Research Report DCSF-RW008

Cost Benefit Analysis of Interventions with Parents

London Economics

department for
children, schools and families

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1 Introduction

Interventions to promote positive early childhood development are widespread and are based on the belief that early benefits in child cognitive and emotional development will carry on into later life. These benefits accrue not only to the individual, but also to society, through reduced crime rates and lower use of costly public services. Further, early childhood interventions are increasingly seen as an important economic investment in human capital that can generate large future benefits through the creation of a highly qualified and productive workforce (CED, 2006).

Despite the recognised importance of early interventions, and a large literature evaluating programmes aimed at improving child outcomes, there remains a fundamental lack of robust evidence relating to interventions aimed directly at parents. It is clear that parenting plays a crucial role in determining the outcomes of children. However, it is less clear as to the transmission mechanisms by which parental attributes or behaviours impact on the outcomes of children and to what extent the government has any influence over these transmission mechanisms.

There is an extensive literature examining the impact that parents, and their personal characteristics, have on child outcomes. The importance of earnings, and education has been illustrated repeatedly (e.g. Blanden et al., 2003; Chevalier et al., 2005), and there is now an increasing evidence base emerging relating to the effects of parenting characteristics and skills on child outcomes. Less is known about the impact of parenting and parenting skills *per se* simply because it is difficult to isolate the effect of different parenting interventions from the parenting skills already embodied in different levels of parental education (and earnings)[1]. Despite this, there is evidence that positive and consistent discipline; on-going parental involvement; and parental attitudes more generally are associated with better behavioural and educational outcomes in children (Levenstein et al., 1998, Wade, 2000). For instance, the most recent evidence from the Effective Pre-School and Primary Education (EPPE) study has found that parental education and the quality of the home learning environment in the early years remain powerful predictors of child academic attainment at age 10 (Sammons et al., 2007).

Parenting interventions aim at promoting these positive parenting behaviours, and reducing activities such as erratic discipline techniques that may have a negative effect on child outcomes. Parenting interventions also aim at increasing parenting knowledge relating to issues such as health, nutrition and other aspects of child development and a healthy parent-child interaction more generally.

[1] In the academic literature, this problem is known as endogeneity, which is discussed in greater detail later in the report.

UK government policy has placed a significant emphasis on improving child outcomes, and since the current Labour government came into office in 1997, there has been a trend to focus public service delivery to specifically achieve child centred outcomes. Several government policies have been published placing family support at the heart of the objective to eliminate child poverty: *Supporting Families* (1998), *Every Child Matters* (2003), *Every Child Matters: Next Steps* (2004), *Support for Parents: The Best Start for Children* (2005) and, most recently, *Every Parent Matters* (2007). These policy documents have recognised the crucial role of parenting in the development of children, and particularly the prevention of antisocial and criminal behaviour. At the same time, there is an understanding that, while most parents want to do the best for their children, there is a need for parenting support in many families.

This recognition has led to a range of policy initiatives.

First, a new emphasis has been placed on *parental responsibility*, leading to the introduction of Parenting Orders in 1998 (mandating parents to attend parenting skills classes) and the voluntary Parenting Contracts in 2003. Secondly, there has been a focus on *supporting parents*. This has led to a major expansion in parenting services delivered by central government (Moran et al., 2004). This has included both universal services (such as Parentline Plus) and more targeted programmes (such as home visitation and parent training programmes). A number of services have been delivered through Sure Start, which provides a range of family services, including early education, childcare, health and family support. Recently, *Every Parent Matters* has announced a new range of parenting services including the provision of health-led parenting projects in 10 areas across England, the expansion of the Bookstart literacy programme, and the introduction of new family learning courses.

With this widespread expansion of parenting support, it is important that we improve our understanding of the likely impact of many of these programmes. Although there is a growing body of literature incorporating policy and programme evaluations alongside systematic reviews of the academic literature, there remains little understanding of the costs and benefits of different types of parenting interventions. In particular there are few robust economic evaluations of policy interventions relating to parents, largely due to the lack of a sound methodological framework for analysis[2], and the rarity of long-term follow-ups to assess the outcomes achieved by either parents or children.

[2] For example, the majority of the evaluation work that has been undertaken in relation to parenting interventions has not incorporated appropriate counterfactuals. The counterfactual relates to understanding what would have happened to those individuals participating or in receipt of a particular initiative had they not been in receipt of the initiative.

1.1 Scope of the Review

This review of the existing research and policy evidence set out to collect and evaluate the existing English language evidence relating to the effectiveness of parenting interventions. Given the vast literature focusing on early childhood interventions, and the implicit relationship between parenting skills specifically and parental education and income more generally, it was necessary to focus the review on the key areas of interest to the Department.

