers were unclear regarding the process of analysis or did not report the process in sufficient depth to be able to make a judgement regarding quality.

5.5 Interventions and outcomes

The included studies have been grouped by intervention type. Firstly, findings in relation to early years education programmes will be presented, followed by those relating to interventions delivered in the home.

Given the exploratory nature of qualitative research, outcomes of papers reported in this review are the themes and ideas described by the included

studies. The main themes examined in this review relate to the initial uptake of interventions, ongoing engagement; and service delivery issues such as staffing and management.

5.6. Early years education interventions

Three papers examined interventions delivered as part of a Sure Start local programme in early years education settings in selected areas in the UK (Avis et al. 2007 + interviews; Coe et al. 2008 + interview; Tunstill et al. (2005 - interviews). Avis et al. (2007 + interviews) examined Sure Start programmes in inner cities described as being characterised by social exclusion and disadvantage. Coe et al. (2008 + interviews) interviewed parents in the Midlands to explore factors relating to engaging "hard to reach" populations. Issues of implementation were also investigated by Tunstill et al. (2005 - interviews), in a sample of 20 Sure Start areas.

Flying Start and Neighbourhood Nurseries were each examined for this review. Flying Start Evaluation (2009 + interviews) targeted deprived families in Wales and focused on childcare and parenting programmes. Mathers and Sylva et al. (2007 quantitative), explored how childcare quality impacted on child behaviour.

Early years education programmes were the topic of focus in three further papers. Smith et al (2009 + mixed methods) evaluated an early years education pilot for disadvantaged children. Toroyan et al. (2004 - mixed methods) conducted a process evaluation of a RCT, and explored parental and staff views through qualitative research. Finally, Kazimirski et al. (2008 - interviews) explored outreach strategies employed by local authorities involved in a two year programme pilot of early education interventions.

Table 5.4. Education/child care interventions in the included papers.

Author	Quality	Type
Avis et al. 2007	+	Sure start nurseries
Coe et al. 2008	+	Sure start nurseries
Flying Start 2009	+	Early education/nursery
Kazimirski et al. 2008	-	Child centres; Evaluation of outreach (2 year pilot)
Mathers & Sylva 2007	NA	Neighbourhood nurseries initiative

Smith et al. 2009	+	Early education/nursery
Toroyan et al. 2004	+	Early education/nursery
Tunstill et al. 2005	-	Sure start nurseries

5.6.1. Uptake of early years education interventions

This section of the report will examine views and perceptions underpinning parental decisions to take up or decline offered early years education interventions. The sub-themes within this section are perceived benefits, personal factors, information and reputation of the programme.

Perceived benefits for parents

Perceived benefits for parents were cited as important motives for taking up available programmes in three studies. Avis et al. (2007 + interviews) found that parents perceived that Sure Start would allow them to build connections and networks that would be useful for parenting. According to Smith et al. (2009, +, mixed methods), nurseries were seen as "giving parents a break" and a chance to do other things such as work, rest, or deal with other family issues. Toroyan et al. (2004 - mixed methods) reported that a flexibly timed nursery programme was seen as facilitator for parental employment. The perception that parents could use Sure Start nurseries as a way of freeing up time for work was also reported in the Avis et al. (2007 + interviews) study.

Personal factors as a barrier to uptake

Personal choice impacting on uptake was described as a factor in three papers. Parents in the Kazimirski et al. (2008 + interviews) paper cited personal and family reasons, as well as personal choice as reasons for not using a service. The qualitative Flying Start evaluation (2009 + interviews) also described that some parents simply did not attend by personal choice. Coe et al. (2008 + interviews) examined Sure Start non-users to examine why parents did not take up the service in the Midland. The authors reported that cultural differences and poor language skills may impact intervention uptake. Also, some respondents believed that the service was not for them and could not see the value in using the Sure Start nurseries.

Another personal reason relating to the uptake of an intervention was the confidence levels of parents. A qualitative evaluation of Sure Start nurseries by Avis et al. (2007 + interviews) found that some parents were too shy or uncomfortable to take up the service, and some parents lacked the confidence to attend. Coe et al. (2008 + interviews) echoed this aspect of confidence, finding that parents may not attend a service if they do not know anyone. Avis et al. (2007 + interviews) reported that embarrassment with their child's behaviour or simply taking part in activities outside a parent's comfort zone was another reason for lack of uptake of Sure Start.

The Avis et al. (2007 + interviews) study also described that some parents worried about trusting staff and other users of the service, some worried about the cleanliness of venue, and some parents had concerns about staff prying into their personal lives if they attended a service. Smith et al (2009 + mixed methods) reported that some parents were concerned for their child's wellbeing while in day care, and that this influenced their decision not to take up the placement.

In contrast to the data described above regarding the perception of freeing up time, some parents (Avis et al. 2007 + interviews) cited time as a constraint for not using a service as they would find it difficult to fit Sure Start into their routines. In addition, Coe et al (2008) also found that multiple demands such as family, work, children, or illness impacted on uptake.

Importance of reputation and stigma of programme

The reputation of early education programmes was also suggested to be important to uptake in two papers. Coe reported that where parents knew people who had had positive experiences with Sure Start in the Midlands and that this influenced their decision-making. It was described that there seemed a perception amongst some parents that Sure Start was "for certain groups" that they did not see themselves as wishing to be associated with. Avis et al. (2007 + interviews) found that while some parents did not speak of a stigma attached to the programme, others indicated that they believed the

programme was stigmatised and this may impact their involvement in the programme.

Information and recruitment

Four papers highlighted the importance of providing parents with sufficient information about interventions during recruitment and throughout the programme. In Avis et al. (2009 + interviews), parents were not sure about the broader goals of Sure Start and what the programme offered families, and lack of information was a barrier to uptake. Similarly, Coe et al (2008 + interviews) found that misinformation and lack of information, such as not understanding the programme aims fully was a barrier to uptake. Coe et al (2008 + interviews) examined why some families did not take up Sure Start. When the service was explained to them, many parents found it appealing and said that they would have used it had they been aware of what it actually was. According to Coe et al. (2008 + interviews), parents valued a full explanation of the programme and an outline of benefits such as free childcare, benefits for their child, and other positive outcomes such as that it could build parental confidence. Some parent's views reported in the Flying Start evaluation (2009 + interviews) revealed that non-users were not fully aware of benefits of early years education programmes. The Flying Start evaluation (2009 + interviews) reported that parents would generally like more information on what is happening within the programmes, and even suggested the provision of taster sessions that would serve as method of promotion regarding what the service had to offer to families. Kazimirski et al. (2008 - interviews) also reported that the success of outreach for programmes to help families depended on a clear understanding of the what the programme has to offer and what benefits it would provide for the family.

Methods of recruitment were noted as important factors relating to uptake in four papers. The need and importance of marketing, outreach, and recruitment for programmes was noted by Smith et al. (2009 mixed methods), Kazimirski et al. (2008 - interviews) and Tunstill et al. (2005 - interviews). The use of key workers and targeted publicity was described as important in one study (Tunstill et al. 2005 - interviews). Data suggested that tailored

approaches to outreach and recruitment were beneficial. Door knocking and making use of referral partners was seen as useful in ensuring that families in need were aware of services (Kazimirski et al. 2008 - interviews). Avis et al. (2007 + interviews) found that parents appreciated on-going invitations to the programme, and this was especially important if families stopped using the service. Also, it was highlighted that continuous invitations would provide families with valuable information about what was happening in the programme and how parents could get involved.

Accessibility

The importance of the location of a service was discussed in three papers. Coe et al. (2008 + interviews) found that accessibility of the site was important for intervention uptake, with accessibility often being a challenge for families lacking transportation. Kazimirski et al. (2008 - interviews), reported that not being able to access the centre was a factor in uptake. The Flying Start evaluation (2009 + interviews) found that settings should be visible and accessible to the public through adequate positioning on a busy street and clearly sign posted. They suggested that associating the nursery service with nearby schools made the programme appear more “official” to parents and suggested continuity of services.

5.6.2. Factors influencing ongoing engagement

Themes relating to ongoing engagement were: perceived benefits; perception of quality; programme timing; and the involvement of parents.

Perceived benefits to children

It was reported in three papers that parents who took up the interventions valued the approach, and believed that it was beneficial to their children (Avis et al. 2007 + interviews; Flying Start 2009 + interviews; Smith et al. 2009 + mixed methods). According to Avis et al (2007 + interviews) parents continued to use services as they valued how the programme was delivered, structured, and the way information and advice was given in a non-intrusive manner. Nursery interventions were described as allowing children to mix , play, and learn with other children, and this was cited as important in Smith et al. (2009

+ mixed methods), Avis et al. (2007 + interviews), and the Flying Start evaluation (2009 + interviews).

Perception of quality

Views regarding quality of the provision were outlined in three papers. According to the Flying Start evaluation (2009, +, interviews), parents were positive about the quality of the service. This links to research by Kazimirski et al. (2008, -, interviews) which stressed the importance of a high quality early years education setting. Views of some parents within the Flying Start evaluation (2009, +, interviews) revealed that smaller groups are preferable, but if the staff and venue were perceived to be of high quality, maintaining smaller group sizes was of less importance. The perceived quality of the provision was cited as a reason for drop outs in 22% cases of drop outs in an early education pilot for disadvantaged children (Smith et al. 2009 + mixed methods) as well as poor accessibility, especially for those families without adequate transportation.

Programme timing

Views regarding programme timing were reported in three papers. Lack of programme flexibility was cited in the Flying Start Evaluation (2009 + interviews) and in Coe et al. (2008) as reasons for not engaging with interventions. Avis et al (2007 + interviews) found that while most parents were happy with the timing and nature of events in Sure Start, some parents indicated that they would value events outside of typical centre hours. The desire for increased programme flexibility was more common in students and part-time workers. Data from the Flying Start evaluation (2009 + interviews) revealed that those not engaged in programmes would not only like more information on the programme to help them decide if nurseries would be of value to their family, but flexible hours and conditions of the nursery would also be helpful to working parents.

Involvement of parents

Three papers described views of parental involvement in programme. According to the Flying Start evaluation (2009 + interviews), parents would

like more written feedback about their child's progress, but this was noted as difficult given the large size of the programme. Also mentioned in this evaluation was working with parents to make them feel more comfortable with taking part in activities that were designed for parent and child. Kazimirski et al. (2008 - interviews) noted that clear feedback to parents was an important factor in the success of an early years education intervention. Smith et al. (2009 + mixed methods) found that while many parents were satisfied with feedback they received from nursery staff, some other parents, particularly parents with special needs were less satisfied.

5.6.3. Staff views of educational/day care provision

Themes regarding staff views related to a perception of the rewarding nature of the work, staff skills, inter-agency working, professional role, a tailored approach and service provider issues.

Rewarding nature of work

Two papers reported staff perceptions that the nature of the work was particularly rewarding. The Flying Start evaluation (2009 + interviews) described that providers had a positive view of the programme that they were offering. They felt confident in their abilities, were engaged in delivering Flying Start, and were proud to be part of the service. Kazimirski et al. (2008 - interviews) in a qualitative study of views of a early years education pilot found that staff believed that they were successful in reaching families in need. In addition, having staff believing in the programme was noted as a key factor for success. However, some staff involved in the intervention reportedly had concerns about the selection and outreach strategy, with a fear that some vulnerable families would unknowingly be excluded (Kazimirski et al. 2008 - interviews).

Skills of staff

The level of skills amongst staff was noted as a key factor in success of programmes in four papers. Kazimirski et al. (2008 - interviews) found that tailored approaches delivered by staff specifically trained in extensive strategies were important. Mathers and Sylva (2007, quantitative) found that

centres with more qualified staff provided a better service for children and their families. Tunstill et al. (2005 - interviews) stressed the importance of a programme manager who was supportive, flexible, approachable, understanding, and motivated as making a difference to the operation of early years educations settings. In a paper by Toroyan et al. (2004 - mixed methods), some staff indicated that on-going monitoring was an important aspect of the work. Kazimirski et al. (2008 - interviews) reported that it was also important that staff kept families notified of services and the results of any outreach.

Professional roles

Tunstill et al. 2005 - interviews) described how staff may face conflicting management pressures and even loyalty pressures between their original home organisation and their new roles, so clear roles and responsibilities for staff must be in place. The authors cautioned that professional roles may need to be reinterpreted when working in multi-professional teams. Professionals need to flexible and adaptable in their working so that they can work more effectively in teams. Working with others to deliver Sure Start may cause stress or anxiety as their job may be done by others, or professionals may need to work outside their comfort zone. Training and good management was key in achieving this objective. The authors also commented that staff working in early years settings should maintaining a balance between taking a friendly and open approach to working with families, while also trying to maintain professionalism with their clients. The report also commented that being ‘a professional, will not, in the eyes of the parents, automatically guarantee success in Sure Start’. So professional will have to build a trusting, open, and friendly relationship with families (Tunstill et al. 2005 - interviews).

Inter-agency working

The importance of good organisational links was highlighted in two papers. Tunstill et al. (2005 - interviews) indicated that good pre-existing relationships between local agencies were key, and that special attention should be paid to early clarification of the purpose and implementation of working partnerships. Kazimirski et al. (2008 – interviews) highlighted that once one service was

working with vulnerable families in early years settings, it was useful to refer families to other services, and also that having clear established pathways to other services may be helpful for families as well as staff.

Tailored approach

The need for tailoring approaches and services to vulnerable families was reported as a factor in the success of early education programmes in two papers (Kazimirski et al. 2008 - interviews; Murphy et al. 2008 - interviews). Door knocking, using referral partners, as well as indirect marketing can be effective outreach strategies. Approaches that suit the needs of the family are more effective in reaching vulnerable families (Kazimirski et al. 2008 – interviews). It was recommended that health visitors or volunteers should work together with mothers and families to tailor the programme content and mode of deliver to suit the needs of the client (Murphy et al. 2008 - interviews).

Service provider

Four papers highlighted the influence of the service funder on provision. Tunstill et al. (2005 - interviews) suggested that differences in funding between providers and local agencies could cause alienation for centres. The Flying Start evaluation (2009 + interviews) found that dedicated providers were more engaged with Flying Start than outside nurseries that were not as closely linked with the programme. Research by Toroyan et al. (2004, -, mixed methods), indicated that external events can impact on the provision of care within local centres. For instance, funding issues, financial deficits, and funding freezes could all impact on programme delivery.

Mathers and Sylva (2007, quantitative) found that Neighbourhood Nurseries which were also childcare centres were the most successful at providing children with pleasant and appropriate staff-child interaction and better quality. This work reported findings from researcher-observed rating scales for quality of provision in a Neighbourhood Nurseries Initiative. They found that better quality was observed in fully maintained local authority settings. Local

authority provisions, child centres, and larger nurseries provided the best quality environment for children.

5.7. Interventions delivered in the home

Table 5.5. Home-delivered interventions in the included papers

Author	Quality	Type
Barlow et al. 2005	+	Health visitor
Barnes et al. 2009 and 2008	+	Family-nurse partnership home-visiting
Barnes et al. 2006	NA	Home-start home-visiting
Kirkpatrick et al. 2007	+	Intensive home-visiting
MacPherson et al. 2009	+	Volunteer visitors
McIntosh et al. 2006	+	Health visitor
Murphy et al. 2008	-	Peer mentoring in home
Smith et al. 2007	+	Health visitor & health support workers (sure start)
Wiggins et al. 2004	NA	Support health visitor

Barlow et al. (2005 + interviews) examined uptake of a health visitor delivered intervention. Kirkpatrick et al. (2007 + interviews) examined perceptions of vulnerable women about the value of an intensive home visiting programme for one hour a week for 18 months. McIntosh et al. (2006 + interviews) examined views of the Starting Well programme that offered structured and intensive visits from health visitors until the child was aged three. Smith et al (2007 + interviews) investigated an intervention that was part of Sure Start where health support workers supplemented regular health visiting for vulnerable families. A support health visitor was also part of the intervention offered by Wiggins et al. (2004, quantitative), which encompassed visits over a one year period.

The Family Nurse partnership (FNP) was reported in two papers (Barnes et al. 2008 + mixed methods; Barnes et al. 2009 + mixed methods). The FNP programme, developed in the USA, focuses on building a relationship that is designed to improve well-being and health in vulnerable families over a period of 2 years.

Volunteer in-home support was reported in three papers. MacPherson et al. (2009 + interviews) explored perceptions of need and support received by a

volunteer visitor that was flexible in visiting frequency to suit the family. Programme frequency was also tailored to the family in an intervention offered by Murphy et al. (2008 - interviews) which aimed to provide fortnightly telephone or in-person visits. Barnes et al. (2006, quantitative) investigated a community volunteer visitor intervention as part of the Home-Start programme.

5.7.1. Uptake of home-delivered interventions

According to Barnes et al. (2008 +, mixed methods), 87% of clients accepted the Family-Nurse Partnership after being told about the service. Families found the programme acceptable after given details of the FNP aims and goals, and this was reflected in the programme exceeding its fidelity targets. Barnes et al. (2006, quantitative), found qualified mothers, parents with health problems, families in rental housing, and families with four or more children were more likely to accept an in-home support intervention ($p<0.01$). Acceptance of the programme was the same before and after birth (Barnes et al. (2006, quantitative). Recruitment by researcher or health professional did not impact acceptance (Barnes et al. (2008 +, mixed methods).

Themes relating to uptake of in-home interventions were information and timing of information, low perceived need of intervention, and personal circumstances.

Providing recruitment information and timing

One paper described the importance of information and timing of information. Barlow et al. (2005 + interviews) examined women who declined a home visiting intervention, and found that lack of information was a barrier to participation. The authors described that many mothers were unclear about what the programme offered. Women reported that they were told about the intervention, but either could not remember information at the time of offer, or simply did not understand the information that was provided. Some women reported that they had misgivings about the home visiting service and what it offered, but suggested that they would have considered the programme had it been better described to them (Barlow et al. 2005 + interviews).

This paper also reported that some women in hindsight felt that the programme would have been useful if it had been offered after the birth of their baby (Barlow et al. 2005, +, interviews). This suggestion that later recruitment may be preferable in contrast to other work (Barnes et al. 2006, quantitative) which suggested that the timing of recruitment for a home visiting intervention prior to or following birth did not impact on maternal acceptance of programme.

Perceived lack of need

Lack of need for an intervention was discussed in five papers, with some families perceiving that other/sufficient support was already available to them. These papers described that the needs of mothers could be fulfilled by support from friends, family, or other services, so these mothers did not take up the offer of an intervention (Barlow et al. 2005 + interviews; Barnes et al. 2006, quantitative; Barnes et al. 2009 + mixed methods; Murphy et al. 2008 - interviews). MacPherson et al. (2009, +, interviews), echoed these views with women reporting having practical support from family and friends, which the authors suggested may have been the reason why women turned down support offered. The "wrong type of support" was described by Barnes et al. (2006, quantitative) with parents needing practical support, such as cleaning, watching the child, rather than other more mentor and emotional support offered by the programme. Women in the study by Barlow et al. (2005 + interviews) did not feel that their problems were unusual and did not feel that they needed in-home support.

Personal circumstances

In a paper by Barnes et al. (2006, quantitative), women simply changed their minds about the programme, and it was suggested that this may have been from influence or input from their partners who may not value or see the potential benefits of the programme (Barnes et al. 2008 + mixed methods). Another reason for lack of uptake reported were women simply not being interested in the programme being offered (Barlow et al. 2005 + interviews). In Barnes et al. (2006, quantitative) and MacPherson et al. (2009 + interviews)

women's needs changed as they waited to be part of the programme meaning that some women no longer needed the service when it was offered to them.

5.7.2. Ongoing engagement with home-delivered services

Themes regarding ongoing engagement related to personal reasons, building a relationship, support, and the timing of delivery.

Personal reasons for not engaging

Four papers reported personal reasons for not engaging with a service. Personal reasons for not engaging in a programme are linked more closely with individual preferences, needs, and circumstances, and less about content and delivery of the intervention itself. Losing interest in the programme, or missing too many appointments were identified as reasons for not engaging in home support programmes in three papers (Barnes et al. 2008 + mixed methods, Barnes et al. 2009 + mixed methods, Barnes et al. 2006 + qualitative, Wiggins et al. 2004, quantitative). Another personal reason for dropping out described was moving out of the area (Barnes et al. 2008 + mixed methods, Barnes et al. 2009 + mixed methods). Changing circumstances, such as infant illness, hospitalisation, moving, or adoption, as well as other commitments such as school, work, or family were also identified.