The focus of the review is on interventions targeted directly at parents, with the objective of directly or indirectly affecting child outcomes. This covers a wide range of policy initiatives, ranging from those aimed at increasing household income and employment rates, to those interventions aimed at changing parenting behaviour or increasing parenting skills. This emphasis **precludes** discussion of the following:

- Interventions aimed at all adults (but possibly affecting parents); and
- Interventions primarily targeting children (unless there are separately evaluated parenting elements within the child-centred programme). This includes:
    - Early childhood education and childcare
    - Family therapy, where children are included

We took an open approach when assessing the evidence to include in the review. In particular, while seeking to incorporate as much evidence from the United Kingdom as possible, we complemented this with international evidence wherever this added to the discussion. Given the vast preponderance of programme evaluations in North America, a large proportion of studies considered were US-based. This is particularly true of cost-benefit analyses. Similarly, we make particular reference to studies with rigorous methodologies; however; less robust evaluation and research work was included where we felt this added to the discussion and analysis.

The core focus of the review is to analyse the academic literature relating to the relative costs and benefits of parenting interventions. However, the review does not include a detailed discussion of the underlying educational theories and pedagogies that underpin many parenting programmes as this was beyond the original scope of the research.

This review aims at identifying the recent and relevant research in the area and also identifies some of the evidence gaps that continue to be faced by policymakers. Despite the fact that there are gaps in the evaluation material, from the evidence that does emerge from the review, it appears that there is a rationale for the allocation of resources in favour of parenting interventions.

2 Methodology

In this section, we present the basic methodological approach used in undertaking this systematic review of the literature relating to the cost effectiveness of parenting interventions. We base our approach on the guidance that has been set down in the HMT *Magenta Book*, which offers a checklist for undertaking a systematic review.

Conducting the review

The review was based on English-language literature, including both published and unpublished work. A key methodological challenge was to identify any available literature on the economic evaluation of parenting interventions. While it is clear that there are a huge number of documents relating to the role of parents on child outcomes in England (a simple internet word search of 'parenting programmes' yields over 600,000 web pages referring to the subject for the UK alone), literature specifically focusing on the costs and benefits of those programmes is more limited. A four-stage process was used to identify relevant studies.

Stage 1: Development of parameters and identification of potential sources

We started the review by defining a number of parameters for selection of research material that might be considered for review. The initial broad criteria included geographical, temporal and methodological considerations.

The published literature searched included major journals (both specifically economics based as well as social sciences more generally), in addition to publications by a number of governmental bodies (such as the Department for Education and Skills and Department for Work and Pensions), other public bodies (such as the Joseph Rowntree Foundation and the National Evaluation of Sure Start) and online databases (such as the Education Resources Information Center). In addition to this, we also undertook a hand search of some key sources.

Unpublished literature was accessed through general internet searches, as well as review of the CERUK research database. In addition to this, we contacted leading education economists directly to ascertain whether they were aware of any unpublished work or research that was in progress.

Stage 2: Development and application of exclusion criteria and initial filter of articles

This was a three-stage process of refinement that involved a review of each of the initial documents selected following the first stage of analysis and was based on abstracts and titles. The main criteria used were:

- Geographical (based in countries in either the European Union or the OECD;
- Temporal (undertaken in the last 10 years);
- Focus of article (evaluations of interventions, either quantitative or qualitative);
- English language.

Stage 3: Application of review specific exclusion criteria and second filter of articles

Having refined the list of articles for the second stage, we then further refined the inclusion/exclusion criteria specifically associated with the proposed research questions. Considerations at this stage included:

Focus of Interventions

We focused on interventions that were aimed primarily at parents, and their behaviour. This included interventions targeting both "who the parent is" (such as employment and welfare programmes) and "what the parent does" (such as parent training classes). Interventions targeted largely at children through early childhood education or childcare (for example) were not included in the review.

Age of children

Given the particular importance of the early childhood in determining child outcomes, and the relatively large importance of parenting in the early years, the focus of this review (as with the majority of interventions) was on children aged 0-5. However, some studies that consider children outside of this particular age range were included where this was thought to add to the overall analysis.

Outcomes

The evidence presented in this report focuses on cost-benefit analyses of parenting interventions. However, given the relatively limited amount of studies directly addressing this question, studies providing a broader range of outcomes were included. Both parental outcomes (such as employment or earnings) and child outcomes (such as educational) were considered.