Relationships between staff and service users

The importance of building relationships between staff and a service user was highlighted in six papers. Papers reported that mothers liked having home visits rather than discussing personal matters in clinics, and visits provided them with a sense of ownership (Kirkpatrick et al. 2007 + interviews, McIntosh et al. 2006 + interviews). Kirkpatrick et al. (2007 + interviews) found that regular interaction as part of an intensive home visiting programme resulted in parents feeling at ease and being able to "open up", despite some women holding previous negative views of health-visitors. Negative views of visitors as a method of surveillance were later replaced by positive views of visitors who were supportive, trusting, and able to maintain a bond with clients while acting as a mentor, friend, and teacher. Women reported that they liked that

home-visitors did not impose their views, and took an honest, open, humane and egalitarian approach.

In contrast to these positive perceptions, another paper described that some younger women viewed a health-visitor intervention as somewhat authoritarian, almost like advice from parents (Barlow et al. 2005 + interviews). In Murphy et al. (2008 - interviews) some women were worried about how they may be perceived by home-visitors, believing that they were being checked up on, and were concerned about visitors passing judgment on their lifestyle and parenting skills. Similarly, some clients in the Kirkpatrick et al. (2007 + interviews) study perceived some health-visitors as being nosy. Murphy et al. (2008 - interviews) reported that communication break downs between mothers and visitors could impact on the quality of the intervention, with not all visitors bonding as friends during their sessions, and with this having a negative impact on intervention delivery.

In Barnes et al. (2009 + mixed methods), women described a good relationship with their home visitor underpinned by the family-nurse partnership relationship building model. This model seeks to build a purposeful, but yet meaningful relationship between mothers and providers and focuses on building relationships where others have failed (Barnes et al. 2008 and 2009, + mixed methods). This model was found to encourage parents to re-engage with other services that may be of benefit to them, and was seen as an effective tool to help parents get into other services (Barnes et al. 2008 + mixed methods). In terms of father's involvement, Barnes et al. (2008 + mixed methods) found that fathers were less involved, and fathers that did get involved took a few sessions to become engaged. Other members of the family such as grandmothers were supportive of the programme.

Perceived benefits of home-visiting support

Support was a theme described in six papers. Parents reported that having someone there to listen and provide additional support was beneficial (Kirkpatrick et al. 2007 + interviews). It was described that women received help in gaining control with their child and life in general. Also, visitors offered

assistance in difficult times, allowed parents to vent frustrations, and encouraged parents to develop life skills and confidence. Wiggins et al. (2004, quantitative) found that women valued their visitor's ability to listen and offer support.

In Barnes et al. (2008 + mixed methods), women engaged with the programme indicated that they were positive about the home-visiting, and felt highly supported. In the McIntosh et al. (2006 + interviews) study women reported feeling more confident, more supported, less isolated, and gained parenting skills. Similarly, research by Murphy et al. (2008 - interviews) found that parents valued the support of a peer home visitor, especially if they had little existing social support. McIntosh et al. (2006 + interviews) found that the majority of intensive health-visitor programme users felt supported, and valued the way in which material and advice was provided in a non-intrusive manner. In McIntosh et al. (2006 + interviews), mothers also appreciated the non-intrusive method of the home visiting programme, and mothers felt empowered by the approach. In a paper by MacPherson et al. (2009 + interviews) some women described how they were reluctant to seek emotional support from family or friends, making the role of a home volunteer visitor more appealing to mothers who needed more support.

Timing of delivery

Making such a large time commitment to in-home support programmes was a barrier to participation identified by Barlow et al. (2005 + interviews) and Wiggins et al. (2004, quantitative). Also, some women reported that they were too burdened by other demands to think about participating, with time commitment issues also acting as a barrier in the Barlow et al. (2005 + interviews) study.

Five papers described views regarding how programmes were delivered. It was reported in one paper that some of those who left a programme were positive about it even though they did not like the frequency of visits (Barnes et al. 2009 + mixed methods). Issues regarding committing to frequent visits and lack of time for such a commitment were negative aspects of intervention

delivery also described by Kirkpatrick et al. (2007 + interviews). This study also noted that fragmented visits were a negative aspect of a home visiting programme since mothers never really developed a bond with their visitor. Similarly, the timing of visits was noted as a problem in MacPherson et al. (2009 + interviews) with mothers feeling disrupted by the timing and scheduling of visits. A problem of terminating services was an issue for some respondents in two studies (Kirkpatrick et al. 2007 + interviews; MacPherson et al. 2009 + interviews). In some instances, mothers felt that they required additional support after the end of their programmes.

An important factor reported in keeping clients interested in in-home support was flexibility on part of the visitor (Barnes et al. 2008 + mixed methods). This required the visitor to work to the needs and scheduling of the client to ensure the service was delivered at a suitable time, with cancelling and arranging visits around the client being key (Barnes et al. 2008 + mixed methods). Once the programme delivery schedule was set, it was recommended that health visitors or volunteers should work together with mothers and families to tailor the programme content and mode of deliver to suit the needs of the client (Murphy et al. 2008 - interviews). Another paper highlighted that the health visitor, mentor, or in-home support worker should also be proactive in recognising warning signs of losing a client, and then work with the family to ensure that the client remains in the programme (Barnes et al. 2009 + mixed methods). It was suggested that this could be achieved by offering the family a break from the programme, changing the content delivered, and working with families to create meet their needs and achieve goals (Barnes et al. 2009 + mixed methods).

Accessing other services

Another positive aspect of taking part in home support interventions described was that it made it easier for families to engage in other services (Kirkpatrick et al. 2007 + interviews). The Kirkpatrick et al. (2007 + interviews) study warned however that involving other services without adequately discussing with the family breaks trust with the client.

5.7.3. Staff views

View of staff regarding delivery of the service encompassed perceptions of high stress and complex workloads, that the job was rewarding, the need for training and support, and the impact on professional role.

Stress and workload

Six papers described concerns from staff regarding their working on in-home programmes. According to Barnes et al., staff turnover was high in some sites and this impacted on successful programme delivery as a result of lack of clarity where FNP sits within other professional roles (2009 + mixed methods). Some staff members were leaving their roles as health or home visitors due to stress and the pressures of the job. The issue of stress due to a larger burdensome caseload and stress related to the job was also noted in Smith et al (2007 + interviews). Home visitors reported experiencing fatigue due to working outside their normal hours (Barnes et al. 2008 + mixed methods), and also finding it hard to find time to do the job (Murphy et al. 2008 - interviews). Other issues reported were: having no time for adequate planning of visits (Barnes et al. 2008 + mixed methods); travelling long distances to reach clients (Murphy et al. 2008 - interviews); last minute client cancellations; having other family members present during visits; and general administration of the programme being a constraint to delivery (Barnes et al. 2008 + mixed methods, Murphy et al. 2008 - interviews).

Home visitors also reported that they were burdened by the complex nature of some of the issues presented in home visits with clients (Barnes et al. 2008 + mixed methods, Murphy et al. 2008 – interviews, Wiggins et al. 2004, quantitative). For instance, some visitors/mentors/volunteers highlighted that they were not experienced in every aspect of health and family wellbeing, lacked cultural awareness, found it difficult to manage more than one person in a session, or struggled to deliver messages to clients with poor literacy and (Barnes et al. 2008 + mixed methods, Murphy et al. 2008 – interviews, Smith et al. 2007 + interviews, Wiggins et al. 2004, quantitative). McIntosh et al. (2006 + interviews) described how the health-visiting programme aimed to

facilitate the disclosure of problems within the household, however, the disclosure of serious family problems inevitability served to identify higher levels of need, thereby increasing a home visitor's workload.

Home visitors also described how they harboured frustrations with not being able to reach clients, struggled with losing clients they wished they could help, and had to cope with neglecting some clients at the expense of those who needed more support (McIntosh et al. 2006 + interviews, Wiggins et al. 2004, quantitative). Some visitors reported that interventions were too short and did not provide enough time to tackle complex problems, and that on occasions programmes had unrealistic targets (Smith et al (2007 + interviews). Wiggins et al. (2004, quantitative) suggested that home visitors were worried that the intervention may not be effective.

Rewarding job

While in-home support, such as health-visitors appeared to experience stress and pressures in their roles, taking pride in their work was described by one paper (Barnes et al. 2008 + mixed methods). Staff reported that they were pleased to be part of high profile national and regional programmes that aimed to help families in need or at risk (Barnes et al. 2008 +, mixed methods). Staff reportedly found the job rewarding and enjoyed their roles in reaching families. Enthusiasm for the goals of home visiting was described as making it easier for visitors to cope with the demands of their jobs and effectively delivery programme material (Barnes et al. 2008 + mixed methods).

Training and support

Training and support was discussed in three papers, with mixed views of satisfaction with training and support. Many visitors reported that they were happy with the training that they received (Barnes et al. 2008 + mixed methods), while others believed that more resources should be in place, with more intensive training to prepare them for their dynamic and complex roles (Smith et al 2007 + interviews). While training was recognised as important, a perception of there being need for a "trade-off" emerged, as home visitors

realised that more or continued training would have been helpful but would not easily fit into an already full client caseload (Barnes et al. 2008 + mixed methods).

The need for visitors to be well supported by peers and supervisors was highlighted in one study (Barnes et al. 2009 + mixed methods). There were mixed views of supervision found within the included papers with one reporting satisfaction with management (Barnes et al. 2008 + mixed methods), while another described a need for safer working conditions and better management (Smith et al 2007 + interviews). In Murphy et al. (2008 - interviews), peer mentors reported that at times, they felt unprepared for some of the cultural and ethnic differences that they encountered in the home while visiting mothers, and felt they could not provide adequate support.

Professional roles

One paper highlighted the potential for professional roles to be undermined, with concerns apparent regarding role clarity especially when working in mixed teams (Barnes et al. 2008 + mixed methods). While mixed team working was perceived as advantageous in helping at risk families it was reported that there was a blurring of roles and boundaries which created confusion, and in some instances tension within teams (Barnes et al. 2008 + mixed methods).

5.8 Interventions delivered in early years education settings and in the home (Sure Start)

Research by Melhuish et al. (2007 quantitative) utilised a quantitative method to gather data from multiple sources to produce measures of implementation within Sure Start programmes. Programmes included core services such as home visiting, childcare, and additional support for parents in terms of health and general advice for disadvantaged communities. One hundred and fifty areas were sampled, and stratified across 9 regions within England.

Table 5.6. Intervention details.

Author	Quality	Type
Melhuish et al. 2007	NA	Sure start programmes Quantitative research on programme implementation Sample across 150 SSLP

The paper focused on quantitative ratings on domains of implementation proficiency. Eighteen domains of implementation proficiency including 7 relating to the process, another 7 regarding progress, and 4 for holistic aspects of implementation of Sure Start Programmes. Findings from the paper suggest a moderate link between differences in programme implementation and impacts on families living in Sure Start areas across the sample population. Proficiency in domains of implementation are linked and are likely to yield better outcomes for families using the service (higher implementation proficiency associated with positive impacts for the family using the service). A SSLPs promotion of empowerment for families was linked to enhanced maternal acceptance in the 9 month old group ($p<.01$). In the 36 month group, programmes had a more positive effect on maternal acceptance if they were rated higher on programme ethos, empowerment, service flexibility, and had child-focus services. Also for the 36-month group, one staffing variable was significant: having a greater the proportion of health service staff was linked to increased maternal acceptance ($p<0.01$).

5.9. Summary of identified research

This review has identified a number of themes relating to factors affecting uptake and ongoing engagement of vulnerable families in home-delivered interventions, and views of staff on delivery.

5.10. Discussion

The included papers shed light on delivery and implementation issues underpinning interventions designed to improve wellbeing amongst vulnerable children and families. The studies highlighted that while some clients were highly engaged in interventions delivered inside and outside the home other families chose not to take up the offer of intervention. Some factors are

common to both intervention settings such as personal reasons, timing issues, and staff training/skills. Other elements however were particular to a service, for example accessibility, relationship-building and concerns regarding caseload and stress.

Personal reasons such as confidence and personal choice, a perceived lack of need, perceived advantage for parents, accessibility issues, available information, and timing were cited as reasons for lack of uptake. Parents who engaged with services also had varied reasons for doing so including perceiving benefits for their child and receiving extra help/support. Reasons relating to the delivery of the service also impacted on engagement, for example, the perceived quality of service, timing of sessions and parental involvement were noted as important.

The role of information and knowledge of the programmes offered to families was emphasised, with some potential clients being unaware about the goals and direction of programmes, with some misinformed about what programmes had to offer. Families may have felt that they were not aware of what the programme offered and the potential benefits to the family. Also related to the theme of information was the need for increased feedback on child progress within out of home programmes.

Related to the theme of information and knowledge, the importance of appropriate outreach and marketing to reach families in need was noted. It was suggested that on-going marketing and advertising to increase the awareness and profile of programmes for vulnerable families was important. The access and location of services was seen as an important factor in uptake with a prominent visible location that was easily accessible seen as a facilitator.

Papers emphasised staff perceptions that working with vulnerable families in these interventions was rewarding. Staff perceived they were reaching families in need and enjoyed their work even though it could be demanding and stressful dealing with heavy workloads and pressures. Some staff were

satisfied with the amount of training and management support, while others had mixed views on the level of support they were given and emphasised the need for greater skills.

UK Process Studies: Evidence Statement 1
Engaging families and the take up of early interventions services

Moderate evidence suggests that the uptake of early interventions amongst vulnerable families is influenced by mothers' perception of benefits, timely provision of information about the interventions, personal circumstances and views, the reputation of the services, recruitment procedures, perceptions about quality of interventions and their physical accessibility.

The perceived benefits for parents in their child attending childcare/early education were described in terms of building networks, providing an opportunity to take a break from parenting and a facilitator for employment (Avis et al. 2007 interviews [+], Smith et al. 2009 mixed methods [+], Toroyan et al. 2004 mixed methods [-]).

Five papers reported that a perceived lack of need influenced parents' decision not to take up home visiting. In some cases their needs were seen as being fulfilled by support from friends, family, or other services (Barlow et al. 2005 interviews [+], Barnes et al. 2006, quantitative, Barnes et al. 2009 mixed methods, [+], Murphy et al. 2008 interviews [-], MacPherson et al. 2009 interviews [+]). The "wrong type of support" was described by one paper with parents needing practical support rather than other support (Barnes et al. 2006, quantitative).

Parental lack of knowledge regarding the content and potential benefits of available services was reported (Avis et al. 2007 interviews [+], Coe et al. 2008 interviews [+], Flying Start evaluation 2009 interviews [+], Kazimirski et al. 2008 interviews [-]). One good quality paper described how mothers were unclear regarding what a programme offered, with women not understanding or not remembering information. Some women reported that the offer of the programme might have been preferred after the birth of their baby (Barlow et al. 2005 interviews [+]).

Two papers described the influence of personal choice with some women changing their minds or not being interested in a programme (Barnes et al. 2006, quantitative, Barnes et al. 2008 mixed method [+]), and one good quality paper highlighted that needs changed over time. Waiting lists for

interventions meant that some women no longer needed the service when it was offered to them (MacPherson et al. 2009 interviews [+]).

Three papers of mixed quality described the influence of personal circumstances and views in influencing uptake. These included personal and family reasons and perceived cultural and language differences (Kazimirski et al. 2008 interviews [-], Flying Start evaluation 2009 interviews [+], Coe et al. 2008 interviews [+]).

Personal choice may also be influenced by the confidence levels of parents, (Avis et al. 2007 interviews [+], Coe et al. 2008 interviews [+]). Two papers described personal time factors could present barriers to uptake; with difficulty fitting the intervention into a personal routine or multiple demands (Avis et al. 2007 interviews [+], Coe et al. 2008 interviews [+]).

Four mixed quality papers highlighted the importance of marketing, outreach, and recruitment processes for programmes. Studies suggested the use of key workers and targeted publicity, door knocking, making use of referral partners and on-going invitations (Avis et al. 2007 interviews [+], Kazimirski et al. 2008 interviews [-], Smith et al. 2009 mixed methods [+], Tunstill et al. 2005 interviews [-]). Two good quality papers suggested the influence of the reputation of early education programmes in uptake. The reputation and feedback from other parents could be influential, and also a perceived stigma that services were “for certain groups” (Avis et al. 2007 interviews [+], Coe et al. 2008 interviews [+]).

Two good quality papers described parental worries regarding the cleanliness of venues, staff prying into their personal lives and concerns for their child (Avis et al. 2007 interviews [+], Smith et al. 2009 mixed methods [+]).

The importance of the location of a service was discussed in three papers. The papers highlight that the accessibility of a site is important, with settings being visible and accessible to the public through adequate positioning on a busy street and clearly sign posted. There was the suggestion that associating the nursery service with nearby schools made the programme appear more “official” to parents and provided continuity of services (Coe et al. 2008 interviews [+], Kazimirski et al. 2008 interviews [-], Flying Start evaluation 2009 interviews [+]).

UK Process Studies: Evidence Statement 2

Parents experience of services and ongoing engagement in early interventions

Moderate evidence suggests that ongoing engagement with early interventions amongst vulnerable families is influenced by perceived benefits to children, perception of a quality service, timing of the programme, the involvement of parents and personal reasons.

Three good quality papers described that parents who took up the childcare/early education interventions valued the approach, and believed that it was beneficial to their children. Parents continued to use services as they valued how the programme was delivered, structured, and the way information and advice was given in a non-intrusive manner. Perceived benefits for children were the ability of children to mix, play, and learn with other children (Avis et al. 2007 interviews [+], Flying Start evaluation 2009 interviews [+], Smith et al. 2009 mixed methods [+]).

Three papers suggested that parental perception of quality of provision influenced ongoing engagement. It was reported that smaller groups are preferable to parents, but if the staff and venue were perceived to be of high quality, maintaining smaller group sizes was of less importance (Flying Start evaluation 2009 interviews [+], Kazimirski et al. 2008 interviews [-], Smith et al. 2009 mixed methods [+]).

Three papers of good quality suggested that feedback to parents is an important factor in the success of an early education intervention. One paper highlighted a need to make parents feel more comfortable with taking part in activities that were designed for parent and child (Flying Start evaluation 2009 interviews [+], Kazimirski et al. 2008 interviews [-], Smith et al. 2009 mixed methods [+]).

Three papers suggested that a lack of programme flexibility precluded some parents from engaging with programmes. Some parents indicated that they would value events outside of typical centre hours, with a desire for increased programme flexibility particularly amongst students and part-time workers (Avis et al. 2007 interviews [+], Flying Start evaluation 2009 interviews [+], Coe et al. 2008 interviews [+]).

Three papers highlighted that making a large time commitment to in-home support programmes could be a barrier to engagement (Barlow et al. 2005 interviews [+], Kirkpatrick et al. 2007 interviews [+], Wiggins et al. 2004). One paper reported that parents did not like the frequency of visits or fragmented visits (Barnes et al. 2009 mixed methods [+]). The timing of visits was noted as a problem in one study with mothers feeling disrupted by the timing and

scheduling of visits (MacPherson et al. 2009 interviews [+]). Two studies, one of good quality and one of poor quality reported that flexibility on the part of the visitor to the needs of the client to ensure the service was delivered at a suitable time was key (Barnes et al. 2008 mixed method [+], Murphy et al. 2008 interviews [-]).

It was suggested that a home visitor should be proactive in recognising warning signs of losing a client, offering the family a break from the programme, changing the content delivered, and working with families to meet their needs and achieve goals (Barnes et al. 2009 mixed methods [+]). One good quality paper highlighted that it made it easier for families to engage in other services once they were taking part in one programme (Kirkpatrick et al. 2007 interviews [+]).

Four papers described personal reasons for not engaging with a service such as losing interest in the programme, missing too many appointments, moving out of the area, infant illness and other commitments (Barnes et al. 2006, quantitative, Barnes et al. 2008 mixed method [+], Barnes et al. 2009 mixed methods [+], Wiggins et al. 2004 quantitative).

UK Process Studies: Evidence Statement 3.
Home based interventions and staff-parent relationships

Moderate evidence suggests that the nature of the relationship between staff and parents is an important factor influencing the ongoing engagement of vulnerable families in home based interventions.