Methodological robustness

The methodological robustness of the research evidence was assessed, but since few robust evaluations have been carried out (in several areas), we also include some less robust studies (with appropriate caveats). The citations in each of the articles not excluded by this stage were assessed to ensure no relevant articles were excluded from the analysis.

144 articles were carried forward for full and final review. The full list is provided in the references.

Stage 4: Full scale review of articles selected for inclusion

This final stage involved the in depth academic review of the final list of intervention studies. This included the categorisation of articles directly examining parenting interventions according to the quality and usefulness of information provided in each article.

- **Tier 1** - Qualitative identification of (main) costs and benefits only (e.g. increased participation)
- **Tier 2** - Quantitative assessment of benefits using subjective outcome measures (e.g. behavioural scales) or using less rigorous methodologies
- **Tier 3** - Robust non monetary quantification, of main costs and/or benefits (e.g. 4% increase in the likelihood of children aged 16 staying on in full time education)
- **Tier 4** - Monetary quantification of (main) costs and benefits where possible (e.g. 20,000 more young people staying on where lifetime benefit of staying on is £100,000 per person set against the total policy or initiative costs of £200m).

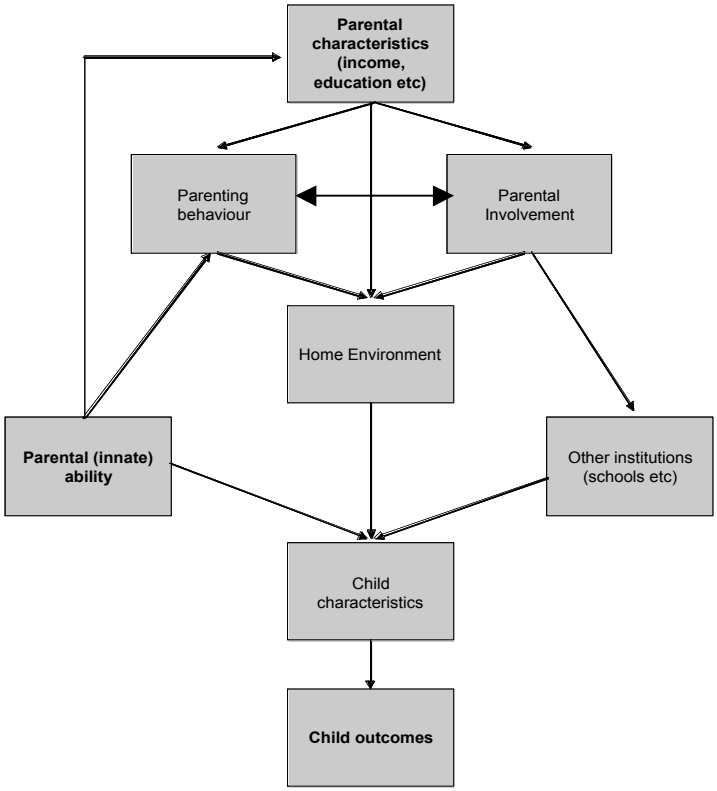
A short overview of each of the articles by category is provided in the Annex.

3 Early Interventions and Parenting

3.1 Parenting and Child Outcomes

Parenting is clearly an important influence on development in the early childhood years. Determining the effects of parents and parenting on child outcomes is extremely difficult, as child development takes place through a number of personal and institutional interactions. Figure 1 shows some of these influences on child outcomes, but is not intended to be exhaustive and does not include all possible connections. Outcomes are broadly defined and include educational, health, nutritional, cognitive and behavioural outcomes.

Figure 1: Parenting and Child Outcomes



As the figure indicates, there is a wide range of factors that can influence child outcomes, and it is difficult to separate out the particular effects of parenting behaviours, for example. The various elements of the diagram are discussed below in more detail, but at this point it is important to note that characteristics - including parental income, employment and education – and parental behaviour act together to affect child outcomes. The complementarities between parental characteristics and behaviours can manifest themselves in several ways and can significantly complicate the analysis. To take one example, to assist in developing child literacy, parents both need to be willing to read to their children (parental behaviour) and have the resources to secure the books to read to them (parental characteristics). Understanding the complementarities between these elements of parenting is crucial to identifying successful interventions.

In addition, although it is not a focus of this report, the role of other institutions, such as schools, childcare providers and the wider community on children should not be forgotten. There is evidence that parental involvement (in schools etc) also has an important role in ensuring the quality of these bodies and hence has an effect on child outcomes (Desforges and Abouchaar, 2003).