The importance of building relationships was highlighted in six papers with regular interaction resulting in parents feeling at ease and being able to “open up”, and with home visitors acting as a mentor, friend, and teacher. Women reported that they liked that home-visitors did not impose their views, and took an honest, open, humane and egalitarian approach. Some younger women however reportedly viewed a health-visitor intervention as somewhat authoritarian, almost like advice from parents and some women were worried about how they may be perceived by home-visitors, believing that they were being checked up on, and were concerned about visitors passing judgment on their lifestyle and parenting skills (Barlow et al. 2005 interviews [+], Barnes et al. 2008 mixed method [+], Barnes et al. 2009 mixed methods [+], Kirkpatrick et al. 2007 interviews [+], McIntosh et al. 2006 interviews [+], Murphy et al. 2008 interviews [-]). One good quality paper (Barnes et al. 2008 + mixed methods) found fathers were pleased with the programme but took a few

sessions to become engaged.

Support was a theme described in six papers. Parents reported that having someone there to listen and provide additional support was beneficial, visitors offered assistance in difficult times, allowed parents to vent frustrations, and encouraged parents to develop life skills and confidence.

Parents valued the support of a peer home visitor, especially if they had little existing social support, with some women describing how they were reluctant to seek emotional support from family or friends (Kirkpatrick et al. 2007 interviews [+], Barnes et al. 2008 mixed method [+], MacPherson et al. 2009 interviews [+], McIntosh et al. 2006 interviews [+], Murphy et al. 2008 interviews [-], Wiggins et al. 2004).

UK Process Studies: Evidence Statement 4.
Professional roles and practices

Evidence suggests that issues relating to professional roles and working practices impact on service delivery and performance. Staff perceptions of the work being rewarding, the need for skilled staff, clarity about professional roles and inter-agency team working are seen as linked to the success of a programme. Concerns relating to high stress and complex workloads were highlighted, and the need for training and support.

Two papers indicate staff's belief in the programme was related to perceptions that the nature of the work was particularly rewarding. This was noted as a key factor for success (Kazimirski et al. 2008 interviews [-], Flying Start evaluation 2009 interviews [+]).

The level of skills amongst staff was noted as important to the success of programmes in four papers. Particular elements were: empowering users and staff; on-going monitoring; staff keeping families notified of services and the results of any outreach, and a supportive and flexible centre manager (Kazimirski et al. 2008 interviews [-], Mathers and Sylva 2007 quantitative, Toroyan et al. 2004 mixed methods [-], Tunstill et al. 2005 interviews [-]).

Also one paper highlighted that clear roles and responsibilities for staff must be in place to avoid the potential for staff to face conflicting management and loyalty pressures between their original home organisation and their new roles (Tunstill et al. 2005 interviews [-]).

Five papers described concerns from staff regarding home based programmes. Stress due to a larger caseload, stress related to the job, fatigue from extended hours of working and the complex nature of issues presented during home visits was described (Barnes et al. 2008 mixed method, [+], Barnes et al. 2009 mixed methods [+], Murphy et al. 2008 interviews [-], Smith et al 2007 interviews [+], Wiggins et al. 2004).

Three papers described how home visitors harboured frustrations with not being able to reach clients. They, struggled with losing clients they wished they could help, and had to balance the needs of varying clients and had concerns that interventions were too short (McIntosh et al. 2006 interviews [+], Smith et al 2007 interviews [+], Wiggins et al. 2004). One good quality paper highlighted the potential for professional roles to be undermined, with concerns apparent regarding role clarity especially when working in mixed teams. While mixed team working was perceived as advantageous in helping at risk families, there was a blurring of roles and boundaries which created confusion, and in some instances tension within teams (Barnes et al. 2008 mixed method [+]).

There were mixed views of supervision found in three further studies. One reported satisfaction with management, while another described a need for safer working conditions and better management. In Murphy et al. peer mentors reported that at times, they felt unprepared for some of the cultural and ethnic differences that they encountered in the home while visiting mothers, and felt they could not provide adequate support (Barnes et al. 2008 mixed method [+], Smith et al 2007 interviews [+], Murphy et al. 2008 interviews [-]).The need for visitors to be well supported by peers and supervisors was highlighted in one good quality study (Barnes et al. 2009 mixed methods [+]).

UK Process Studies: Evidence statement 5
Organisational and management issues

The evidence highlights the importance of good organisational management links and interagency relationships.

Specific features were highlighted:- partnership boards should have a balanced representation; multi-agency team work should be well established; and centres should function well with low staff turnover rates. It was suggested that good pre-existing relationships between local agencies were

key, and that special attention should be paid to early clarification of the purpose.

Implementation of working partnerships with clear established pathways to other services were identified as helpful for families as well as staff (Kazimirski et al. 2008 interviews [-], Tunstill et al. 2005 interviews [-]).

The need for tailoring approaches and services to vulnerable families was reported as a factor in the success of programmes (Kazimirski et al. 2008 interviews [-], Murphy et al. 2008 interviews [-]).

Three papers highlighted the influence of the service funder and affiliation on provision. It was suggested that dedicated providers were more engaged. Funding issues, financial deficits, and funding freezes were highlighted as impacting on programme delivery (Mathers and Sylva 2007 qualitative, Toroyan et al. 2004 mixed methods [-], Tunstill et al. 2005 interviews [-]).

The Sure Start impact evaluation examined domains of programme implementation and proficiency. It found that there were modest links between programme implementation and effectiveness on child and parenting outcomes. Collectively the 18 programme-proficiency ratings (including ethos, identification of users, empowerment of users and staff) significantly discriminated between groups of more or less effective programmes for 9-and 36 month old child and parenting outcomes. Some effects attributable to specific programme features were noted with respect to maternal acceptance, nonverbal ability, and home learning environment. The authors suggest that the proficient delivery of services is important as well as what services are delivered in influencing the benefits for families. In particular empowerment of users and staff and identification of users impacted on effectiveness of programme for the family (Melhuish et al. 2007 quantitative).

6. DISCUSSION

6.1. Summary of identified research

6.1.1. UK effectiveness studies

We searched for articles reporting on evaluations of UK interventions to increase child emotional and social wellbeing (under 5s) which considered the effectiveness of specific progressive interventions: home visiting and family based interventions; and early education and child care. Evaluations which did not contain data relating to the effectiveness of the intervention were excluded, as were those papers reporting only on the content of interventions, although some of these excluded papers met the inclusion for a subsequent review looking at delivery and implementation of the interventions (including qualitative and process evaluations). We identified 16 studies which met the inclusion criteria. The papers focused on home visiting interventions (ten papers reporting eight interventions) and interventions based in early years education settings (two papers reporting two interventions). In addition four papers from the National Evaluation of Sure Start, which reported on the effectiveness of the programme (rather than specific interventions), were included. There were limitations in a couple of the studies in terms of small sample sizes and/or high drop out from the study resulting in concerns over study power and the introduction of biases. In addition some studies observed considerable contamination of their control groups from alternative interventions or normal service provision, especially in terms of the provision of alternative day care for young children.

6.1.2. UK process studies

This systematic review focused on the evidence on the factors influencing the effectiveness of the delivery and implementation of interventions designed to improve wellbeing among vulnerable children and families. We identified 19 relevant studies which met the inclusion criteria for this review. The papers focused on home visiting interventions (n=10) and interventions based in early years education settings (n=8), and Sure Start programmes (n=1). Given the nature of the review question, a variety of evidence was considered: qualitative studies (n=11), process evaluations (n=3), and quantitative papers and mixed methods (n=5). To ensure

evidence synthesised in this review was relevant to a target population, only UK evidence has been considered. This review identified a number of themes relating to factors affecting uptake and ongoing engagement of vulnerable families in home-delivered interventions, and views of staff on delivery. The main themes examined in this review relate to the initial uptake of interventions, ongoing engagement; and service delivery issues such as staffing and management.

6.2 Research questions for which no evidence was identified

A range of populations that could be considered at risk or vulnerable were included. The main issues regarding addressing the subsidiary research questions were that most studies were not large enough to consider their impact in terms of differing demographic groups, for example in terms of differences in ethnic, cultural and religious background. These papers, although describing for example, the ethnic mix in their population, did not report their results with a breakdown for different ethnic groups. An exception to this was Mackenzie et al. (2004) who reported that minority ethnic mothers achieved lower HOME scores, although they also commented that the measure was not validated for use in ethnic minority populations and therefore this result is unreliable. Compared to home based, we identified fewer studies of interventions based in early years settings which met the criteria for inclusion in this review making it difficult to draw conclusions on delivery settings due to the lack of evidence base. Many of the interventions delivered outside the home which our searches identified were group parenting programmes which are excluded from the scope of this review, this may have in part accounted for the small number of reports on this type of intervention which we identified as suitable for inclusion here.

6.3 Evaluating the impact of different approaches

Finding an effective methodology for the evaluation of the type of interventions reported here, particularly in terms of strong outcomes which measure wellbeing directly yet are not self reported is immensely challenging and will have led to some of the problematic features of the papers and limitations of the literature.

Validated measures which make a indirect assessment of child emotional and social wellbeing such as scales measuring child development or child behaviour are available and were used by some authors, although factors such as time constraints

and programmes which were delivered in the home by lay volunteers rather than health professionals in particular, may have meant that the use of this type of robust, validated measure was not always possible. In order to also provide a more direct measure of wellbeing many of the interventions were evaluated using self reported measures which have significant issues with regard to their validity, especially in relation to young children, where often the self reporter is the parent rather than the child due to obvious age constraints. However, as self reported measures are often the best available measure due to the lack of other appropriate, validated measures, this does not always mean the results are not reliable. The validated, robust measures available in the educational settings where interventions were delivered and assessed by teaching staff invariable related to cognitive development (and less frequently behavioural development) as proxy measures of wellbeing, although more of the interventions we identified were conducted in the home environment.

Many studies used a wide variety of outcome measures; often a mixture of robust and validated scales of child behaviour and development along side numerous self reported measures of child wellbeing, parent wellbeing, home environment and social support factors. In most cases only a small number of this wide variety of outcomes measures showed any positive association with the intervention leading to concerns that the few positive observations may have been observed due to chance (generated by excessive analysis of the data). Also there was often inconsistency in the associations seen between very similar outcome measures across the different studies. These concerns over the validity and consistency of outcome measures raise questions over the reliability of the data presented and ultimately mean that the results of these studies should be interpreted with caution when considering the drawing of conclusions or development of recommendations.

In addition, a lack of information pertaining to "intervention fidelity" (did they actually deliver what they were supposed to) along with, in some cases, very little information about what was actually delivered and how, in the course of the intervention, adds to the concerns over the reliability of the results presented here. In the case of the Sure Start National Evaluations it is demonstrated that variation in the specific interventions across sites has the potential to mask intervention effects and in a

similar way poorly reported or adhered to interventions can have the same effect of masking potentially positive associations.

Finally some of the studies had relatively short term (less than a year) follow up which creates comparison problems as those with longer follow ups are at greater risk from drop out and dilution of any positive effects over time.

6.4 Adverse or unexpected outcomes

Three UK effectiveness papers reported adverse outcomes. Shute et al. (2005) reported that, after controlling for demographic effects, intervention mothers were less likely to be above the threshold for postnatal depression than control mothers, however, only 57% of participants provided follow up data which will affect the reliability of this result. Wiggins et al. (2004) reported that at second follow up more intervention women were concerned about their children's eating habits than the control group, but this outcome measure was self reported, and the intervention group scored better than the controls in several other outcome measures. Finally, Mackenzie 2004 reported adverse effects on maternal depression and home environment scores in minority ethnic mothers; but, as neither the HOME inventory nor the Edinburgh Postnatal Depression Scale used to measure these outcomes have been validated in the British Asian cohort, this result cannot be considered to be reliable.

6.5 Applicability in the UK context

Applicability in the UK is not a key concern for those studies which reported specifically on UK studies in vulnerable populations published in the last ten years and supported this by worldwide review level evidence. However, even within the UK, populations will differ considerably and an intervention which works in one area will not be guaranteed to succeed in another. Although most of the studies reported populations which were vulnerable, the many different ways of defining vulnerability means that the individual populations may actually be quite different in terms of their social demographic characteristics. Due to the variety of populations presented here caution should be exercised when making judgements about context in the UK over all from just one or two locally implemented studies.

6.6 Implications of the review findings

Inconsistency in the use of key terms relevant to this review may be problematic. There are several recognised definitions of both vulnerability and wellbeing and authors use a variety of measures to define both. Vulnerability in particular is a problematic term and is defined inconsistently by a variety of measures including areas of residence and parent related socioeconomic factors such as employment status, education level and relationships status.

Very few of the papers used the term vulnerability, therefore proxy terms such as at risk of educational failure, low socioeconomic status, women at risk of postnatal depression were used to determine inclusion and exclusion. The review included papers which were answering different research questions to the target of this work, requiring selective extraction of data. A lack of information in some of the papers made this challenging with the potential for error in omission or inclusion.

Many authors highlighted the multi-faceted nature of the interventions considered here. While endeavouring to divide the evidence into home-based versus centre-based provision it should be recognised that in many programmes there are elements of both. The complex nature of the interventions precludes identification of elements which may lead to more successful programmes. The evidence presented here is limited in terms of the quality of some of the papers. There is some disparity in the evidence regarding who should deliver the programme, programme length and intensity. As a result, these limitations should be considered when making recommendations based on these studies.

UK effectiveness studies

The evidence we present here is limited in terms of the relatively small number of papers identified and the challenges discussed above in terms of suitability and validity of outcome measures relating to the emotional and social wellbeing of vulnerable young children, saturation of outcome measures leading potentially to chance results, concerns over reporting and adherence to interventions, and contamination and loss to follow up in some cases. As a result, these limitations

should be thoroughly taken into account when making recommendations based on these studies.

UK process evaluations

The review findings suggest that while many people are aware of what interventions are being offered to assist vulnerable families with young children, some people were not aware of some of the services that were available. It highlights the role of outreach and marketing, and out-of-home interventions being visible and accessible. The scheduling of both home and educational interventions at a time to enhance attendance was seen as a key challenge. Personal circumstances, perceptions and beliefs also offer significant barriers to be overcome for some potential users.

Findings from this review highlight that some staff were under pressure and were stressed with considerable and complex caseloads. Caseloads, working conditions, training, and support systems seem significant areas for consideration in optimum service delivery. The importance of inter-agency working and defining of professional roles also seem areas of importance in successful service provision.

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APPENDICIES

Appendix 1. Evidence tables

Appendix 1.1: Evidence table for UK effectiveness studies

Study Details	Sample	Population and setting	Interventions	Results	Notes
i. Authors **ii. Year and country of origin:** **iii. Research question:** **iv. Study design:** **vi. Quality score (++, +, -)**	**i. Sampling strategy** **ii. Sample achieved** **iii. Method of allocation**	**i. Included populations: Describe where available age, sex, sexual orientation, disability, ethnicity, religion, place of residence, occupation, education, socioeconomic status, social capital values.** **ii. Excluded populations** **iii. Setting**	**i. Intervention description: Describe in detail including:** **What delivered** **By whom** **When/where** **How long** **How often** **ii. Comparator description** **iii. Follow up periods:**	**i. Method of analysis + outcomes measured** **ii. Results and themes** **iii. Attrition details: Indicate the number lost to follow up and whether the proportion lost to follow up differed by group.**	**i. Limitations identified by the author** **ii. Evidence gaps and/or recommendations for future research** **iii. Source of funding.**
Barlow et al. 2007 Evaluation of Family Partnership Model RCT [++]	i Community midwives attached to 40 GP practices screened women. 433 screened by midwife, 151 excluded by researcher (no reasons provided). ii	i 131 vulnerable pregnant women, 68 intervention 63 control. 36% single parent, 20% eligible for free school meals, 92.5% White, 16% owned home, 84% rented. Employment - 28% working, 42% caring for home, 13% unemployed, 6% disabled, 13% other.	i 18 months of weekly visits from a specifically trained health visitor. Mean 41.2 visits. No further details of intervention. ii Standard care mean 9.2 visits by health visitor iii	i Intention to treat analysis using univariate and multivariate ANCOVA. CARE index evaluation of mother-infant video interactions. General Health Questionnaire, Edinburgh Postnatal Depression Scale, Adult Adolescent Parenting Inventory, Parenting Scale of	i Many of the outcomes favoured the intervention group but were not statistically significant suggesting that the study was underpowered. ii

	131 consented iii Randomisation by sequentially numbered sealed envelopes	35% no educational qualifications, 18% aged over 17 years, 34% no educational/vocational qualifications, 6% no support network, 27% unhappy childhood, 36% children with behaviour problems, 24% had social worker, 12% physical illness/disability, 64% had mental health problems, 18% partner with mental health problem, 55% housing concerns, 36% unwanted pregnancy, 30% previous attendance at court of self/partner for criminal reasons. ii Women without a working understanding of English iii. 2 UK counties; home setting.	2 months, 6 months and 12 months	Competence/confidence, What Being the Parent of a Baby is Like, Social Support Questionnaire, Rust Inventory of Marital State, Rosenberg Self Esteem Inventory, Generalised Stress Efficacy Scale, Parenting Stress Inventory, HOME inventory, Brief Infant-Toddler Social and Emotional Assessment, Bayley Scales of Infant Development, Infant Temperament Scale, Parent report of infant wellbeing, health visitor child protection data. ii No statistically significant differences at 2 months or 6 months. Women in the intervention group were more sensitive to their babies at 12 months (p=0.04) and babies were more co-operative (p=0.02). No sig differences on HOME inventory measures or Bayley Scales of Infant Development, or number of child protection issues or number of children being removed from the home. No significant group, time or time by group effects for parent-report measures. Cost of providing the intervention was calculated as £3246 mean per infant greater than standard care. “Programme seemed to have increased the number of cases of abuse identified in the intervention group” (no	iii Department of Health/Nuffield Foundation

				figures provided). iii 3% drop out from the intervention and less than 10% attrition from follow up	
Barnes et al. 2006 Evaluation of Home-Start scheme Cluster RCT [++]	i. 161 of Home Start schemes in England, approached which weren't in Sure Start areas, geographically convenient (and not new, experiencing organisation difficulties, already developing and offering support for new mothers). 42 (26%) agreed to take part. Mothers invited to participate during antenatal visits or well baby clinics. Social Disadvantage Screening Index used to identify at risk families from those who consented, 527 of 1007 ii.	i. 24 schemes intervention, 17 comparators. Pregnant women or new mothers within 8 weeks of birth. At least 18 years of age, able to understand English. Scored 9 or higher on Social Disadvantage Index. N=274 intervention, 253 comparison. Groups subdivided at later stage due to high drop out into 3 arms – intervention, control, and drop-out (refusers) Intervention group (n=96) – mean age 29, mean 2.3 children, mean area deprivation score 4.1 (SD 14.3), White mother 78%, single 18%, married, living with spouse 50%. Mother qualification - degree 20%, A level 8%, GCSE 27%, other 32%, none 8%. Mother occupation – professional 9%, intermediate 17%, lower supervisor/technical/semi routine/routine 22%, never worked/unemployed/student 48%. Father qualification – degree 15%, A level 8%,	i. Eligible participants referred to local Home Start scheme. Initial visit then volunteer assigned. Two or more home visits considered to have received the intervention. Volunteers received 10 sessions training. Parents decide with volunteer the frequency and length of visits. ii. Usual care iii. 2 months and 12 months	i. T-tests, Mann-Whitney, chi squared, regression analysis. HOME inventory, Parenting Stress Index, Maternal Social Support Index, length of breastfeeding time, healthy eating scale, reported use of services. ii. At 2 months mother's mean responsivity to infants, involvement in infant activities and mean total HOME environment score was lower for supported mothers than control group. Supported mothers had more materials in the home for babies to play with. At 12 months maternal responsivity, learning materials available, organisation of the home environment was lower in the supported group. Mothers in control group overall made more positive changes than the intervention group. Only positive change associated with the intervention was that there was more of a reduction in parent-child relationship problems between 2 and 12 months for those receiving support ($p<0.05$). Other measures	i. Some demographic differences between groups. Support offered varied. ii. Intervention may be required by a professional rather than volunteer. iii. Health Foundation