Finally, as shown on the left of Figure 1 above, when discussing parenting interventions it is important not to forget the fundamental role of genetics in determining child outcomes (Chevalier et al., 2005). Some innate qualities are likely to be passed from parent to child, and will not be affected by any government intervention.

3.1.1 Parental Characteristics (earnings and employment)

First, we turn to the box at the top of Figure 1: parental characteristics. These cover a wide range of factors, including parental income, education, employment and family structure. Each of these has been suggested as having a possible effect on child outcomes. Identifying the important transmission mechanisms is difficult, because of the endogeneity of many parental characteristics and behaviour. For instance, if we want to identify the effect of parental income on child outcomes, we need to allow for the fact that less well-off parents also tend to have fewer qualifications; are more likely to be unemployed; and are more likely to suffer from family dissolution. In addition, less well-off parents may also have other characteristics that we cannot easily observe that make them less effective in some of their parenting, such as attitudes towards schooling. Without understanding and allowing for all these observed and unobserved factors it is extremely difficult to determine which ones have the most significant impact on childhood outcomes. This obviously also makes it extremely difficult to determine the costs and benefits associated with parenting interventions.

There is increasing recognition within the economics literature that children born to parents from less well off socio-economic groups are less likely to achieve positive outcomes as an adult than their contemporaries born to parents from higher socio-economic groups.

Family background also affects educational attainment. Feinstein (2003) shows that children from lower socio-economic groups that score poorly on test scores at the age of 22 months are very unlikely to catch-up in later academic performance, and tend to remain in the bottom ability quartile at the age of 10. In contrast, children of better-off parents that score poorly at 22 months show significantly more upward mobility.[3] Family income may also affect health outcomes, as illustrated by the tendency for lower income households to have higher rates of child smoking (Blow et al., 2005).

In addition, the increasing degree of social mobility implies that children born in less well off families are increasingly likely to remain in households towards the bottom of the income distribution.

This has been illustrated several times in several countries and encompasses many child and adult outcomes. Evidence from the UK relating to a cohort of children born in March 1970 (National Child Development Study) indicates that those born in the bottom income quartile had a 37% chance of remaining in the bottom income quartile at age 30, and only a 16% chance of making it to the top quartile. For those children born to parents in the top income quartile had a 40% chance of remaining in the top income quartile at age 30, and only a 13% chance of falling to the bottom quartile age 30 (Blanden et al., 2005).

Family income can affect children through determining the extent of investment in child education. While later on in life, such investments will include items such as university fees, in the early years of a child's life this is likely to consist of parental investment in books, toys and the creation of a positive home learning environment (Blanden and Gregg, 2004). There is evidence that, controlling for the other aspects of family socio-economic grouping; family income continues to have a positive effect on child educational outcomes. Blanden and Gregg (2004) find that a one third reduction in income from the mean increases the average probability of a child getting **no** GCSEs at grade A*-C by around 3 to 4 percentage points, and reduces the chances of achieving degree level qualifications to a similar extent.

[3] For those in the bottom quartile at 22 months, the average position in the distribution at ten years was around 25 for those of low socioeconomic status, and nearly 60 for those from higher socioeconomic backgrounds. 60% of children from low socio-economic backgrounds who were in the bottom quartile on test scores at 22 months were still there at age 10. Children from higher SES backgrounds who were in the bottom quartile at 22 months were more likely to be in the top quartile at 10 years than the bottom quartile.

Evidence of the effects of other family characteristics is less prevalent than the effect of income. There is clear evidence of strong intergenerational transmission of educational achievement in the UK (Dearden et al., 1997), however, it is not clear whether this effect is simply a manifestation of poorer families tending to be less educated, or due to genetic transferral of innate ability. It may be, on the other hand, that better educated adults are more able to produce positive learning environment at home.

One study (Chevalier et al., 2005) found that leaving school at the age of 16 is affected by both paternal earnings and parental education when the effects were estimated separately. However, when interrelationships between earnings and education were accounted for (i.e. treating them as endogenous) the effect of parental education was statistically insignificant.

Similarly, Feinstein and Sabates (2006) have found that the link between education and maternal behaviour may be due to differences in family background and child characteristics between those parents who undertook post compulsory education and those that did not, rather than being an effect of the education itself. There is evidence however, that better educated parents produce a better home environment for their children (Feinstein and Duckworth, 2002). Other characteristics have been shown to have an effect on child outcomes including family disruption (e.g. children with step-parents are more likely to be homeless (Hobcraft, 1998)).