	41 schemes, N=527 women iii.	GCSE 29%, other 18%, none 13%. Father occupation – professional 9%, intermediate 22%, lower supervisory 44%, never worked/unemployed/student 12%. ii. Newly implemented schemes. Birth weight under 2500g or 5 days or more in SCBU iii. Home		no difference between groups. iii. One intervention group dropped out after trail underway (42 reduced to 41). Of the 274 intervention participants, 96 were supported and 92 completed both research visits. 65% of referrals were not supported by the scheme, leading to creation part-way through study of a non-supported group. 130 of 178 approached and 97 agreed to research (75%), but only 66 had both research contacts (51%). Comparison group of 196, 195 seen at baseline and 178 (91%) of comparator group completed both research visits.	
Barnes et al. (Same study as Barnes 2006) 2009 Evaluation of home-visiting support to prevent maternal depression Cluster RCT [++]	i Home-start schemes with stratification for region. Schemes ineligible were those also having Sure Start programmes, those judged not being ready for involvement, schemes already offering support and schemes geographically distant. 76	i Mothers living in geographical area covered by the scheme. Mother at least 18 years, understood English, score of 9 or greater on Social Disadvantage Screening Index. Infant birth weight >2500g, < 5 days in special care baby unit. N=274 intervention and n=253 control. Of the intervention group 96 intervention families received the intervention. Intervention group (n=96) – mean age 29, mean 2.3 children, mean area	i Visit at home by a Home-start volunteer. Intervention considered to be more than one visit. Volunteers mainly parents, have 10 half-day sessions of preparation. Two additional training sessions. Frequency, length and duration of visits agreed between volunteer and family. Visits may encompass providing company, assistance with	i Binary logistic regression & multiple linear regression. Structured Clinical Interview for Diagnostic and Statistical Manual, Depression section from the Mood Disorders Module, EPDS, Parenting Stress Index, Maternal Social Support Index, ii At 12 months the rate of major or minor depression from 2-12 months in the supported group was not significantly different from the control group or unsupported group. The only significant predictor of a greater likelihood of	i. Low rate for those receiving the intervention. Support offered varied. Demographic differences in the intervention versus control group. ii. Intervention may be required by a professional rather than volunteer. iii. Health Foundation

	schemes excluded. Women approached in waiting areas for routine antenatal check, SDI completed. Names of those eligible passed to scheme co-ordinator. ii 161 approached, 42 schemes agreed to participate (25 intervention and 17 control). One intervention scheme later withdrew. 1007 mothers consented, 52% met eligibility criteria. iii Ongoing allocation by chance 1:1 changed to 2:1	deprivation score 4.1 (SD 14.3), White mother 78%, single 18%, married, living with spouse 50%. Mother qualification - degree 20%, A level 8%, GCSE 27%, other 32%, none 8%. Mother occupation – professional 9%, intermediate 17%, lower supervisor/technical/semi routine/routine 22%, never worked/unemployed/student 48%. Father qualification – degree 15%, A level 8%, GCSE 29%, other 18%, none 13%. Father occupation – professional 9%, intermediate 22%, lower supervisory 44%, never worked/unemployed/student 12%. ii Infant birth weight below 2500g, more than 5 days in SCBU, deprivation index below 9. iii Home	childcare, other household tasks, joint trips or giving parenting advice. Visits started on average 0.2 months, average number 15.1 and average months of support 5.5. ii Usual care iii Initial research visit at 2 months follow up at 12 months.	depression was depression identified at 2 months, and predictor of lower likelihood of depression was more social support at 2 months. The only significant predictor of more depression symptoms at 12 months was more at 2 months. iii Total intervention group of 274. 96 received support and 92 completed both research visits. 178 (65%) of referrals were not supported by the scheme, 130 approached for research contact and 97 agreed (75%) 196 in comparison group, 178 of completed both research visits.	
Belsky et al. 2006 Evaluation of Sure Start Programmes [++]	i. Sure start areas stratified by region, 150 of the 260 randomly selected. ii. 150 programmes iii.	i. Families with 9-36 month old children in a Sure Start programme area. N=12575. Compared to non-Sure Start families N=1509. 73% White child, 79% English only spoken, 85% mother aged	i. Sure Start Programmes (no other details) 9 months into implementation. ii. 50 areas waiting for programmes to be	i. Multilevel models adjusted for child and family background variables and area characteristics. Mediation effects tested using Sobel Test. Mother's area rating, observers area rating, total support services used, total usefulness of support,	i. An RCT was ruled out by the funding body. Programmes could have diverse elements ii.

	N/A	under 20 years. Equivalised income of household divided into fifths – 17.6% < £126pw, 17.4% £126-167, 20% £168-216 , 16.5% £217-338, 19.9% above £338. Mother's education - degree or HE 16% A level 22%, GCSE 23%, other 7.4%, none 29.4%. Mother's occupation – professional or management 13.6%, intermediate 14%, small employer 2%, lower supervisor/technical 5%, semi-routine 27%, routine 17.9%, 19.4% unemployed. N=3927 Comparison=1101 ii Non-Sure Start areas iii. Not specified	introduced. iii. N/A	Malaise, supportive parenting, negative parenting, home learning environment, involvement of father, home chaos, birth weight, duration of breast feeding, frequency of accidents, hospital admissions, social competence, behavioural problems, language expression and comprehension, spatial and number skills. ii. Mothers of children aged 9 months reported less home chaos ($p<0.001$ CI -0.48 to -0.18). Mothers of children aged 36 months in Sure Start areas reported greater parental acceptance (avoidance of scolding, spanking and restraining). Some sub population differences identified for example for teenage mothers, non teenage mothers but no other group differences. Some positive differences (fathers involvement, mother's area rating, children having accidents) associated with programme being led by a health agency versus other agency. iii. N/A	iii. Sure Start
Cupples et al. 2010 Evaluation of a peer mentoring	i. Midwives recruited first-time mothers a their 1st hospital antenatal visit	i. N=534. English speaking, first time mothers, age 16-30 years (mean age 22 years), gestation less than 20 weeks,	i. A home visit or a telephone call by a mentor (a non-professional) twice	i. Intention to treat analyses using t tests. Chi squared to compare categorical measures. Complier Average Causal Effect analysis to	i. Primary outcome measures well validated but may not be sufficiently

programme RCT [++]	ii. Aimed to recruit 170. 534 fulfilled inclusion criteria & invited, achieved 343 iii. Block randomisation (alternate blocks of 20 and 40) using a computer-generated programme	(mean gestation 14 weeks). No previous miscarriage and no ongoing co-morbidity. Living in postcodes of lowest tertile of deprivation scores in Northern Ireland. 44% owned their home, 55% rented, 56% in household where someone owned a car, 50% in household where someone was unemployed. 13% no educational qualifications, 55% A level, 21% degree/prof qualification, 44% mothers smoked, 55% no alcohol consumption, 52% wanted to be pregnant later, 26% wanted to be pregnant then, 18% wanted to be pregnant sooner, mean maternal attachment score 78.8, mean maternal self-efficacy score 33.4. Ii Not resident in target postcodes. iii In home/telephone call	monthly during pregnancy and monthly for the following year. Mentors were aged less than 40 with one child under 10 years. Recruited via advertisement, 6 hours initial training with further 2 hour training sessions 6-8 weekly. Paid per hour + travel, in contact with a midwife. Mean no. contacts was 8.5 (SD 9.3). 16% none, 29% more than 12. Described as being based on the social cognitive theory of health promotion. ii. Normal post-natal care iii. 9 month home visit, routine hospital visits, 1 year primary outcomes reassessed.	compare compliers (those receiving at least 10 telephone contacts and 3 visits) versus “expected compliers” in control group. Used covariates which predicted compliance (age, smoking, education, wanted pregnancy, deprivation, self-efficacy, attachment). Bayley Scales of Infant Development, Parenting Stress Index, questionnaires on parental self efficacy + maternal attachment + lifestyle + mothers physical mental wellbeing, feeding and use of health and social care services (SF36). Primary health records. ii. Using non inputed data there was no significant difference between groups in Bayley infant development scores or maternal physical or mental health scores (using SF36). Borderline significance using inputed data which the authors describe as unlikely to be of clinical significance. No difference in infant growth, breast feeding, hospital admission, changes in smoking alcohol or drug use. iii. Intervention group - 32 lost to follow up, 83 discontinued the intervention but took part in the follow up assessment, 32 excluded from the	sensitive to detect intervention effects in the UK health care system. Resignation of mentors (22 of the 32 had to be replaced) ii. May be potential for longer-term rather than short term benefits. iii. Research and Development Office Northern Ireland.

				analysis. 135 completed the FU assessment. Controls – 19 lost to follow up, 19 excluded from the analysis, 145 completed the FU assessment.	
Ford et al. 2009 Evaluation of home educational activities programme (funded through Sure Start) RCT [+]	i. Participants recruited from districts identified by LEA as having markers of social deprivation. Head Teachers provided contact details. Invited by letter. ii. 60% of those invited expressed an interest. iii. Assignment to group by lottery.	i. N=60. 32 M & 28 F. Socio-economically disadvantaged families Wales. Children aged 3. Half families young single mothers, majority on unemployment of sickness benefits. 85% of families primary caregiver had left school at 16. 90% White, 10% Asian. English primary language in all homes. No other demographics reported in the paper. Intervention + control children attended the same part-time nursery. ii. Children with profile suggestive of developmental delay excluded iii. Home	i. Parent-delivered education programme Lets Play in Tandem aiming to develop school readiness. Children in programme for 12 months. Included pre-reading skills, numerical skills, general knowledge. Project worker assigned to each family and visited once a week for 90-120 minutes. Family received a pack of 3 activities – 1 for vocabulary and general knowledge, 1 for pre-reading and 1 for numerical skills. Activities took 20+ minutes each. Regular newsletters + social events for parents, + keeping diary of progress. Intervention delivered in 4 stages of 10 weeks. ii. Control group were	i. T tests Nursery tests of academic ability – knowledge of name/address, colours, non-word repetition, perceptual discrimination, letter recognition, rhyme test, understanding size length quantity, counting. ii. The intervention group outperformed the control group on all measures of academic ability – name, address, colours, (4.02) pre-literacy skills, (5.18) basic numeracy (3.23) all $p<0.01$. Teacher ratings of listening and communication higher for intervention children $p<0.01$ and $p<0.05$. Significant difference for inhibitory control and vocabulary scale $p<0.01$ in favour of intervention group, no difference between groups for theory of mind test or digit forward recall. iii. 6 intervention families lost to follow up.	i. ii. Need to identify which of parent behaviours are most influential and included pre-intervention assessments as outcome measures. Should include research contribution of entry level academic and cognitive abilities to child progress during subsequent years of schooling. iii. Sure Start

			encouraged to attend other Sure Start interventions in the area. iii. 12 months		
Johnson et al. 2005 Evaluation of Avon Premature Infant Project RCT [+]	i. Infants recruited at birth to project. No details in this paper of recruitment methods ii. No details in this paper iii. No details in this paper	i. Parents of n=187 infants born less than 33 weeks gestation. Maternal age mean 26.9 years, only child 50%, non-manual SES 45%, 68% car use by mother, 9% single mother. No further details. ii. Infants of normal gestation iii. Predominantly home	i. Two intervention arms. Portage – parents received a developmental educational programme. Activities to introduce parent to aspects of their child's development. Teaching uses a task analysis approach. Parent advice – parental support intervention. A series of seminars and individual and group work using a supportive counselling model. Both interventions were carried out by either a nursery nurse or SEN nurse who had received training in child protection and counselling with structured weekly supervision from a clinical psychologist. Nurses in both arms of	i. ANOVA, intention to treat basis, Kruskal-Wallis, Mann-Whitney U, Linear regression. British Ability Scales, Movement ABC, Child Behaviour Checklist. ii. No significant differences between the 3 groups on cognitive development scores (BAS), verbal reasoning, or spatial ability at five year follow up. No significant difference between groups in motor development or child behaviour. The developmental advantages which had been reported at two years were therefore not persisting at 5 years. iii. 334 parents recruited to study, 328 randomised, 284 entered study, 240 available for follow up at 2 years, 187 at 5 years.	i Baseline differences between groups in social and demographic factors – maternal age, non-manual occupations, use of a car, living with both parents. Dropout rate high for this 5 year follow up. Ii Interventions commenced after birth rather than after discharge may be more advantageous. Iii. Action Medical Research Grant.

			trial received training in the parent advice intervention. Interventions began on discharge home. Visits were weekly for the first few months and then 2-4 weekly for a year and then monthly up till around 2 years (as requested by parents). ii. control group received standard care iii. 2 year + 5 year follow up		
Mackenzie et al 2004, Scotland Evaluation of Starting Well quasi experimental [+]	i. a dedicated health visitor approached all families with newborn children for consent, yielding a total of 627 participants (50% of all births) ii. n=627 (367 intervention, 260 control) iii. in defined geographical area or not.	i. Intervention (n= 367) - all births visited by Starting Well health visitors between 01/06/01 & 31/06/02 within the project's geographical boundaries. Intervention characteristics: minority ethnic mother 16%; mother no qualifications 24%; no car in household 43%; not homeowner 63%; workless household 36%; higher income households (>£1000/month after tax) 28%. ii. families outside defined	i. intensive home visiting. Project team for each area (health visitor coordinator, Starting Well health visitors & health support workers & a bilingual worker in one area). Health visitors use a number of standardised tools to structure their visits. They include: a core visiting schedule (number of visits & age-related health topics), family health plan, family support scale (staff assess vulnerability of families	i. Stepwise ordinary least squares (OLS) regression was performed on the HOME total score and logistic regression on the three dichotomous outcomes. Quality of the home environment (HOME inventory), maternal depressive symptoms (Edinburgh Postnatal Depression Scale), child dental registration & measures of maternal service satisfaction. ii. lower rates of depressive symptoms among intervention mothers at 6 months but not at 18-months; no improvement in the quality of the home environment at 6-months but a small positive effect at 18-months (p = 0.88); higher	i. Need more sophisticated multi-level analyses to help tease out the relative contribution of individual & area- level factors to outcomes. ii. More longitudinal data and analysis are necessary to determine the longer-term clinical and social significance of these intermediate outcomes & to assess the extent

		geographical area for Wellstart Scheme. iii. home	at different stages). Project team members received intensive training on a wide range of issues including child development & protection, domestic violence, speech & language, & accreditation on a Triple P Programme (an Australian parenting programme). Local Implementation Groups – statutory & voluntary sectors & community. Remit included the identification and addressing o community level issues pertaining to child & family health. Annual budget £20,000 – used to support activities of local organisations that have joined a Starting Well Affiliation Scheme. Community Support Facilitator – bridge between home visiting teams & local implementation groups. ii. statutory health visiting	levels of client-satisfaction with levels of health visitor support; & higher levels of dental registration at both assessments. Minority ethnic mothers achieved lower HOME scores and were more likely to suffer from high levels of depressive symptoms (BUT HOME inventory & EPNDS not yet validated in British Asian cohort). iii. 359 participants completed both baseline & 6-month assessments, 294 completes all three assessments to 18-months. These sub-samples represent 57.3% and 46.9% of opt-ins, respectively.	to which a 'step-change' in child health has been achieved. Valuable to determine whether or not Starting Well had a direct influence on more child-centred outcomes such as readiness for school in general or cognitive development in particular. iii.

			iii. assessed max 3 occasions: immediately after birth, then at 6 & 18 months		
Melhuish et al. 2008a Evaluation of Sure Start Quasi-Experimental impact evaluation[+]	i. Participants randomly selected within Sure Start areas using child benefit register, based on age of child. . Most deprived areas later excluded as no comparison data could be found for these. Comparison group identified from Millennium Cohort Study by propensity score matching of areas using Indices of Multiple Deprivation and census ii. Response rate of 84% iii. Comparison group living in comparable areas	i. N=12,575 infants aged 3 years and their families. N=5883 used in the analysis following exclusion of the most deprived areas. Compared to N=1879 non Sure Start areas. 50% M/F, 84% White, 89% English home language, 10% teenage mother, 47% "below poverty line", Occupation - 32% unemployed, 9% routine, 12% semi-routine, 9% lower supervisory, 7% small employer, 9% intermediate, 23% management/professional . 26% lone parent, 28% in a workless household. Highest education in household - 28% degree/Higher Education, 30% A level, 23% O level, 8% other, 11% none. ii. No exclusions reported iii. Not specified	i. Sure Start – not specified further ii. iii. No intervention	i. Multilevel models. Intention to treat analysis. Multiple imputation for missing data. Analyses with complete-case data and multiply imputed data. Child immunisation, accidents, BAS naming vocabulary, Child positive social behaviour, child negative social behaviour, independence, parenting risk index, home learning environment, father involvement, maternal smoking, life satisfaction, BMI, family service use, mother's rating of area. ii. After adjustment for pre-existing background characteristics of children, families and areas, significant difference between groups for five of the 14 outcomes. Higher child positive social behaviour ES 0.19 p<0.0001, Higher child independence ES 0.17 p<0001, reduced parenting risk index (less negative parenting) ES 0.44 p<0.0001, better home learning environment ES 0.27 p<0.0001, higher family's service use ES 0.53 p<0.0001. Effects were stable for all populations and in all the Sure Start areas. No	i RCT was not permitted by funder. ii iii Sure Start

				significant effect on vocabulary, negative social behaviour, father involvement, maternal smoking, maternal life satisfaction, BMI, mother's rating of area, immunisations. No evidence of adverse effects. iii. 17% lost to follow up.	
Meluish et al. 2008b Evaluation of Sure Start Impact evaluation from second phase (REPORT) [++]	i. 11,118 children/families in the SS project at 9 months of age were randomly selected to be approached. 1879 MCS study children in similar areas ii. 83% (9192)SS agreed to participate iii. MCS/non SS	i. N=9192 children in SS areas + 1879 millennium cohort/non SS areas. Not lone parent 74.1%, working household 71.7%, workless household 28.3%. Highest education in household – degree 28.2%, A level 30%, O Level 23%, other 7.9%, none 10.9%. No other demographics at 3 years old. ii. No exclusions reported iii. Not specified	i Sure Start ii iii No intervention	i. Multilevel models Childhood immunisations, children who had accidents, child positive social behaviour, child negative social behaviour, independence/self regulation, parenting risk index, home learning environment, father involvement, currently smoking, life satisfaction, BMI, service use, mother's area rating, BAS naming vocabulary (cognitive and language development). Of the 14 outcomes 7 were significantly different between groups. Children had all immunisations (OR 1.46 CI 1.06-2.01 p=0.02) Children had accidents (OR 0.73 CI 0.58-0.93 p=0.009) Child positive social behaviour (OR 0.38 0.009-0.67 p=0.01) Independences/self regulation (OR 0.32 0.18-0.47 p<0.0001) Parenting risk index (OR -0.9 CI -1.11 to -0.69 p<0.0001)	i. Some demographic differences between MCS and SS – more workless households, more lone parents, more White families and households where English only language. Trustworthy results differ for between two phases. ii. The two positive effects detected re. Child health may have been a function of the 2 year gap between studies. All positive effects parent reported. iii. DCSF

				Home learning environment (OR 1.30 CI 0.75-1.86 p<0.0001) Service use (OR 0.98 CI 0.86-1.09 p<0.0001). All these positive outcomes based on parent self-report. Effects did not vary significantly across demographic subgroups. No evidence of adverse effects. ii. iii. Selective attrition appears not to seriously threaten confidence placed in the effects of SSLPs detected.	
Melhuish et al. 2005 Evaluation of Sure Start Cross sectional impact study [+]	i. Potential study participants identified with assistance from the Child Benefit Office (Inland Revenue) ii. Goal to recruit 12000 9 month olds and 3000 3 year olds from 150 Sure Start areas and 50 soon-to-be Sure Start areas. Response rate 84% iii.	i. 9 and 36 month old children. N=11316 Sure Start and n=1389 control. 9 month olds/3 year olds Ethnicity of child – 76%/80.6% White, 5.2%/4.8% mixed, 1.2%/0.8% Indian, 5.9%/5.1% Pakistani, 2.5%/1.4% Bangladeshi, 1.5%/1.1% Black Caribbean, 4.3%/3.5% Other Black, 3%/2.7% other. 82.2%/84.3% English speaking only. 86.4%/86.8% mother not teenager at child's birth (13.6%/13.2% teenager). Household income – top quintile (£338+) 21.8%/15.8%, 2nd quintile (£217-338pw) 18.1%/28.1%, mid quintile	i. ii. iii.	i. Two factor analyses with oblique rotation. Child cognitive and language measures using subscales from the BAS, parental report of behaviour (hyper-activity, prosocial behaviour, independence, emotional regulation, overall behaviour difficulties. Child physical health – birth weight, breastfeeding, accidents, hospital admissions by parental report. Observed maternal responsivity, observed maternal acceptance, mothers report of household chaos, home learning environment, parent-child conflict, parent-child closeness, harsh discipline, father involvement (all mother report). Mother's malaise,	