Comparison of the relative importance of particular parental characteristics, such as parental education level, parental income and social class, in determining child outcomes is difficult and the evidence is not conclusive. Whilst parental income is often significant in models of child outcomes, the magnitude of the effects of parental income are arguably quite small (Joshi 2000).

3.1.2 Parenting Behaviour and Involvement

In addition to parental characteristics (who parents are), the way parents interact with their children (what parents do) is clearly an important influence on child outcomes. In Figure 1 above, these are shown in the boxes "parental behaviour", which might be characterised as "discipline and parental attitudes towards their children" and "parental involvement", characterised by the active participation of parents in children's educational activities.

Good parenting is clearly a subjective term that is inherently difficult to specify accurately or measure. At the most basic level, good parenting must include the fundamental components such as physical care, nutrition and protection. Further good parenting involves the provision of emotional needs such as love, consistent limit setting and the facilitation of development (Hoghughi and Speight, 2000).

Parental involvement can take a number of different forms, including the creation of a positive learning environment at home, parent-school communications, parental participation in school, parental involvement in school decision making and parental access to community resources aimed at increasing children's learning opportunities.

There is strong evidence that parental involvement in childhood is important in determining child outcomes (Catsambis, 2001), while Wade and Moore (2000) have specifically shown that children that were read to before school age perform better in school. There is also evidence that parental involvement in children's learning, in addition to having a positive effect on children's academic outcomes during childhood (Fan and Chen, 2001), can continue all the way into adolescence (Feinstein and Symons, 1999)[4].

While the majority of evidence relating to parental involvement is focused on mothers, as the most frequent providers of care to children, there is an increasing recognition of the role that paternal involvement has to play in child's upbringing. Flouri and Buchanan (2004) found that both father and mothers' involvement at age 7 independently predicted the child's educational attainment by age 20.

As well as affecting educational outcomes, there is also evidence that parenting is a determinant of conduct or behavioural problems in children. Inconsistent and punitive discipline practices are key risk factors for the development of conduct disorders (Dretzke et al., 2004), while parents encouraging pro-social behaviour have children with fewer behaviour problems (Edwards et al., 2007).

These two elements of parental involvement and parenting behaviour in the home come together, along with material considerations, to form the home environment for a child.

[4] Some studies suggest that not all effects are continued into adolescence. For a fuller discussion, see Desforges and Abouchaar (2003).

This general measure of parenting in the home has been shown to be an important factor in determining child development outcomes. The Effective Pre-School and Primary Education (EPPE) study has, for instance, shown that the home learning environment[5] continues to be a strong predictor of cognitive attainment at age 10 (i.e. after 5 years in primary school) (Sammons et al., 2007). This has been supported further by recent evidence from the Avon longitudinal project (ALSPAC) showing that the frequency of mother-child interactions; the quality of the home learning environment; and greater use of outside activities were significantly related to her scores on measures of child motor development (Gutman and Feinstein, 2007).

3.2 Parenting Interventions

This evidence on the determinants of child outcomes provides important guidance for the formulation of parenting interventions. There are two separate, but interrelated challenges for interventions to address.

The first is to change parental characteristics. While this could theoretically cover a wide range of policies focussed on different characteristics, in practice it has generally meant attempting to increase household income (through increased employment) or occasionally education levels (through adult basic skills classes).

The second area of policy intervention seeks to improve the home environment, through increasing parental involvement, improving parenting behaviour or providing additional learning materials. These various elements clearly overlap, and are often provided together in some interventions. For instance, several programmes (e.g. HIPPY) both provide educational materials, and teach parents how best to use the materials with their child.

In the rest of the report we examine the existing evidence on parenting interventions in detail. For ease of exposition policies are split into four categories based on the factor they are primarily aiming to change:

- family income;
- parental involvement; or
- parental behaviour (split into home visits and parent training)

[5] The home learning environment includes a range of activities that parents undertake with pre-school children which have a positive effect on their development. For example reading, teaching songs and nursery rhymes, painting and drawing, visiting the library, teaching the alphabet and numbers, taking children on visits and creating regular opportunities for them to play with their friends at home (Sylva et al., 2004).

However, it is important to remember that this split is somewhat artificial. Each of these areas overlap, and several of the parenting programmes or interventions discussed contain components in more than one area. More importantly, the possible tensions between the different elements should not be forgotten. While parental characteristics and parental behaviour are both important elements in a child's upbringing, policies emphasising one may risk destabilising the other.