		(£168-217) 22.3%/18.6%, 4th quintile (£125-168) 18.9%/18.8%, bottom quintile (<£126 pw) 18.9%/18.7%. Maternal education – 14.1%/18.9% degree/HE, 23.3%/23.5% A level, 24.1%/25.8% GCSE, 7%/8.8% other, 28.3%/23% none. Maternal occupation status – 17.3%/14% management/professional, 14.7%/13.2% intermediate, 2.2%/3.1% small employer, lower supervisory/technical 5.3%/5.8%, 27.9%/28.3% semi-routine, 18.6%/20.1% routine, 17.2%/15.5% unemployed. Maternal work status – not in employment 66.9%/66.1% pt 11.7%/14.0%, FT 21.4%/20%. ii. Non-Sure Start area iii. Various		mother's self-esteem, local area ratings, type and number of services used. ii. Limited evidence of Sure Start impact. Beneficial outcomes limited to sub-populations, some of effects beneficial, others developmentally adverse. In all cases effect sizes small. Significant effects favouring Sure Start in 9 month olds – children admitted to hospital OR 1.25 (CI 1.03-1.52 p<0.05) unadjusted and adjusted analysis. Home chaos adjusted and unadjusted analysis OR -0.31 (CI -0.46 to -0.15). Significant effects favouring Sure Start in 3 year olds – adjusted mother area rating poorer in SS (% difference -0.74 (CI 1.46-0.02) p<0.05) total service used (% difference 10.3 (CI 1.01-19.72) p<0.05). Less negative parenting in SSLP areas (mother reported) -1.23 (CI -2.31-0.15) p<0.05. Variation in community effectiveness – 22.5% performing better than expected, 23.5% more poorly than expected. iii.	
Shute & Judge 2005 Evaluation of	i. Families recruited by project health visitors. Eligible	i. N = 359 (213 intervention, 146 control). Disadvantaged areas of Glasgow. Intervention	i. An intensive home-visiting service delivered by a team of trained	i. Stepwise ordinary least-squares regression analysis. HOME Inventory, Edinburgh	i. Sig difference at baseline in terms of higher income

home visiting programme quasi experimental [+]	population within the project geographical boundary. ii. 50% of eligible families opted to join the intervention from the control area "proportionally more so from the intervention area" iii. Families in project area versus families in non-project area	group - mean 39 weeks gestation, mother age 29, mother's self esteem score 21, 2 children in household. 50% male, 49% female participants. 49% first time mothers, low birth weight 9%, 12% single parents, 16% minority ethnic mothers, 34% mother smoker, 24% mother no qualification, 43% no car in household, 63% not homeowner, 36% workless households, 28% "higher income" households (not defined). Intervention group more disadvantaged on most measures (sig diff for percentage of higher income + ethnic minority mothers). Compared with city average study population similar for lone parents/non homeowners, more deprived in terms of unemployment. ii. Not within geographical project boundary. 3 health visiting teams formed comparison group. iii. Starting Well home visiting programme	health professionals and lay workers. Includes topic-specific initiatives (home safety, encouraging and modelling play) enhanced support for minority ethnic families, and the Positive Parenting Program. In addition to the home visiting support includes building links between the community and pre-school agencies and developing new resources. ii. Normal care. Local health care districts outside the project zone where health visitors are attached to GP surgeries iii. 6 months	Postnatal Depression Scale, mother reported Dental Registration. ii No difference between groups on score above the Edinburgh Postnatal Depression Scale threshold for postnatal depression (zero difference CI -8.1 to 7.6) Controlling for background characteristics intervention group mothers were less likely to be above the threshold for PND (OR 0.23 p=0.02) Significantly greater number of children in intervention group reportedly registered with a dentist (p=0.001 CI 9-28.3) No significant difference for Infant/toddler HOME Inventory scores between intervention/controls (p=0.07 CI -0.06 to 1.94) Ethnicity and background characteristics relating to material resources were important predictors of outcome. iii. The complete study sample was 627. Only those completing baseline and follow up assessments are included in the paper. Data analysed was 57% of the study sample.	households (49% controls versus 28% intervention p<001). Not clear what part of the package produced the effect. Possible opt-in and completion biases. Only 57% completion of baseline and follow up data. ii. iii. Health Improvement Strategy Division Scottish Executive Health Department
Smith et al. 2009	i Targeted	i The pilot children were more	i The pilot provided free	i Propensity score matching for	i Some baseline

Evaluation of Early Education Pilot Case control effectiveness data in mixed method study [+]	disadvantaged families. ii Selected on the basis of being disadvantaged: living in a target area (33 per cent), being a low income family (19 per cent) and being a lone parent (15 per cent). Iii N/A	'disadvantaged' than the general population of two year olds. A considerable proportion of families lived in the 20% most disadvantaged areas of the country (73 per cent). 92% of children experienced one or more forms of disadvantage. Pilot families tended to have a lower income than the general population. There were many more lone parents amongst pilot families. Higher prevalence of longstanding illnesses & disabilities amongst parents and children. Pilot children were identified as having additional needs than in the general population (most commonly difficulties with speech and language). Parents were informed of pilot from a variety of sources mostly from professionals or early years setting ii Random sample of children	early years education to over 13,500 disadvantaged two year olds between 2006 and 2008. The main purpose of the pilot was to improve children's social and cognitive outcomes, and to positive impact on children's parents and wider family 7.5 (or in a small number of local authorities 12.5) hours of early years education per week for 38 weeks of the year. The pilot places were available in a variety of early years settings e.g. nurseries, play groups and with childminders ii Baseline child development assessments at age 2. Assessed again at age 3	sample + comparison data. British Ability Scales, Sure Start Language Measure, Adaptive Social Behaviour Inventory. ii No sig difference between groups at age 3 on any measure. Sub-group analysis according to quality of educational environment scores indicated that settings with an Infant Toddler Environment Ratings Scale score of 4 or higher may have had a significant impact on child language development compared to settings with lower scores.	differences between groups (fewer on housing benefit). Hypothesised that lack of effect could be due to differences in delivery between areas or that more than half of comparison group also used formal childcare. ii

		living in relatively deprived areas of England where the pilot was not operating with a relatively large ethnic minority population. Sampling via child benefit records iii			
Toroyan et al. 2003 Evaluation of day care facilities RCT [+]	i. All families in the catchment area eligible ii. 123 families eligible, 120 gave consent and were randomised. iii. Allocation of place was randomised (children in same family was a cluster) by computer generation, varied between 1:1 and 1:2 according to availability of places	i. Families living in catchment area within London Borough of Hackney. N=120 families (143 children). 64 intervention children , 79 control. Intervention group - 53% of mothers in paid employment, mean age of mothers 31 years, 42% total weekly household income <£200 (no other income information), 61% claiming means tested benefit, 60% non white ethnicity, 21% smokers, mean general health questionnaire score 11.9. 49% living with a partner. Children mean age 26 months, mean birth weight 3200g, mean Griffiths scale quotient 106.6 ii. Those not successful in achieving a place at the centre iii. Day care, inner city	i. Early Years Centre – qualified teachers with integration of education into health and social care. Full or part time places offered + extended care outside normal hours. Exceeded national requirements for staff qualifications and staff to child ratios. Mean time children attended centre was 211 days ii. Normal provision. 43% of control group attended some type of centre based day care. iii. 18 months	i. Intention to treat analysis. ANCOVA used to adjust analyses of follow up variables for the baseline measure of that variable. Generalised linear model with a log link to estimate adjusted risk ratios for binary variables. Maternal paid employment, smoking, educational courses, household income, reported health, reported no. close friends + help from family. Griffiths Mental Development Scales, injuries needing medical attention, infection/illness, contact with health professional, health promotion reviews up to date, otitis media, immunisation up to date, mothers perception of child not developing normally. ii. Risk ratio of mothers in intervention group versus control group being in paid work 1.23 CI 0.99 to 1.52. Effect estimate imprecise and results compatible with chance. Mothers in intervention group	i. Power constrained by sample size. Many of control group were in day care (although part time). ii. iii. Department of Health

				worked more hours per week than control group (mean difference 7.57 CI 2-13.75). Again estimate imprecise Mothers in the intervention group less likely to have a weekly household income of above £200 (risk ratio 0.88 CI 0.7 to 1.09). Mental development slightly higher intervention group but imprecise estimate (adjusted mean difference 2.89, CI-1.64 to 7.41) Fewer children in intervention group had experienced an infection the previous week (RR 0.91 CI 0.72 to 1.16) Intervention group children however more likely to have middle ear infection (RR 1.74 CI 1.02-2.96) and have visited a health practitioner in the previous month (RR 1.58 CI 1.05-2.38). iii. Intervention – 61 of the 64 complete Control – 66 of the 79 complete.	
Wiggins et al. 2004 Evaluation of Social Support and Family Health RCT [++]	i. Women living in the boroughs who gave birth in the first nine months of 1999 n=1574. Names passed to research team, letters of invitation with reply	i. London boroughs of Camden and Islington N=731 ii. 1st time mother: 49% Age at birth years: mean 30 years Baby age at baseline weeks: mean 9	i. 2 interventions - Support health visitor (SHV) intervention consisted of the offer of monthly home visits by an SHV for 1 year. The structure of the visits was	i. Intention to treat analysis. Bootstrap method used to calculate mean differences. Childhood injury, maternal depression (Edinburgh postnatal depression scale), smoking, GCHQ12, Duke UNC functional support social support scale, health service use, infant feeding, child	i. Low uptake of community group intervention. Having 2 interventions reduced the power. ii. iii.

	slip sent, home visits to non-returners. Interpreters provided + study information translated into 7 languages ii N=1263 eligible to participate. 252 unable to contact, 42 leaving area, 9 ill, 7 adopted/fostered, 1 no language interpreter available. 532 in addition declined to participate. iii. Allocation by computer-generated software programme. Housing tenure, lone parenthood and parity used as stratifying factors. Participants contacted by letter with allocation status.	Mother 'White': 58% Lone parent: 27% Education <16 yrs 11% Weekly household income <£200: 56% Living in public housing: 69% ii. Women whose baby had died or was seriously ill in hospital, women whose baby had been placed in foster care, and women who had moved (or were in the process of moving) out of Camden and Islington. Women who did not speak English. iii. Inner city	informal, with a focus on listening to the woman and exploring any issues she wanted to discuss. The women could request more or less frequent visits and could also ask that the visits took place in an alternative venue. Interpreters were provided for the intervention visits where necessary. Community group support. (CGS) intervention arm of the study consisted of the offer of support from one of eight local community groups in the voluntary and charitable sector that provide support and services to postnatal women and their babies. The nature of the intervention was dependent on the standard services operated by each group. These included drop-in activities, home visiting	use of medication, self reported assessment of mother's health and child's health, experiences of motherhood. ii. No evidence that either intervention reduced depression. RR 0.86 (CI 0.62-1.19) for SHV and RR 0.93 (CI 0.69-1.27) for CGS. Maternal smoking levels not significantly reduced RR 0.86 (0.62-1.19) SHV and 0.97 (CI 0.72-1.33) for CGS. Maternal anxiety about child health and development reduced for women in SHV intervention group (RR 0.7 CI 0.51-0.95). At second follow up greater number of GCS intervention women were concerned about their child's eating habits than control group (RR 1.49 CI 1.06-2.09). At second follow up more SHV women than control group had talked on telephone to health visitors and seen a social worker(RR 7.29 CI 2.06-25.77 and RR 4.64 CI 1.22-17.71). At first follow up SHV women had made more use of a health visitor for their own needs than control group (RR 2.87 CI 1.25-6.58). At second follow up fewer women from both intervention groups made use of a midwife compared to controls (RR 0.35 CI 0.15-0.82 & RR 0.43 CI 0.2-0.91). Proportion of children with injuries	NHS R&D + Camden & Islington HA

			and telephone support. ii. Control: Routine NHS health visiting services were available to women in the control group and both intervention arms. In the study area these health visiting services involved one postnatal home visit when the baby was 10–15 days old and clinic support thereafter; subsequent home visits were not routinely made, except for women deemed to be at moderate or high risk. Women in all three trial arms were able to access available local community group services. iii. 12 and 18 months post randomisation	requiring medical attention no sig difference between groups. No significant differences in child health or infant feeding outcomes. At first follow up fewer SHV children had been taken to the GP or hospital doctors and more had visits from health visitors at home (RR 0.77 CI 0.62-0.97 & RR 2.41 CI 1.02-5.71). iii. Follow up 90% at T1 and 82% at T2.	

Appendix 1.2: Evidence table for UK process studies

Review Details	Sample	Population and setting	Interventions	Results	Notes
i. Authors **ii. Year and country of origin:** **iii. Aim of study:** **iv. Study design:** **vi. Quality score** (++, +, -)	**i. Sampling strategy** **ii. Sample achieved** **iii. Method of allocation**	**i. Included populations:** Describe where available age, sex, sexual orientation, disability, ethnicity, religion, place of residence, occupation, education, socioeconomic status, social capital values. **ii. Excluded populations** **iii. Setting**	**i. Intervention description:** Describe in detail including: What delivered By whom When/where How long How often **ii. Comparator description** **iii. Follow up periods:**	**i. Method of analysis** **ii. Results and themes** **iii. Attrition details:** Indicate the number lost to follow up and whether the proportion lost to follow up differed by group.	**i. Limitations identified by the author** **ii. Evidence gaps and/or recommendations for future research** **iii. Source of funding.**
i. Avis et al ii. 2007, UK iii. Identify promoting and hindering participation factors in sure start.	i. Sampled within 2 Sure Starts in the East Midlands ii. 60 parents, guardians, or care givers identified as frequent or non-frequent users	i. **Area 1:** Inner city, multicultural, ethnicity minorities make up 23% of population in area. Well developed social networks, but a transient population. Area has 667 children under 4, and	i. inner city areas in the East Midlands with social exclusion and disadvantage Sure start is targeted at disadvantaged families to improve life chances through an integrated approach to early education and play, health services, family support, and	i. Thematic analysis ii. **Reasons for engaging with sure start:** Making social contact, sharing parent and community information, and building job skills. Making contacts helped with feelings of isolation, for many parent, sure start was the primary connection outside the	i. Limited sample size and sample community. ii. A better communication strategy for parents so they understand the goals of sure start.

iv. Qualitative (interviews) vi. +	Programme 1 n= 38 Programme 2 n=22 iii. NA	475 were registered with sure start 47% employed 82% white 45% frequent users of sure start * Not all parents responded to questions **Area 2:** Challenges of this community are similar to area 1 Area has 331 children under 4, and 258 were registered with sure start 23% employed 41% white 36% frequent users of sure start* Not all parents responded to questions ii. NA iii. Sure starts in East Midlands	parenting advice. ii. NA iii. NA	home. They were also able to gain information about the community as well as parenting skills and information sharing. Parents were positive about the advice they obtained, and liked the approach and non-intrusive manner advice was given. Parental self confidence was also improved. Many parents viewed sure start as offering volunteer and training opportunities that could be helpful for personal development. Parents who used sure start for work related opportunities did not want to live in the area in the long-term. This might be a problem for social capital in the area since people will engage with a service then move out of the area into a more desirable area. This could create community fragmentation. Parents said they would be more likely to attend sure start if they received an invitation (newsletter, calls, home visits). These should be ongoing, especially if a family stopped using sure start. **Not engaging with sure start:** Most common reasons include lack of	iii.NR

				social confidence and distrust in others (staff and users) Parents who attended less frequently talked about feeling shy or lacked courage to attend. There were some concerns about mixing in with strangers, worries about different opinions, and possible conflicts. Worries about staff prying into personal affairs. Worries about being embarrassed about child's behaviour. Other reasons for not attending include: inappropriate venues, communication challenges, timing of events, stigma and lack of understanding of sure start service. Majority parents were satisfied with timing of events, but some (including students) wanted weekend events. Flexibility to attend events was more common in students and part-time workers. Many parents found it difficult to organise themselves and get into a routine. There was mixed views on stigma of	

				sure start. Some parents did not understand what sure starts was about. They did not understand the broader goals of sure start. **Unmet expectations:** Some parents felt that anticipated services never materialised. **Suggestions for improvements**: More activities outside normal operating hours, more activities for older children, more activities for parents iii. all 60 respondents completed interview	
i. Barlow et al ii. 2005, UK, iii. to explore the reasons why vulnerable women refuse to take part in early interventions iv. In-depth interviews vi. +	i. Demographic data were obtained from a total of 25 women, but only 19 women took part in an interview. Six women refused to take part in an interview and completed a questionnaire only. ii. 19 women who refused to take part in an evaluation of an	i. age ranged from 16 to 40 with the highest proportion (44 per cent) in the 16–20 age group. Half of the women were living with a partner, a fifth were living alone, and a further third were living in other circumstances, most commonly in the parental home. Over a third of the women interviewed had no educational qualifications, half had obtained GSCE	i. Women who refused to take part in home visiting programme. Forty health visitors have been trained to deliver the service to pregnant women who are experiencing significant environmental and psychological difficulties with a view to improving maternal and infant mental health and reducing the risk of poor parenting postnatally. The intervention involves working in partnership with parents (Davis and others, 2002), and home visitors	i. The interview data were analysed thematically using the software package. ii. **Perceptions about vulnerability** A number of women refused to participate because they did not feel that they needed the kind of service being offered. Some did think their problems were unusual; therefore define themselves as being in particular need of support. Some of the women were unclear about why they had been invited to take part in the home visiting study. Engaging vulnerable women	i. it is a small study, and it has not been possible to address the methodological limitations as regards, for example, the possibility of moving between participant and researcher accounts. ii. there is a need for service providers to find new ways of making contact with hard-to-reach

	intensive home visiting programme iii. NR	or vocational qualifications, and three women had obtained degrees. ii. NA iii. NA	aim to establish a relationship with the parent based on trust, empathy and respect (Barlow and others, 2003). The intervention also aims to enhance the relationship between mother and baby, and the home visitors have been trained in the use of four methods of improving mother-infant interaction. ii. NA iii. NA	The information failed to engage some women. Some did not remember what they had been told about the intervention, or were not interested, or were not able to understand the information. **Feeling too burdened and misconceptions** Some women were feeling too burdened to participate in a new service and some could not conceptualise the benefit. Instead they saw the service as a burden Some women also had misgivings about the service and what it offered. **Time** Time was also a barrier for participation since they did not think they could find the time for visits that lasted 18 months. **Lack of trust** Some women were reluctant to receive emotional support from a health visitor. Some preferred friends or family. Younger women may have viewed the services support as authoritarian like that of their parents. **Existing support** Some women felt they did not need extra support, and they were well supported by family, friends, another	women, and of creating links that may eventually become more solid connections There is need for service providers to keep the door open and repeat offers of help, so that women may take them up when they feel ready. iii. Part of a larger RCT

				health visitor, etc **Benefit of hindsight** Many women were better placed to envisage the potential benefits of the home visiting service once their baby had been born. Some women did not fully understand the intervention at the time, but would consider it now after given more information iii. NA	
i. Barnes et al ii. 2009, UK iii. to examine the second year of the pilot nurse-family partnership (NFP) iv. mixed methods vi. +	i. Sampling from the entire NFP in ten sites in England ii. Forms from FNs. Client interviews n=154; telephone questionnaire with clients n=98; 42 moms who left programme; case studies with 9 exemplars; interviews with 44 FN and 10 supervisors, and 4 staff who left; interviews with 35	i. Families that are disadvantaged and in need of enhanced services (see pilot phase one by Barnes et al) ii. NA iii. Home visiting	i. The Nurse-Family Partnership (NFP), developed in the USA, is an evidence-based nurse home-visiting programme designed to improve the health, well-being and self-sufficiency of young first-time parents and their children. It involves weekly or fortnightly structured home visits by a specially trained nurse from early pregnancy until children are 24 months old. ii. NA iii. NA	i. Analysis of all documents and integration of data. ii. **Client retention:** •The strength of the client-Family Nurse relationship is noted by clients and FNs as the key to successful delivery, making an impact, and retaining clients in the programme. •Staff turnover has been high in some sites, one factor impeding successful delivery, and this may be related to a lack of clarity about where FNP sits in relation to other professional opportunities for nurses. Most client demographic characteristics are not related to attrition. • The most common reasons for leaving, apart from practical reasons	i. recruiting new clients while under pressure of new pilot ii. continue work to evaluate pilot iii. Department of children schools and families

	local commissioners of services; staff diaries from 38 FNs and 10 supervisors; interviews with 10 project leads; analysis of documents and plans iii. NA			such as moving out of the area, are clients indicating that their needs have been satisfied so they can cope without the programme, and clients missing many appointments. • Clients who had left were positive about the FNs but a number commented on being unhappy about the frequency of the visits, especially if they were in education or employment. • To avoid the likelihood that a client would leave they turned to the team for guidance, worked on the relationship with the client, and looked in more depth at the client's immediate concerns, utilising motivational interviewing techniques. They also offered a 'holiday' from the programme. **Acceptability:** • The programme was acceptable to clients, families, and FNs • Clients were positive about programme • FNs were enthusiastic about materials • Clients who left had lower involvement and less understanding of programme. This could be seen as a warning sign and measures should be put in place to retain client. **Delivery:** • Support was important to FNs in delivering programme. Supervision was valuable • The main barrier to delivery was lack	

				of time to learn materials and discuss with colleagues • FNs had to have meetings with other non-FNP administration and meetings with other professionals • Clients were more enthusiastic about programme once they had their baby • some FNs noted the stress of being under close scrutiny of national pilot iii. 712 clients had reached the end of the infancy phase in that their baby was at least 12 months old. 147 (20.6%) left FNP in infancy and the average age of their infants at leaving was 26 weeks or 6 months old.	
i. Barnes et. al ii. 2006, UK iii. investigate characteristics of families with a new baby, screened to identify families with vulnerability, who did not take up the offer of home-visiting support from a community volunteer	i. Referral to home-start visits n=274 (intervention) Control n=253 Declined to participate in original project or could not be contacted n=162. ii. Spoke with the research team about reasons why they did not participate n=85. iii. 3 regions in England: South-	i. Those who refused to participate. Details on characteristics of this group found in results section of extraction ii. NA iii. Home-start intervention, telephone interviews who those who refused to participate.	i. Home-Start is a voluntary organization dedicated to supporting families with children aged less than 5 years. By emphasizing the befriending nature of the support, Home-Start aims to remove any stigma attached to receiving help. They work collaboratively with families, asking them to identify areas where they would benefit from support. Parents then decide with the volunteer on the frequency and length of visits. This collaborative method is aimed at enhancing families' involvement in the service	i. Quantitative analysis and qualitative coding of telephone interviews ii. There was no significant difference in the rate of acceptance in the three regions. There was no significant difference in acceptance for those initially recruited by health professionals and those recruited by the research team Comparing those recruited before or just after their baby was born, we found that the timing of the information did not have a significant effect on the acceptance of support. The average UPA score was significantly lower (indicating less	i. interview refusers in more details, as well as interview home-start scheme organisers ii. Have more detail retained on those who do not participate. Also, liaise with accountable bodies to collect and share information. iii. Part of a larger RCT

iv. Quantitative (logistic regression) and qualitative (telephone interviews) vi. +	east and London, Midlands, and North		and reducing attrition Expectant mothers and those with newborn infants living in the intervention areas were requested to take part during routine health visits, either by a health professional or by a member of the research team. Eligibility criteria for this initial stage were: pregnant and due before a specified date, or having an infant no more than 8 weeks old; at least 18 years of age; able to understand spoken English; and living outside any Sure Start programme area. A telephone contact was attempted by the researchers with those who had declined the offer and with those not contactable by Home-Start. They were asked if they would discuss their reasons for refusing the support. ii. The 76 schemes were excluded either because the majority of their	disadvantage) for those accepting support P<0.05). Families with no local support were more likely to accept the offer of Home-Start support than families who had local support available to them (P<0.05). Those accepting support had a significantly lower average score on the social disadvantage screening score than those who declined the offer (P<0.01). There was no significant relationship with maternal age, but acceptance of support was significantly related to maternal qualifications, with those with higher qualifications most likely to take up the offer and those with qualifications below GCSE, or those with none, the least likely to accept support (P<0.01). Families in the highest social category were more likely to accept support and those in the lower categories were less likely to take up the offer of home visiting Paternal qualifications and marital status were not related to the acceptance of support. Families who had one parent with health or mental health problems were more likely to take up the offer of	

			catchment area was within a Sure Start local programme area (15), for logistic reasons (travel costs, 34), they had been operating for less than 2 years (10), they were experiencing organizational difficulties (10), or because they were already developing support for new mothers (7). iii.	support than families who had no such problems (P<0.01). Shared or rented accommodation was a factor in accepting support Families with one child least likely to accept support while those with 4+ kids more likely (P<0.01). The final logistic regression model was able to predict 67.5% of support acceptance. Significant predictors were: a lower UPA score, more children in household, mothers with more educational qualifications and families where there were parental health problems. **Main reasons for not receiving home visiting** <u>Reason (%)</u> 1.Just did not need support (47) Women thought it was a good idea, but decided they did not need support since they are already well supported. At first some women were worried about coping, but were managing okay. Some wanted to see how they would cope without a visitor 2.Simply changed mind (19) Changing mind during the process, with influence of partner in some instances. 3. Circumstances changed (9)	

				Hospitalisation, infant illness, moving, adoption. 4. Agreed support but waited too long (7) On a waiting list, and then family needs changed 5. Not right type of support (7) The programme did not offer the correct support for their needs 6. Partner input (4) 7. Other commitments (3) Too busy, had older children, would not be home. 8. Not the right time (2) Support may have been more useful earlier on, and visit not at the right time 9. Not the right person providing the support (2) Some felt uncomfortable with a stranger. iii. NA	
i. Barnes et al. ii. 2008, UK iii. Evaluate the family-nurse-partnerships	i. 10 pilot sites in England: County Durham and Darlington, Manchester, Barnsley, Derby City, Walsall,	i. First time parents under the age of 20, but sometimes women 20-23 were included if they were classed as high risk. Average 17.9 years.	i. The Nurse-Family Partnership (NFP), developed in the USA, is an evidence-based nurse home-visiting programme designed to improve the health, well-being and self-	i. NR ii. **Acceptability:** 87% accepted the service after being told about it. Once started the programme carrying on was influenced	i. NR ii. NR iii. Department of Children, Schools, and Families

(FNP) programme in 10 pilot sites iv. Quantitative (forms) and qualitative (interviews) vi. NA	South East Essex, Slough, Somerset, Southwark and Tower Hamlets. ii. Approximately 10% of sample clients were interviewed. Interviews with service providers and those responsible for programme, stakeholders from other agencies, and government teams. iii. NR	The majority are becoming parents at a young age, have low incomes, do not live with their partners and have few educational qualifications or steady employment. In addition they have identifiable vulnerabilities including physical health difficulties, mental health problems, experience of domestic violence and homelessness. ii. Mothers not at risk. iii. pilot program in UK based on USA model	sufficiency of young first-time parents and their children. It involves weekly or fortnightly structured home visits by a specially trained nurse from early pregnancy until children are 24 months old. The curriculum is well specified and detailed with a plan for the number, timing and content of visits. Supervision is ongoing and careful records of visits are maintained. The programme is designed for low-income mothers who have had no previous live births and starts in the second trimester of pregnancy. The main goals are to improve the outcomes of pregnancy by helping women improve their prenatal health; to improve the child's health and development by helping parents to provide more sensitive and competent care of the child; to improve parental life course by	by the client's perceptions of the FN, which was positive. Information was not just provided, but discussed and this was useful for clients. The material was seen as helpful to clients. Families: were positive about the programme even though it may have taken awhile for them to understand the extent of it. They did not feel judged or undermined but felt supported. Some were not sure, but later came to value the programme. Fathers were also pleased with programme, but engagement took several visits and many fathers were not too interested in being too involved. Grand-mothers were supportive of the programme Family nurses: enjoyed the job and challenges. Some stain over workload. Some nurses commented on management, supervision or leadership of their team, also comments about burden of paperwork. They were happy with the training and support they received. They found the structured prescribed programme rewarding. FNs retained clients by being flexible, meeting emotional needs, giving information, being a FN and the fact that mothers wanted the best for their babies. Stakeholders: would have benefited	

			helping parents plan future pregnancies, complete their education and find work. ii. NA iii. NA	from clearer information about the FNP and regular local feedback from it since they were not clear about the details of the programme. **Delivery:** Midwives: were central to recruitment to the programme. Midwives were not recruited as FNs and this could be seen as a threat. It would be beneficial to have midwifery managers involved in FNP as part of strategic planning boards Children's centres: plan to include FNP in children's centres. Interviews with centre managers showed a low level of understanding of the programme. Wider service structure: central team managed programme. The open and full exchange between FNs, supervisors and managers and the central team is strength in that it has allowed for ongoing support for the sites in this early phase, and has allowed for early difficulties to be addressed in a timely manner. Noted in interviews was the tension between this new way of working and longstanding professional attitudes evident in some commissioners and local managers. However, the profile of FNP is high and it is an important element in the new Child Health Promotion Programme. **Costs and working conditions:**	

				In all sites Family Nurses were not able to deliver the requirements of the programme within their normal working hours; working 20% more than their standard hours. This was happening at a time when many did not have a full caseload. At the same time as they were seeing clients, the FNs were also attending ongoing training sessions requiring substantial time-commitment. In addition the fast rate of recruitment meant that they had many new clients at one time, all requiring a high frequency of visits (weekly in the first month) making it a challenge to reach the dosage target. If recruitment had been phased more slowly this would not have been the case. Nature of work and best practice: FN feel they are reaching families and seeing change in them. They valued the support they received from the team, the quality training, and the opportunity to work with the whole family. **Barriers to good practice:** Managing workload, cancellations by clients, and insufficient planning for visits. Some clients lost interest after birth, FNs were fatigued after 3 visits, and number of people present at visit took away attention from programme. FNs may have insufficient knowledge of	

				problems, might end up slipping back into health visitor role, or struggle with clients with poor literacy. Travelling long distances, getting expenses paid from PCT, insufficient quantise of equipment, and not being informed of maternity discharge were seen as barriers as well. **Reasons for leaving the programme:** Moved, miscarriage/death, needs satisfied, missed appointments, unable to locate, pressure from family, dissatisfied, work or school, service from another programme, refused new nurse. Rate of refusal was highest with older women. **Sites, teams, supervision:** Training provided team cohesion. Relationships of teams built over time. Supervisors helped make teams work, but there was times when their role was undermined. In future, supervisors should have experience as of FN. FNs were seen as good listeners, approachable, non-judgemental, non-threatening, and different from other professionals. FNs build trust, keep the client interested, and are adaptive. Maintained relationships where other professionals/services have failed. They encourage clients to reengage with agencies they have refused services	

				with. FNs also engage fathers and kept them involved. Clients: prefer help that is practical and effective. They appreciate the professional background of the FN and take advantage of their expertise. Parents felt more confident, and FNs gave them skills to cope. iii. NA	
i. Coe et al ii. 2008, UK iii. explore factors affecting how to engage hard to reach populations iv. geographic information system (GIS) and qualitative participative research (interviews) vi. +	i. Participatory research methods allowed for researchers and people in the community to conduct research interviews. ii. 24 interviews completed through participatory methods, plus researcher-led interviews with 70 parents from Midlands city iii. NA	i. 10 parents were recruited across 4 sure start programs and asked to interview 3 others who were non-users of sure start. Parents were trained (2 sessions) ii. NR iii. Sure start, non-users, midlands	i. NR ii. NA iii. NA	i. Thematic analysis: both sets of interviews were combined together in the analysis. ii. GIS research indicated that there was an even spread of users and non-users across the four areas. However, there are important sections of the sure start target population are not accessing the service. iii. **Barriers to using sure start**: 1. **accessibility:** getting to the site, particularly with no car. Time constraints might also be a problem since parents have multiple demands on their time (working and caring for example). 2. **social isolation:** parents would not use the service is they did not know anyone else who uses it. Language and	i. sample under-representative. Not easily validated. ii. more research on non-users of a new service. iii. Coventry City Council and Coventry Primary trust

				cultural barriers might also pose a problem. 3.**lack of information/misinformation**: many of heard of sure start, but they did not fully understand what it provided or aimed to achieve. **Facilitators:** 1. **appeal of sure start**: when the service was explained many parents indicated they would find it beneficial, and said they would have used the service if they had known more about it 2. **positive views of sure start**: parents knew people who used sure start and had a positive experience. Some thought sure start was for certain groups (i.e. single moms), but t here was little mention of stigma of the programme.	
i. Flying start (FS) qualitative evaluation ii. Wales, 2009 iii. to evaluate flying start programme iv. Qualitative	i. 22 partnerships in Wales that are part of the FS programme ii. Purposive Sampling within 5 out of the 22 partnerships Interviews with users, non-users and service	i. Deprived areas in Wales ii. NA iii. NA	i. Flying start (FS) targets deprived families in deprived areas of Wales by investing £2000 per child. It focuses on the following: 1. childcare: 12 hours a week 2. Health visiting: reducing health visitor caseloads to 1:110 which is significant lower than other services	i. Thematic analysis ii. Themes relevant to targeted areas are explored below: **<u>Childcare</u>** All users were **taking up** the free childcare provision, but some were not aware of other FS services even though the FS brand was clear to many. **HV** provided information on FS, some provided better and more information	i. Evaluation mainly qualitative and narrative in nature. ii. More quantitative data will be incorporated into evaluations. More precise monitoring of programme iii. NR

vi. +	providers, and management teams iii. NA		3. Parenting: programmes to improve outcomes for children (excluded from extraction due to review inclusion criteria) 4. Language and play (LAP): parents will have access to LAP programmes ii. NA iii. NA	than others and this resulted in varying levels of knowledge and uptake. There was some positive feedback on the information HV provided and the HV role was seen as critical. However, some criticised: some HV never mentioned, or did not provided enough information, on one consistent HV to provided information. Parents were positive about the **service and quality provision**: convenient times, but some would like more flexibility in times to suit their needs. **Location** was suitable for most, but some indicated it should be improved. Location near schools was seen as a positive thing since parents could have links with schools for after childcare. Also being near a school was good for FS branding. **Visible settings** (i.e. off a main road) was seen as a positive thing- increasing awareness of programme and accessibility. No concerns about **child safety**- good ration of child/provider. **Smaller groups** are preferable, but if the venue and staff are plentiful, there is less of an issue. The **free cost** of the programme was not mentioned often by parents since many believed free childcare was provided to all in Wales. Once prompted, they recognised it as important element. Parents **did not feel stigma** attached to free places- they	

				wanted to take advantage of the support. Parents appreciated verbal, informal, and written **feedback**, but would like more written feedback (as was the custom in the past, but the size of programme limited this). Feedback could be used to shape future activities with parent and child. Parents could feedback to programme if they wishes. Some parents would like **more information** on what the childcare programme actually involved so they would know what their child would be doing in nursery- this information could help parents acclimatise the child prior to nursery. Where **taster sessions** were offered, they were successful in providing this information. **Benefits of programme**: language, literacy, numeracy, social development, behaviour, activity levels, wider family effects. **<u>Provider views:</u>** Providers had a **positive view** of the programme. They felt confident in their abilities, were engaged in FS, and proud to be part of service. More dedicated providers were more engaged with FS than outside nurseries. Providers were not concerned with **marketing and**	

				publicity; they believed HV should provide this role. They were more concerned with providing a quality service, however, some believed it was within their remit. **Success of FS** comes from parental feedback, strong parental relationships, and open communication. **<u>Language and play (LAP) programmes:</u>** Users were **positive about LAP** as it was an opportunity to learn with child. There were some concerns about **discomfort for parents** while engaging in hands on activities (esp. in hard to reach groups). These positive views are linked to positive outcomes in parents and children LAP needs to be approachable, reassuring, and adopt a softly, softly approach, and have clear purpose/aims, **Room for improvement**: linking LAPs with childcare and nursery to reduce isolation of providers, integration of services, and work on making parents feel comfortable with LAP. **Non-users** can be by choice or non-users due to lack of information. Those who are **non-users due to**	

				information are likely to have poor contact with HV or have a HV who has not provided enough information. Some parents indicated they would have taken up the service if they were more aware of FS. Non-users would like more info on dates, times, courses, and outcomes. More flexibility is needed for working parents. **Non-users by choice** already have existing support, or are experienced parents. For a few parents, that did not use FS because of possible criticism or embarrassment. iii. NA	
i. Kazimirski et al ii. 2008, UK iii. to explore outreach strategies being employed by local authorities (LAs) involved in the Two Year Old pilot iv. Qualitative (case studies) vi. -	i. Sampling from larger Las taking part in pilot ii. 33 interviews across 6 LAs in pilot iii. purposively selected	i. **Groups targeted by LAs:** disadvantage relating to family group (i.e. language; ethnic minority); Disadvantaged parent or disadvantaged child. **Outreach strategies:** referral partners/and/or children's centres Conducted outreach (single point of contact with families) Referrals ensured a	i. The Department for Children, Schools and Families (DCSF) commissioned the National Centre for Social Research (NatCen) and the University of Oxford in 2006 to carry out an evaluation of the Two Year Old pilot The **aim** of this element of the evaluation was to capture the range and diversity of outreach strategies being managed and delivered across all local authorities (LAs) involved in the Two Year Old pilot, and to assess	i. Thematic analysis ii. It is important to ensure a good communication of outreach strategy to professionals. One-to-one **tailored** approaches were seen as the best method for promoting the pilot to families. Door-knocking and referrals partners (most cost-effective) and indirect marketing (seen as less effective) were also useful. **Success of the referral process was influenced by:** the quality of communication between different agencies over whether parents had been accepted for the pilot; the amount	i. Concerns over how spaces were allocated. ii. redefinition of what constitutes a targeted group requires further study iii. Department of Children, Schools and Families

		wide range of families were being targeted. Indirect marketing and door knocking was also used. ii. NA iii. Children's centres day nurseries Outreach in communities	their effectiveness in encouraging disadvantaged, vulnerable and/or hard-to-reach families to participate. The **aims of the study** were to: • Explore the range and diversity of approaches taken to outreach; • Understand how outreach strategies are being managed and delivered across LAs involved in the Two Year Old pilot; and • To assess the relative effectiveness of these – as a whole, and for particular types of families. '**Outreach'** was interpreted as reaching disadvantaged families to inform them about the Two Year Old pilot and encouraging and supporting them to participate. The **outreach approach** adopted depended on the nature and type of families being targeted, the degree of expertise and knowledge held about these	of lead-in time professionals had for each cohort, the longer the easier; and the availability of suitable childcare for parents in an area. Decisions on referrals are best if they happen within two weeks. **Importance of outreach:** Important for families that lacked confidence Important to track progress and feedback to families Provide parents with support with application process, explain the type of childcare provided, and finally explain that it would be free. **Why parents dropped out/opted out:** Not wanting to use service, not being able to access location, concerns about the care being provided, and other personal issues which took precedence over considering the pilot. **Staff views:** Believed the pilot was successful in reaching families that would not of afford childcare. **Concerns/criticisms** around the nature of eligibility for pilot, and whether some were unfairly excluded **Influences on success of pilot:**	

			beneficiaries and the experience of working with them. ii. iii.	Having staff and partners who believed in pilot The local context and infrastructure that could be built upon for pilot, the quality of multi-agency relationships, previous outreach experience. **Success of outreach dependent on:** 1. identifying targeted groups 2. experience in outreach work 3. tailored approaches 4. agencies on board 5. Personally promote pilot to professionals 6. ensure understanding of pilot rationale 7. provide on-going support 8. Having a clear an effective referral process 9. Clear process for feedback 10. LAs having adequate lead-in time (consulting other LAs; strategy discussions; information briefing; importance of high quality setting and training; one-one-one referrals; more extensive outreach when needed; extra resources for setting working with target groups) 11. National level support from DCSF iii. NA	
i. Kirkpatrick et al	i. Sample was representative from an RCT	i. Vulnerable women (<17 yrs, housing difficulties, financial	i. Delivered by experienced health visitor who received 8 weeks of training using	i. Tape recorded, transcribed, and thematic coding using software. Methods verified by another researcher.	i. sample of women who completed more home visiting