A clear example of these tensions relate to interventions looking to increase parental, and particularly maternal employment. Such programmes are focused on increasing family income, but risk ignoring the potential developmental downsides associated with maternal return to work. There is some evidence that maternal employment, particularly very early in the life of a child, is associated with poorer child outcomes, including lower test scores and excess weight through to the age of 11 (Ermisch and Francesconi, 2001; Ruhm, 2004, 2005), although recently it has been suggested that this depends on the replacement childcare used (Gregg et al., 2005).

The use of high quality paid childcare, rather than informal care, protects children from any adverse effects from parental employment. This suggests that an intervention aiming to return parents (mothers) to work may be insufficient to improve child outcomes and high quality childcare may be needed to prevent the possible negative impact of substitute care on child outcomes.[6] While the evidence on the effects of parental employment and replacement childcare on child development is mixed, and is not examined here in full, it clearly exhibits the underlying tensions between different strands of early intervention policy.

Understanding the inter-relationship between family characteristics and parental behaviour also provides some insight into which families are most likely to be at risk of poor child outcomes, and as such are most likely to benefit from interventions. Those families with low household incomes and poor levels of qualification attainment are most in need of good parenting guidance (to overcome these negative factors) but may also be least likely to provide it (due to a lack of parenting knowledge).

[6] In addition, the provision of childcare may be important to overcome barriers to parents' employment (see section 4, below).

Finally, in examining the costs and benefits of parenting interventions, it is important to remember that a large number of policies target early childhood development, without directly intervening with parents specifically. Some of these interventions, such as the Perry preschool programme, the Abecadarian and Chicago Child-Parent-Centers in the United States, which contain some parenting aspects, have undergone rigorous evaluations and have been found to very effective with high cost-benefit ratios[7]. More widely still, early childhood policy encompasses a wide range of policy areas, including, for instance, schools, childcare and child health services. Any assessment of the relative effectiveness of different parenting interventions must be within this broader context.

[7] For a review of these and other early childhood interventions, see Karoly et al. (2005) or Temple and Reynolds (2007).

4 Supporting Family Income

As discussed in section 3, the primary focus of government interventions to improve parental characteristics has been on increasing family income and ensuring that children are no longer living in poverty. While direct benefits (such as Child Benefit and, since 2003, the Child Tax Credit) continue to be part of the welfare system in the UK, as in many other countries, the main policies in recent years to address child poverty in the UK have been based on labour market interventions aimed at increasing parental employment levels.

The Labour government in the UK has used the tax and welfare system as a key tool to meet its targets of halving child poverty and increasing employment rates generally. There has been an additional focus on raising the employment rate of specific high-risk groups where there is a disproportionate likelihood of children growing up in poverty (such as raising the employment rate of lone mothers to 70% by 2010). An extensive range of tax and welfare reforms has been implemented in an attempt to achieve these (and other) aims. In addition to a number of general labour market policies[8], two major initiatives have been deliberately aimed at parents and families: the Working Families Tax Credit (WFTC), and the New Deal for Lone Parents (NDLP). These policies have attempted to raise parental employment in two ways. In the first example, the WFTC attempts to "make work pay" through increasing the take home pay of those in low paid jobs (taking into account the withdrawal of benefits). The New Deal for Lone Parents initiative aims to remove barriers to employment, through offering lone parents advice on how to enter the labour market.

In creating policies aimed at parents, it is important to understand the particular characteristics that differentiate them from other individuals within the wider group of unemployed. The most important differentiating factor is the need for the provision of childcare while these individuals may be at work. This affects both how much work pays (through necessitating spending on childcare costs) and also represents an important barrier to entering the labour force (where appropriate childcare is not available).

[8] Such as the national minimum wage, the creation of the new 10% tax band, and increases in the size of benefits available to those not working.

Evidence from abroad indicates that childcare provision can be an effective way of enticing parents into the labour market. Han and Waldfogel (2001) found that reducing the cost of childcare could increase the employment rate of single mothers by between 5 and 21 percentage points and married mothers by between 3 and 14 percentage points. Bainbridge et al. (2003) found that the effects of a change in childcare subsidies were of a similar or greater magnitude to tax policy changes. These effects, combined with the importance of high quality childcare in preventing negative effects on child development (Gregg et al., 2005), suggest that childcare provision may be an important component of any strategy to improve parental employment[9].

4.1 Welfare to Work Interventions

The overall effect of the welfare changes since 1997 has been somewhat mixed. There have been large increases in both the lone parent employment rate (12 percentage points increase between 1996 and 2005) (Gregg et al., 2006), and reductions in child poverty (down by 23% since from 1999 to 2006) (Harker, 2006). Furthermore, these changes have led to low-income families beginning to catch-up on child-related expenditure relative to better off families (Gregg et al. 2005). However despite these changes, it does not look likely that either of the targets (in child poverty or the lone parent employment rate) will be met and, in addition, it remains questionable how much of any changes that have occurred are attributable to government policy interventions. The evidence on the two major UK initiatives, as well as some additional evidence from the US is discussed in more detail below.