ii. 2007, UK iii. Explore perceptions of vulnerable women about the value of intensive home visiting in and after pregnancy iv. semi-structured in-depth interviews v. +	effectiveness study. Women who completed the intensive home visiting program and agreed to be interviewed. ii. n=20 iii. All invited participated. Data saturation reached	difficulties, social isolation, history of mental health problems, parenting difficulties, drug or alcohol problems, domestic violence, child protection history) during their second trimester were randomly allocated to receive home visiting intervention or standard services. Women who agreed to participate were significantly older than remaining sample (29 vs. 25), and were more likely to have had contact with a social worker recently or in the past. No other significant differences and the women interviewed had the same mean number of risk factors as women in the main RCT study. None of the participants received all possible home visits (72 in	the Family Partnership Model, and involved them in a working partnership with parents which focuses on trust, empathy and respect. Also used infant massage, baby dance, songs and music, and Brazelton technique (not described) Visiting took place in the home. Women were visited for up to an hour each week, starting during the second trimester and continuing for a total of 18 months. Interviews took place in the home and lasted 1 hour ii. NA iii. NA	Coding completed by the interviewer. ii. **Initial Concerns:** Women had concerns about committing to weekly visits. Worried about judgments, being portrayed negatively, lacking time, and feelings of being 'check-up on'. Feelings of fragmented visits by different people who never got to know the women properly. Also themes of lack of privacy in baby clinics to discuss matters. Views of nosey health visitors **Impressions of home visiting:** Despite concerns, women spoke positively about their first home visit and were reassured by the qualities and attributes of the home visitor. Home visitors challenged negative preconceptions. A more humane and egalitarian approach was helpful. Women valued the honesty of their home visitor. Some women valued that home visitors encouraged women's confidence in their own ideas and feelings about parenting and did not impose views. This was a vital part of relationship building. **Developing the relationship:** Relationships gradually developed over	sessions. Lower number of minority women included in study. Effects of home visiting can be diffuse, impacting different families in different ways. ii. Possibility of bias, Maybe only those who had positive experience may have wanted to participate in interviews iii. Part of a larger RCT. Funding NR

		total), but women interviewed had received more visits than the original RCT sample (46 vs. 39). % Mean age 29 Single parent 35 Ethnicity-white 100 Working (full/part) 30 Income <£200/wk 50 No education 25 Disability/illness 15 ii. Non-vulnerable women iii. in the home		time. Showing 'interest' made it easier to open up, and allow for health visitors to pick up on subtle clues. Sense of ownership of health visitor lead to feelings of value and respect of mother. **Referrals to social services:** Trusting relationships made referrals to services easier. Able to express feelings about referrals due to the trusting relationship. But negative themes emerged as well: filing for social services without prior discussion could lead to a breaking of trust. **'Somebody there for you'/ Benefits:** Listening and extra support were important. Home visiting can increase confidence in women, make women feel stronger, increase control over life, relieve a burden, provide advice, and help mastering parenting, an avenue to vent frustrations and emotions during difficult times. **Attitude changes:** Women spoke about how regular interaction helped them to feel at ease, and open up to their professionals. Partnership model was key to the success of programme Views of health visitors as a 'surveillance' was replaced with views of trust, support, and positive	

				relationship building. Home visitors became a valuable, friend, teacher, and mentor for women and they found the termination of service difficult. Women could discussion matters in privacy with their visitors Iii NA	
i. MacPherson et al ii. UK, 2009 iii. to explore perceptions of need and support received iv. Qualitative interviews vi. +	i. Recruited from a larger RCT trial. Mothers were recruited from NHS ante-natal clinics. When finished the home-start programme and Infants were at least 12 months they were approached for interview. Quota sampling was used to ensure numbers from all three arms of the larger RCT (received home-start, refused, not offered), and living in three geographic areas (South East, Midland, North) ii. 55 mothers	i. At least 18 years old; Speak English; living outside of sure start area; scoring 9+ on social disadvantage index. Women interviewed did not differ from larger RCT pool in terms of vulnerability, number of children, maternal age, and marital status. ii. NR iii. Volunteer home-visitor	i. Volunteer visitors offered additional support to mothers. Training was provided, and additional 'new baby' sessions were added (2 ½ days). Most volunteers were parents, and lived in the local area. Visits were client-led, and nature and frequency of visits was determined by a joint decision. Volunteers received monthly supervisions. ii. NA iii. NA	i. thematic analysis ii. **Support needs** There was a theme of need for support especially in the control group. 40% described stress linked with a medical condition. A smaller number mentioned support needs in reference to their environment in which their family was living (problems with facilities or unfamiliarity of neighbourhood). Miscellaneous other difficulties were cited (relationship problems faced in 1 in 5 families). About half of sample had support from friends or family, and much of the support was practical in nature. This may have been a reason for turning down the offer of a volunteer. In some cases t he support was not as extensive as mothers would have liked by they did not want to 'take advantage'. Support from partners was limited (dependent upon work, offering, or mothers request)	i. NA ii. target intervention to those more in need to improve impact iii. Part of a larger RCT trial

	were interviewed (23 in home-start; 13 refusers; 19 not offered) iii. NA			**Emotional support** Mothers were reluctant to seek emotion support from close friends or family, adding value to having someone like a volunteer for emotional support. Limitations on support mentioned by half the mothers was restrictions on availability, dependent on having support close by. This was one reason why mother accepted Home-start volunteer. **Formal support** Nearly half of mothers described receiving support from a formal source: health visitors mostly, then midwives, less of GPS and social workers. Only two mothers received emotional support from these sources. Support from these sources was valued if it was offered proactively. **Home-start support (HS)** HS volunteers helped mothers have access to other services; they also acted in a caregiver capacity (even for older children). 1/3 of participants appreciated the opportunity to get out and about with a volunteer because they have been so isolated at home. Volunteers also identified local services to decrease isolation, and even increase attendance by accompanying mother. This could	

				lead to a mother being more confident in seeking out other services. Majority of mothers receiving a volunteer felt emotionally supported. Some explained that they could be listened, and they wanted the impartial advice. It was helpful to have a volunteer with parenting experience. All mothers had at least one positive comment about the programme, but there were some difficulties (see below) **Difficulties:** **Administration problems** Mothers needed to be matched to a volunteer, and this could be a lengthy process, and no information was passed along to the mother who was waiting for support. Less than half of mothers felt the matching process was successful. There was no direct line of communication from mother to volunteer outside of visits Messages needed to relayed through the centre and this was seen as inefficient. **Volunteer characteristics** In a few cases the expectation that the volunteer and mother should form a friendship was not always met. But in	

				some cases, valuable friendships were formed Volunteers and mothers needed to be flexible, but sometimes this posed problems: mothers feeling disrupted or unsupported. **Closure** Closure of the programme support was a problem for some respondents. Personal characteristics of the volunteer (not being able to complete the programme) and administrative problems (mother not being informed or cutting off of service when still needed) were seen as problems. iii. NA	
i. Mathers and Sylva ii. 2007, UK iii. To explore childcare quality and consider implications for child behaviour. iv. Observational vi. NA	i. Centres: a random sample of 103 nurseries Children: 810 attending 100 nurseries who where 20-42 months; attended nursery for >6 months for at least 10 hour/week. A max of 20 children p/centre ii. nurseries were sampled at 3	i. Disadvantaged families who are in need of childcare services. Children were a mean of 33months. ii. NA iii. Childcare setting	i. Neighbourhood nursery initiative (NNI) launched in 2000 to expand early years services. The programme aims to increase the supply of childcare for working families in disadvantages areas ii. NA iii. NA	i. Observational instruments were used to assess the quality of care facilities for infants and toddlers. Information from a previous study informed this evaluation (NNI implementation study) ii. Quality of centres varied across the sample, with some centres maintaining higher standards of excellence. Providers in the maintained sector offered the highest quality of provision. The private sector had the lowest mean quality rating, but also displayed the broadest variation in quality, with some centres operating at a very high standard. Neighbourhood Nurseries were the most successful at providing children with pleasant and appropriate	i. NR ii. Further investigations on mixed room nurseries, length of day of nursery is needed. iii. Department of Education and Skills

	different stages iii. NA			staff-child interaction. **Predictors of provision quality:** **Sector:** fully maintained local authority (LA) provisions provided the most stimulating environment and the highest quality physical environment. **Children's centre status:** Neighbourhood Nurseries that were also Children's Centres offered higher quality provision than centres with no involvement in the Children's Centre Programme **Centre size:** larger neighbourhood nurseries offered better quality provision. This may be due to economies of scale. **Age of children**: mixed age rooms provided scored higher on quality. Children were surrounded by a variety of different stimuli when mixed with older children **Staff qualifications:** qualifications of staff were linked to better provision. No relationship was found between the populations of children and families served and the quality of provision. **Effects of behaviour (extractions only relevant to research question):** **Facilities:** Children displayed less worry and upset in centres which were spacious, well maintained facilities and programmes. Staff qualifications: children will access	

				to a qualified teacher were significantly more cooperative, less worried/upset behaviours. **Centre status:** Involvement in the Children's Centre Programme had a positive relationship with children's co-operative behaviour **Size:** children in larger centres were less anti-social and displayed less worry/upset. For positive behaviours, the relationship was negative: less cooperation and sociability of children in larger centres. **Age:** children <3.5 yrs in mixed rooms with >4 yrs displayed more worry/upset. the age at which children started attending their Neighbourhood Nursery did not have an impact (either positive or negative) on their behaviour, duration of childcare during the early years was important: the longer children had been attending their neighbourhood Nursery, the more likely they were to display anti-social behaviours. **Time:** Time spent in centre-based childcare (hours/days per week) had some beneficial effects on children, such as greater confidence and sociability. Children who attended 30 hours or more each week were rated as more anti-social, while children who attended 35 hours or more displayed more worried and upset. iii. NA	

i. McIntosh et al ii. 2006, UK iii. how the process of health visiting resulted in parents' perceptions of being supported iv. Longitudinal Qualitative interviews at two time points vi. +	i. Recruitment at within Starting Well (SW) health visitors. 20 mothers. 16 health visitors ii. 14 out of 16 health visitors, and purposively selected cases from their case loads (n=20). 13 Mothers available for 2nd follow up. iii. NA	i. first-time and experienced mothers, mothers experiencing a range of emotional, physical and material needs, and mothers from an ethnic minority background ii. NA iii. Start well health visiting programme.	i. Established in 2000 in response to govt efforts to improve health for Scottish people. SW project aims were to demonstrate that child health can be improved by a programme of activities to support families, coupled with access to enhanced community-based resources for parents and their children. **Health visiting in SW:** Structured and intensive visits until age 3; Weekly for 2 months; Fortnightly from 2 to 6 months; Monthly from 6 to 12 months; At any time and after one year, according to need; Needed to complete a family health plan; goal setting for improved health; use of the triple p parenting programme. ii. NR iii. Two follow up interviews at two time-points 3-4 months; 9-10 months.	i. Thematic analysis, codes verified by other researchers. ii. **Process of programme implementation: intensive visits:** Health visitors and mothers testified to the value of regular visits; however, some difficulties in areas resulted in visitors having to target those who were most in need. This was seen as a challenge since visitors did not want to abandon their cases **Building relationships:** All visitors testified to the value of building relationships over time to develop trust, and get at intimate knowledge about the mother/family. Only after time can visitors identify problems and areas from improvement. All visitors were equipped to handle a wide variety of issues. Home visiting was cited by many mothers as valuable as it created the right context for disclosing personal issues. This was seen as a better environment when compared to the clinic or other services. Mothers felt empowered and supported by advice that was offered in a non-intrusive/non-threatening manner- this was valued by all mothers. **Linking program and benefits:**	i. A small sample of mothers who may be motivated to participate ii. A more-focused investigation of the link between the theory, content and style of interaction and perceived benefit may offer health visitors and other health and social care practitioners a means of providing more robust evidence iii. Scottish Executive Health Department.

				in one to cases mothers reported a link between health visiting and child benefit. Several mothers reported improvements in their mental health; they perceived the programme as offering enhanced levels of support and this was felt among all mothers regardless of background (in 1st and 2nd interviews). **Support/benefits of programme:** increased confidence in carrying out infant care and exploiting community resources, reduced anxiety in relation to infant care needs such as feeding, an increase in knowledge and in their sense of personal competence in parenting practices, reduced isolation, and the experience of advocacy for those experiencing housing, financial or family problems. iii. 7 mothers could not be contacted for various reasons. Details not reported.	
i. Melhuish et al. ii. 2007, UK iii. To gather data from multiple sources to produce measures of implementation	i. Families with 9- and 36-month-olds in these areas were randomly selected for recruitment using national Child Benefit records during 2003 and 2004. Home-visit data were	i. Sure start programmes ii. NA iii. NA	i. Examining the sure start evaluation. An area-based initiative, Sure Start Local Programmes (SSLPs), was established by the UK government to reduce social exclusion through improving the well-being of children aged 0–3 years and their families in disadvantaged communities	i. Modelling and regression ii. Domains of programme proficiency: Process (N = 7) Partnership – composition: SSLP Partnership Board has balanced representation of education, social services, health, voluntary and community organisations and parents. Partnership – functioning: The Partnership functions well.	i. NR ii. theoretically derived ratings of proficiency may be a fruitful alternative to established measures of fidelity or quality for future studies iii. UK Department

in terms of proficiency, services and staffing. iv. Quantitative: multi-level modelling and regression vi. NA	gathered on 12,575 9-month-olds and 3,927 36-month-olds, representing response rates of 84.4% (9-month) and 73.4% (36-month). ii. 150 of the first 260 SSLP areas were randomly sampled, stratified across the nine Government Office regions within England iii. Random allocation		ii. NA iii. NA	Leadership: SSLP has effective leadership/management. Multi-agency working: Multi-agency teamwork is well established. Service access: There are clear pathways to access specialist services. Staff turnover: Staff turnover low. Evaluation use: SSLP takes account of evaluation findings. Progress (N = 7) Services – quantity: Service delivery reflects guidance for core services in family support, health, play, early learning and childcare. Services – delivery: SSLP has balanced focus on children, family and community. Identification of users: SSLP has strategies for identification of users. Reach: SSLP shows realistic and substantial involvement of families. Reach strategies: SSLP has strategies to improve and sustain use of services. Services – innovation: SSLP shows innovation in service delivery. Services – flexibility: Services accommodate the needs of a wide range of users. Holistic (N =4) Vision: SSLP has a well-articulated vision relevant to the community. Empowerment: SSLP procedures create an environment empowering users and staff.	of Education and Skills

				Communications: Communications reflect characteristics/ languages of community. Ethos: SSLP has a welcoming and inclusive ethos. Collectively, the 18 programme-proficiency ratings significantly discriminated between groups of more and less effective programmes; and these results were fully replicated when 150 programmes were randomly split into two halves and analyses rerun on both sub-samples. For 9-month outcomes, levels of significance for the full sample were **p** < .001, and improvement in correct classification beyond chance (i.e., 50%) was 32%. For 36-month outcomes levels of significance for the full sample were **p** < .01, and improvement in correct classification beyond chance was 35%. The more a SSLP promoted empowerment, the more it enhanced maternal acceptance (**β** = .28, **p** < .01). For 9-month-olds, programmes that inherited more parent-focused services reduced negative parenting more (**β** = −.23, **p** < .01). For 36-month-old parenting, the more child-focused services were improved, the more maternal acceptance increased (**β** = .25, **p** < .05).	

				The greater the proportion of health services staff, the more maternal acceptance increased (**β** = .26, **p** < .01). iii.	
i. Murphy et al ii. UK, 2008 iii. to describe the experiences of lay-workers, women and health professionals involved in the trial in peer-mentoring for disadvantages 1st time mothers. iv. Qualitative (interviews) vi. -	i. Part of a larger RCT of peer mentoring for women living in areas of socio-economic disadvantage, who became first-time mothers. ii. semi-structured interviews with women (n = 11) who were offered peer mentor support lay-workers (n = 11) who provided mentoring midwives (n = 2) who supervised the programme iii. Purposive sampling	i. Socially deprived areas of Belfast. Women, aged 16–30 years, living in areas of high socio-economic deprivation (identified by postcode), who had no previous pregnancy and required no ongoing healthcare for other conditions were identified in hospital antenatal clinics for RCT. The visits would be arranged to suit mothers. They would normally take place in their own home and would continue throughout pregnancy and for one year after the childbirth. During the visits they would be offered	i. Planned frequency of contact was two-weekly (telephone or home visit) but was tailored to individuals' needs. ii. NA iii. (Early Interviews) 9 months after the start of the trial then followed by interviews one year later (later interviews). The first stages of interviews helped establish the programme. To attempt to confirm the validity of the qualitative findings further data were collected by administering a postal questionnaire, containing questions based on the themes identified, to all mentors involved in the RCT, including those who resigned.	I. Thematic analysis ii. **Contact:** Mentors reported difficulties, including incorrect or unanswered telephone numbers, no response to messages, postponement of arranged visits and women not being at home for arranged visits. In early interviews mentors reported adopting a sympathetic approach, trying to establish rapport through telephone conversations and re-arranging numerous appointments. Repeated unsuccessful attempts at contact appeared to affect some mentors' personal morale. Midwives reported that they recognised a need to support mentors in initiating contact in order to try to encourage mentors to stay in the programme. Later interviews did not reveal such difficulties in initiating contact but suggested that mentors then had a less sympathetic approach, and reported failed contacts to the midwives more readily. Mentor's role Women had a poor understanding of	i. Findings cannot be generalised ii. Findings can inform future studies. iii. R&D office, Northern Belfast.

		advice about their own and their baby's healthcare and help in accessing professional health and social care services as required. Mentors were selected following response to advertisements in local press and community centres. They were of similar age to the participants, lived in the same localities and had at least one child under 10 years of age. Mentors were given, in each of the first three weeks, one formal two hour training session at which the programme and the role of the mentor were explained. Their role was to identify health and social care needs of the women, to ensure		RCT and mentor's role. Some believed mentors were professionals. Negative expectations of the mentoring role, turned positive at programme end. Midwives perceived that women's interest in the RCT lay in the opportunity to avail of some outcome assessments, such as the 29 week fetal behaviour scan, rather than in receiving mentoring. They also suggested that some mentors failed to appreciate that mentoring involved more than providing superficial social contact. Peer-mentor relationship: Mentors used the friendship approach in an effort to reach mothers and to gain trust for future visits. Women valued the support and time spent with them. Midwives reported perceptions that successful peer-mentorship involved friendship and a high level of practical support. Mentors reported difficulties in providing support in situations where a friendship bond did not develop and when there was disinterest or lack of perceived need. Some reported failure in trying to achieve satisfactory communications	

		awareness of health promotion information and to provide non-professional social support. They were told how to refer women to services if they had specific queries regarding their health or social care. If there was any doubt about appropriate action, mentors were encouraged to contact the midwives directly for advice. Mentors were given information and handouts to help them in their role and were also given telephone access to a midwife for support. Mentor group meetings took place every 6-8 weeks and peer support was available through sharing of experiences. Each mentor self-completed a training		with the women. Women receiving other social support (i.e. extended family) were not as engaged in service since they were already receiving support. **Influences on mentoring:** Ethnicity: Language barrier was a problem. Mentors discovered cultural differences for which they were unprepared and wanted to be sensitive. Mentors gave these women information through pre-set agendas rather than by responding to any identified need. Despite this however mentors felt that their visits to them were worthwhile as they appeared to have little local social support. This view was supported by observations of the relatively high rate of mentor visits accepted by the women with minority ethnic backgrounds in the RCT: of the 10 who were assigned a mentor, only one did not avail of any visits. **Others:** Having others present during mentor sessions was not helpful since they either interrupted or wanted to discuss their concerns with mentor. Sometimes having a person present, even if they did not speak, compromised the session. However, some mentors	

		log throughout the programme ii. NA iii. RCT trial of mentor programme (phone or home)		reported a positive experience. One-to-one sessions are better for discussing personal information. Mentors were aware of the possible negative influences of others on mother's continuation in programme. Alternatively, women valued information and believed it would be helpful to others. **Time:** Several mentors reported struggling to fit the mentoring around their other commitments even though the number of hours per month for mentoring was small (from 1 to 11 hours). Mentors identified that difficulty contacting women and finding mutually convenient times added to their workload. The questionnaire confirmed that time was considered an issue for all but two of the mentors who completed the questionnaire (n = 13); nine of the 22 who resigned during the programme cited time constraints as the reason for their resignation. iii. Of the 32 mentors involved in the RCT, 11 were invited to participate and all agreed. Twelve women were invited to participate in interviews and 11 agreed	

i. Smith et al ii. 2007, UK iii. evaluate the effectiveness & appropriateness of the services provided by the health support workers and address issues to improve the service identified by service providers and service users. iv. Focus groups and semi-structured interviews vi. +	i. The service users were identified by five of the health visitors; each composing a list of clients referred to the health support workers. ii. Qualitative methods included focus group discussions with service providers (10 health visitors and six health support workers) and semi-structured interviews with 7 service users. iii. The service providers were invited to take part in three focus groups, one included all the health support workers and two comprised five health visitors each.	i. Service users, service providers. No other details given. ii. NA iii. Working environments for service providers and the homes of service users.	i. The Sure Start programme is the subject of this evaluation. It is targeted at children under five and their families in the most deprived communities. The programme makes use of health support workers to supplement the health visiting service by providing support to families in the Sure Start areas through home visiting and group work. Compulsory training included child protection, cultural and social awareness, child development, speech and language development and basic play techniques. New support workers received 12 weeks' training from the Sure Start health visitors. Referrals were made by the health visitors covering the Sure Start areas, The intervention was specific to each referral and was intended to be clear, focused and limited to a	i. interview schedule was used to ensure all of the relevant topics were covered. Each group discussion lasted approximately 90 minutes and a schedule was used to ensure that pertinent research questions were covered. All the discussions were tape-recorded and transcribed. The method used to analyse the data from the focus groups was content analysis. ii. **The context of work and the study:** Stress was a part of their work for service providers. Many families were deprived and service providers required cultural awareness. Some users were reluctant to fully engage in the service; however, the majority of users were positive about the intervention. **Training of support workers:** Providers were concerned about the lack of information regarding the training of support workers. Training needs to be addressed to improve the service. Support and supervision and safe working practices	i. no firm conclusions regarding possible long term benefits can be established ii. some further investigation needed in this area iii. Study was commissioned by a service provider in a deprived urban area in south Wales

	Researchers contacted the selected service users. Individual semi-structured interviews using a schedule with open-ended questions were conducted in their own homes.		maximum of eight weeks and agreed by the support The health support workers also ran or assisted at various Sure Start groups, including support for teenage parents, parents of children with special needs and parents of multiple births, in addition to programmes to address children's behaviour problems and postnatal depression. ii. NA iii. NA	needs to be considered. **Mechanisms within the Sure Start service** Belief that families need targeted, time-limited interventions by support workers to change a particular aspect of their child's health or behaviour. Some parents might have agreed to the referral to avoid the involvement of other services. A resistance to address issues by some families, particularly those with older children, was identified as a problem by the health support workers. Providers encouraged users to remain involved in services/programmes after the intervention had ended since some families were helped by the intervention. **Seamless service:** Sure start was seen as a seamless service since it provided individual services working together to provide support. This gave a higher profile to the service. Overall, there was a general belief that support workers had a positive impact on the health visiting service **Implications** There was also a widely held view	

				among some health visitors and health support workers that the service had had an impact on social services referrals in that the use of Sure Start as an alternative to social services was becoming accepted practice. However this also gave rise to concerns about the appropriateness of certain referrals to the Sure Start programme and there was a view that the service could be seen as a 'last resort' for some families. However it was seen as important to give families an opportunity to receive a service that might prevent a referral to social services. The existing internal system of evaluation of the health support worker service was regarded as inadequate. Addressing children's behaviour problems was seen as a more difficult area of work in terms of providing a successful outcome and perhaps this area requires more time and expertise, longer interventions may be useful here. **Motivation of families** The motivation of families to work with the health support workers was seen as crucial to the success/failure of an intervention. However it was also seen as unrealistic to expect a significant level of improvement in family circumstances	

				given the short time available. The service should consider a realistic target for successful outcomes. It is important to focus on the positive benefits for those families the service has helped. iii. NR	
i. Smith et al. ii. 2009, UK iii. To evaluate of the early education pilot for disadvantaged children. iv. Evaluation (mixed methods) vi. +	i. Targeted disadvantaged families. Sample collected from local authorities who did not opt-out. 2,186 eligible parents ii. 1,400 interviewed for pilot (mostly parents of pilot children). Further in-depth interviews were conducted with a subsample of 54 respondents to explore views further Selected on the basis of being disadvantaged: living in a target	i. The pilot children were more 'disadvantaged' than the general population of two year olds. A considerable proportion of families lived in the 20%most disadvantaged areas of the country (73 per cent). 78% white 41% lone parent 34% dual earners; 43% single earners 23: not working 92% of children experiences one or more forms of disadvantage. Pilot families tended to have a lower income than the	i. The pilot provided free early years education to over 13,500 disadvantaged two year olds between 2006 and 2008. The main purpose of the pilot was to improve children's social and cognitive outcomes, and to positive impact on children's parents and wider family 7.5 (or in a small number of local authorities 12.5) hours of early years education per week for 38 weeks of the year. The pilot places were available in a variety of early years settings e.g. nurseries, play groups and with childminders ii. Interviews with a comparator group selected from child benefit.	i. Thematic and quantitative analysis ii. Outreach and marketing that was a key feature of the pilot recruitment **Reasons for uptake:** 1. Social advantages: mix with other children (79%) and to become confident and independent with adults (43 %) 2. Educational advantages: learn new things (46%) child's speech and/or English language to improve (29%). 3. Parents personal Advantage: break or time to do other things (both 39%), only a very small proportion saw the pilot as offering them an opportunity to work (2%). Parents with a relatively low level of disadvantage, the child's development was the main or even only reason for taking up the pilot place. Parents with a high level of need (e.g. because of heavy caring responsibilities, mental health problems, child's behavioural problems), other influences, such as the need for respite care or parenting	i. Pilot study ii. scope for improving targeting, particularly in local authorities that used broad geographical and economic indicators to define and target potential beneficiaries iii. NR

	area (33 per cent), being a low income family (19 per cent) and being a lone parent (15 per cent). iii. NA	general population. There were many more lone parents amongst pilot families. Higher prevalence of longstanding illnesses & disabilities amongst parents and children. Pilot children were identified as having additional needs than in the general population (most commonly difficulties with speech and language). Parents were informed of pilot from a variety of sources mostly from professionals or early years setting ii. NA iii. Childcare setting	iii. 2 interview waves for baseline. Follow up was 82% and interviews were completed in two waves at follow up.	support also played an important role in their decision to take up the pilot. 90% received all their free hours over 38 weeks In the small number of instances that families did stop early, 31%of drop outs left within the first two months **Characteristics of drop outs:** non-working, low income families, families including children with needs or a disability. **Reason for drop outs:** concern for their child's well being (36%), poor quality provider (22%), changes and practical reasons (16%), provider closing down (9%). **Views of pilot:** Overall, parents were happy with pilot and used their hours. Some did want extra hours but did not want to pay, there was no space, no hours offered at that setting. Most of those with negative views received help with their concerns. Parents found approachable, friendly and good at communicating. Specials needs and disabled children required more support, and had some unresolved problems. Satisfaction with the level of feedback parents received was generally high	

				(80%) Special needs and disability children's parent were less satisfied with feedback. Parents were generally happy with staff and the quality of the service. Parents believed the pilot had a range of benefits for their families. Where the setting was viewed negatively, it was associated with parents being less positive about pilot effects (more likely to be reported by parents with children with special needs/disability). iii. 10% drop out rate.	
i. Toroyan et al ii. UK, 2004 iii. To conduct a process evaluation of alongside a RCT of pre-school day care iv. process evaluation: questionnaires, interviews, observations, field-notes vi. -	i. 120 mothers took part in the larger RCT ii. Head of centre was interviewed Staff employees completed questionnaires n=11 Mothers in control n=10 Mothers in intervention n=11 iii. NA	i. Sample included a representation of lone parent, large families, and lower SES families. Children 6 months to 3.5 years. ii. NR iii. Day-care	i. Education-led programme flexible to family needs. Full or part-time places available to families. 10 hour working day, 48 weeks per year. Families could change their hours if needed. Delivered by qualified staff (minimum of level 3 qualifications of one member of staff each day) ii. Other services offered in the borough iii. 18 month follow up.	i. Mixed methods ii. Parents support the view that the care in the intervention group was of high quality compared to other facilities in the borough. Control groups parents were critical of inadequate staff at other centres. External events can impact the provision of care at the centre (funding, financial deficits, funding freezes) Staff also commented on the intrusive nature of trial monitoring Flexibility was not an attribute of control group day care and this might influence employment decisions. Mother in	i. Qualitative data not collected for all trial outcomes ii. Conduct interviews after analysis of RCT data so they can be involved in the interpretation of results. iii. Department of Health

				intervention found the flexible nature of the programme a facilitator for employment. iii.	
I Tunstill et al. ii. 2005, UK iii Case studies exploring implementation issues of Sure Start iv. -	I Sample of 20 Sure start areas. ii 138 Programme managers, 155 staff, 15 Chief execs, 77 parents, 12 community members	I Sample selected on demographic variables, varied quality ratings, lead body, proximity of other initiatives	I Sure Start	i. Interviews, service audit, observations, study of documentation iii. **Themes:** The role of a **programme manager** is important, need to be supportive, flexible, approachable, motivated and understand family responsibilities. The right manager makes a difference. Good pre-existing **relationships** between local agencies are helpful. Differences in **funding** available to local agencies could cause alienation. Importance of early clarification of purpose and attention to implementing **partnership** working. Clear **roles** and responsibilities for staff must be in place. Successful **multidisciplinary team** working requires training, dealing with referrals, meeting other staff and co-location. Adequate **databases** are important,	I ii iii DoH

				together with the availability of appropriate hardware and software. **Staffing programmes** is a complex task for managers. Staff from diverse professional backgrounds working in common teams can be a challenge. Professionals may need to re-interpret their professional role when working in a multi-professional team Staff can face conflicting management pressures and loyalty between their professional or home organisation and the sure start programme. Ongoing challenge for programmes in terms of generating and maintaining the right **skills mix**. Need to ensure **training** structures fully address the multi-agency working. **Targeted outreach**, targeted publicity and key workers appear to be crucial in identifying and reaching vulnerable groups. **Reaching vulnerable families** is an ongoing task. Good **inter-agency working** is crucial so that families do not slip through the net. Consistent efforts to engage parents and maintain engagement are required. Considerable problems are generated by boundaries both geographical and age. Operation of 9-5 **office hours** is an	

				issue for parents, particularly working parents. Some tension between working in an open and friendly style and maintaining professionalism. Involvement of **male workers** can pay dividends in terms of involving fathers.	
i. Wiggins et al ii. 2004, UK iii. To determine whether increased postnatal support could influence maternal and child health outcomes. iv. RCT vi. NA	i. eligible women n=1263 ii. 731 participants CGS: Community group support n=165 (only 35 used support) SHV: Support health visitor n=180 (172 used service Control (standard care) n= 364 iii. Randomisation by minimisation by independent researcher. Blinding not possible given nature of trial	i. Women living in deprived enumeration districts in selected London boroughs were eligible for the trial if they gave birth between 1 Jan and 30 Sept 1999. 1st time mom: SHV 48% CGS 50% Control 48% Age at birth years: SHV 29.5 CGS 29.7 Control 29.6 Baby age at baseline weeks SHV 9 CGS 9.6 Control 9.2 Mother 'White' SHV 54% CGS 57%	i. **support health visitor (SHV)** intervention consisted of the offer of monthly home visits by an SHV for 1 year. The structure of the visits was informal, with a focus on listening to the woman and exploring any issues she wanted to discuss. The women could request more or less frequent visits and could also ask that the visits took place in an alternative venue. Interpreters were provided for the intervention visits where necessary. **community group support (CGS)** intervention arm of the study consisted of the offer of support from one of eight local community groups in the voluntary and charitable sector that provide	i. information taken from RCT data ii. Main reasons for **refusal to participate** in study: too busy, not being interested, already having enough support. **SHV intervention:** **Mean number of visits** was 7. 87% of women said they were happy with the number of visits, 8% wanted more, 5% wanted fewer. Over half of the women said that they found the SHV 'very helpful indeed'. Just over 5% either felt that they had not received enough help or had not liked the visits of the SHV Nearly all the women said that the SHV had listened to them. Three-quarters felt that the SHV had been able to spend a lot of time with them. Women who had low usage were more likely to be pleased with the service. Women had more positive views about	i. Uptake of CGS intervention was low; imprecise estimations of intervention effects, biases in study design; appropriateness of interventions for non-English speakers; non-validated tools used; limited outcome and economic data. ii. a systematic review of social support and its effect on health; developing and testing other postnatal models of support that match more closely the age of the baby and the changing patterns of

		Control 60% Lone parent SHV 29% CGS 26% Control 25% Education <16 yrs SHV 8% CGS 13% Control 9% Weekly household income <£200 SHV 56% CGS 56% Control 54% Living in public housing SHV 69% CGS 69% Control 71% ii. women whose baby had died or was seriously ill in hospital, women whose baby had been placed in foster care, and women who had moved (or were in the process of moving) out of	support and services to postnatal women and their babies. The nature of the intervention was dependent on the standard services operated by each group. These included drop-in activities, home visiting and telephone support. ii. **Control:** Routine NHS health visiting services were available to women in the control group and both intervention arms. In the study area these health visiting services involved one postnatal home visit when the baby was 10–15 days old and clinic support thereafter; subsequent home visits were not routinely made, except for women deemed to be at moderate or high risk. Women in all three trial arms were able to access available local community group services. iii. Baseline questionnaire then 12 and 18 months post randomisation	SHV than **NHS health visitor**. Themes that featured strongly included: _ seeing the SHV more regularly than the NHS health visitor _ the SHV being non-judgemental/not an authority figure _ the SHV having more time _ the SHV concentrating 'on me, not just my child' _ having a better relationship, 'continuity' with the SHV **Likes about SHV:** The things that were most frequently noted as being liked were having someone to listen, the friendliness of the SHV and the opportunity to discuss personal issues **Dislikes about SHV**: The main themes were time pressure, which made the visits difficult to fit in, and a feeling that the visits were pointless or unnecessary **Staff views:** *Support for this type of intervention*: the SHVs felt that supportive listening visits were worthwhile and on the whole liked by the women; they enjoyed working in this manner; they got to know the women and learned to give them space and trust them. All said that working in this way had revolutionised their practice. The SHVs interpreted the *variation in their practice* (regarding number of	mothers' needs; evaluating other strategies for mobilising 'non-professional' support; developing and testing more culturally specific support interventions; developing more culturally appropriate standardised measures of health outcomes; providing longer term follow-up of social support interventions; and exploring the role of social support on the delay in subsequent pregnancy. iii. HTA programme

		Camden and Islington. Women who did not speak English iii. Camden and Islington areas of extreme wealth and extreme poverty.		visits, length of time spent per visit, etc.) as being predominantly influenced by the nature of their caseloads; for instance, how many women required interpreters and the number in temporary accommodation who were moved several times and with whom it was difficult to maintain contact. They allowed that the personalities and personal styles of the SHVs had also influenced their individual practice; some found it easier than others to work in a purely 'listening' rather than 'doing' mode. The SHVs were at times overwhelmed by the sheer *burden and complexity of problems* faced by some of the women, including domestic violence, debt, asylum seekers awaiting deportation, bereavement, alcoholism/drug addiction, housing difficulties, relationship difficulties and mental illness. They remained frustrated by the '*ones that got away*' women who moved or became hard to reach They had worries about the *cultural appropriateness of the intervention*. They discussed the awkwardness of trying to implement this intervention in certain settings, especially with interpreters	

				They felt that *the intervention would not be effective* overall, despite all the visits. They were unsure that the outcomes being measured could be influenced substantially by the intervention they provided. They did not think that the intervention would hurt, but felt that the women's problems were either too entrenched or too major to be significantly affected by a once a month visit. All of the SHVs felt that they had success stories, but also had women for whom the intervention would not impact *CGS was the second arm of the trial, which was less relevant to aims of the review questions. A summary of research findings is provided:* Only 35 of the 184 women (19%) allocated to the CGS intervention used the services on offer. The community groups reported providing 264 hours 52 minutes of contact (195 contacts in total) to women assigned to them. The groups that had the most success in uptake of services were those that offered a home-visiting service as part or all of their service. The perceived lack of need for the services offered and the groups' failure	

				to make contact were two main reasons women gave for non-use of the CGS intervention. Of the women who used the services and commented on their satisfaction with them, half found that the group had given them enough help or were very helpful; half were more dissatisfied with the help they had been given. The community groups reflected on possible changes to the way they make initial contact with potential users of their services, and to the nature of the services they deliver in order to be more accessible to a broader range of women. They also reported some individual success stories where they could see that women had benefited from using their services. iii. CGS: 26 lost to Follow up 12 months 164 returned questionnaire (89%) 18 months 158 returned (85%) Reasons: 9 withdrew 12 moved/unable to locate 5 did not return questionnaire SHV: 38 lost to Follow up 12 months 165 returned questionnaire (90%)	

				18 months 145returned (80%) Reasons: 12 withdrew 14 moved/unable to locate 11 did not return questionnaire 1 –baby died - excluded	

Appendix 2: Included studies

Included UK effectiveness studies:

BARLOW,J., DAVIS,H., MCINTOSH,E., JARRETT,P., MOCKFORD,C., STEWART-BROWN,S. (2007). Role of home visiting in improving parenting and health in families at risk of abuse and neglect: results of a multicentre randomised controlled trial and economic evaluation. *Archives of Disease in Childhood*, *92*(3), 229-233.

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Appendix 3: Excluded studies

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Appendix 4: Systematic review search strategies

Child terms	Broad Intervention terms	Vulnerable group terms
MeSH terms – Infant/ – Child, Preschool/ Free-text terms – Infant$ – 0 year$ old$ – 1 year$ old$ – 2 yearold – 3 year$ old$ – 4 year$ old$ – one year$ old$ – two year$ old$ – three year$ old$ – four year$ old$ – toddler$ – preschool$ – pre-school$ – under five$ – under 5 – baby – babies – newborn	MeSH terms – Early Intervention (Education)/ Free-text terms – early intervention$ – progressive intervention$ – progressive program$ – targeted intervention$ – targeted program$ – home visiting and (program$ or intervention$ or postnatal$) – family based and (program$ or intervention$ or postnatal$) – family-based and (program$ or intervention$ or postnatal$) – early education and (program$ or intervention$ or postnatal$) – child care and (program$ or intervention$ or postnatal$) – health support and (program$ or intervention$ or postnatal$) – family support and (program$ or intervention$ or postnatal$) – outreach service$ and support and (program$ or intervention$ or postnatal$)	Free-text terms – vulnerable – sensitive – disadvantaged – at risk – at-risk – low birth weight – child-parent attachment – poor and (cognitive or social or emotional$) – poor adj2 (behaviour or behavior) – difficult adj2 (behaviour or behavior) – low income – poverty – unemployed – jobless$ – single parent$ – teen$ adj2 parent$ – substance abuser$ and parent$

Appendix 5. Databases searched

- MEDLINE and MEDLINE in Process & Other Non-Indexed citations (Ovid)
- EMBASE (Ovid)
- British Nursing Index (Ovid)
- EconLit (Ovid)
- PsycINFO (Ovid)
- Health Management Information Consortium (Ovid)
- Cochrane Library (Wiley):
    - Cochrane Database of Systematic Reviews
    - Cochrane Central Register of Controlled Trials
    - NHS Health Economic Evaluation Database
    - Health Technology Assessment Database
    - Database of Abstracts of Review of Effects
- Health Economics Evaluations Database (Wiley)
- ASSIA (CSA)
- Sociological Abstracts (CSA)
- ERIC (CSA)
- Social Services Abstracts (CSA)
- British Education Index (Dialogue Datastar)
- CINAHL (EBSCO)
- Web of Science (Thompson ISI):
    - Expanded Science Citation Index
    - Social Sciences Citation Index
    - Conference Proceedings index
- Proquest Education Journals (ProQuest)
- The Campbell Collaboration
- EPPI-Centre database:
    - Database of Promoting Health Effectiveness Reviews
    - Database of Educational Research
- Social Care Online
- Centre for longitudinal studies http://www.cls.ioe.ac.uk/