4.1.1 Welfare to work

Welfare to work policies in the UK have generally looked to target families through changes in the tax credits available to families. The previous Family Credit (FC) was replaced with the Working Families Tax Credit (WFTC) in 1999, which in turn was expanded into the Employment Tax Credit (ETC) and an Integrated Children's Credit in 2003 (ICC). [10]

[9] Any policy aimed at parents needs to be careful in coercing parents with young children into work as there may be disadvantages of parental return to work on child development (as discussed in section 3).

[10] For simplicity, the term WFTC is used to cover related benefits including the childcare tax credit until 2003. After 2003, the WFTC was replaced by the Working Tax Credit. However, as far as we are aware, there is no evaluation evidence on either of the new tax credits, and so they are not discussed in this report. The ETC is broadly similar to the WFTC, but is more widely available (including families without children).

The WFTC[11] (like the FC) seeks to increase net income for those on low incomes working for more than sixteen hours a week Acknowledging the need to overcome limited availability of childcare and its high cost, the WTFC also incorporated a childcare tax credit covering a 70% subsidy on childcare costs up to a maximum of £200 per week.

The WFTC was substantially more generous than the FC, offering higher credits and slower withdrawal of benefits as income increases. Although the combination of these policy elements would be expected to provide sufficient incentives to those seeking employment, there is also the possibility that these policies resulted in some unintended outcomes. In particular, some couples found that as a result of the changes, they needed to work less to achieve a particular level of income. Similar conflicting effects resulted from the lower taper rate (Brewer and Browne, 2006).

While isolating the effect of the WFTC on either employment or child poverty is difficult due to the range of policies introduced at the same time (as discussed above), the available evidence suggests that there have been positive effects resulting from these reforms. Several studies[12] have investigated these effects. The research has found that the effect of these welfare to work policies on the labour market participation of lone mothers ranges from no significant effect (Leigh, 2005) to 7 percentage points[13] (Francesconi and Van der Klaauw, 2004) and the effect on lone mothers in full-time work from 3.4 percentage points (Brewer et al., 2005) to 9 percentage points (Francesconi and Van der Klaauw, 2004).

The evidence of the impact on working couples is more mixed. While Blundell et al. (2005) find a positive increase in labour market participation of adults in couples with children of up to 4.3 percentage points, Brewer et al. (2005) find a reduction of up to 0.57 percentage points. Blundell et al. (2005) show that the WFTC tended to have a negative effect on participation where the partner already works, but not when both couples were workless. This suggests that the WFTC may have been successful in reducing the number of workless households (both lone parent and couples).[14]

[11] Information on the WFTC is taken from Brewer and Browne (2006).

[12] Five studies are included in the ranges here: Gregg and Harkness (2003), Francesconi and Van der Klaauw (2004), Leigh (2005), Blundell et al., (2005) and Brewer et al. (2005). These studies are summarised in Brewer and Browne (2006).

[13] The Francesconi and Van der Klaauw (2004) estimates include an 'anticipation effect' prior to the system coming into place, but it is questionable whether this existed (Brewer and Browne, 2006).

[14] It has been estimated that the number of workless households was reduced by 99,000 by 2002 due to the WFTC (Brewer et al., 2003).

In addition to the main element of the WFTC, discussed above, some families were also eligible for a childcare tax credit[15]. This offered parents a subsidy of up to 70% of childcare costs up to maximum of £135 per week for one child and £200 per week for two or more children.[16] As expected, childcare was found to be a major barrier to lone parents' employment. Evans et al. (2003) found that non-working lone parents saw this as a major barrier to entering the labour force. Specifically, the research indicated that the most commonly reported barrier was that respondents "don't want to leave children with anyone else" (55%) followed by a belief that there was a "lack of suitable childcare in the area" (52%) and that "employers won't employ me because of childcare responsibilities" (46%).

The childcare element also seemed to be an important determinant of increased employment resulting from the WFTC. Francesconi and Van der Klaauw (2004) estimate that 50% of the increased entry rate into eligible employment was by lone mothers that made use of paid childcare arrangements. However, it should be noted that the childcare credit affected relatively few parents, with only 2% of all families with children eligible for the childcare tax credit (compared to 23% for the WFTC as a whole) (Paull and Brewer, 2003). Furthermore, many of those families eligible for the child tax credit did not avail of the subsidy, either because they had children of school age (and so did not need childcare), because they still found approved care expensive or due to a preference for informal care[17].

4.1.2 New Deal for Lone Parents

In contrast to welfare to work policies, which seek to increase the incentives from work, the New Deal for Lone Parents seeks to overcome perceived barriers to employment including childcare problems (a lack of suitable childcare or not wanting to leave children with someone else), a lack of skills or low confidence levels (Evans et al., 2003). The NDLP is a voluntary programme available to single parents with their youngest child less than 16 years of age and working less than 16 hours per week. The programme offers parents the help of a personal adviser in applying for jobs, organising childcare and accessing available benefits.

[15] This should be distinguished from the new Child Tax Credit introduced in 2003.

[16] The total WFTC award was calculated by adding together individual credits and deductions (based on a total family income threshold). As such, families may not always have received 70% of childcare costs (Nicholls and Simms, 2003).

[17] Another reason for parents not availing of the subsidies was that that approved formal childcare is mostly 9-5 or at best 8-6, which is not straightforward for shift work parents

Evaluations of the NDLP (including the pilot) have generally shown a positive impact of the programme on exit rates from Income Support and entry into work, although identifying a causal effect is problematic given that the programme is voluntary and therefore it may be the most work oriented lone parents who undertake the programme.

Within six months of commencing the programme, 35% of lone parents were placed into work, representing a 25% increase over a comparison group (counterfactual).

Similarly 41.2% exited Income Support, representing a 27% increase over the matched sample of non-participants. In more recent research, Dolton et al., (2006) found large (although smaller) impacts on the reduced probability of being on benefit for both those continuously on benefits (20.5%) and those moving in and out of benefits (14.2%). However, these impacts tend to fall over time, suggesting that some of the positive effect is a result of speeding up exits from benefit that would have happened at a later date without the NDLP.

Based on the costs and benefits (from 2000/01), and including only the benefits from additional wages during the period (i.e. no longer term benefits associated with child outcomes), a cost-benefit analysis of the programme indicated a net benefit of £4,400 per job and a total gain to the exchequer of £41.5 million (Evans et al., 2003). The NDLP also benefits from low unit costs, which reflects the fact that the programme is based on advice for volunteer participants, rather than the provision of training or childcare to those less ready (or willing) to enter the labour market. Expanding the scheme (e.g. making participation mandatory) may impact upon the cost-effectiveness results, as the lone parents who have benefited from the programme to date are clearly not representative of all lone parents and may already have a higher propensity to enter work.

4.1.3 Studies from the United States

While the evidence above indicates that UK welfare policy has had some positive impacts on parents' employment, it leaves some important questions unanswered. In particular, UK policy has focused on 'work first' initiatives, and so does not examine the effects of providing parents with education and training before gaining employment. Secondly, evaluations of the WFTC and NDLP have focused on employment outcomes, and have not examined the effects on child outcomes. Research into welfare reforms in the US provides some insight into these questions, although caution must be applied in evaluating the results in the UK context.

The available evidence suggests that there are positive effects from welfare policies on parenting (Chase-Lansdale and Pittman, 2002) and child outcomes (Morris et al., 2001). These effects seem to be greatest when support is provided through earnings supplements rather than mandatory employment programmes. Elaborating on this last point, Clark-Kaufmann et al. (2003) review randomised assignments to welfare to work programmes in the US, and find that increasing maternal employment with *additional* income support of $1,500-$2,000 per year for two to three years increases educational attainment for those 0-5 year olds by eight per cent of a standard deviation. In contrast, no significant effect was found from other welfare programmes that increased maternal employment only but had no additional effect on family income.

Some research has also examined the effects of providing welfare parents with education and training, rather than employment. Magnuson and McGroder (2003) find that mothers' participation in educational activities (mainly basic skills education) had a positive effect on children's school readiness and reduced the number of academic problems. However, further analysis of the sample seemed to suggest that these benefits were limited to mothers in particular need of basic skills education. This evidence suggests that for some parents, basic skills education will be an important part of any welfare to work intervention.

4.1.4 Section Conclusions

Overall there is evidence that government interventions aimed at raising family or household income can be successful in bringing more parents into the labour market. Both the Working Families Tax Credit and the New Deal for Lone Parents led to increases in lone parent employment, although the effect on dual income families is more ambiguous. However, a number of caveats remain.

First, the range of welfare changes, as well as the favourable economic conditions over the period, means that it is difficult to completely isolate the impact of any individual policy accurately (Gregg et al., 2006). This is particularly problematic in identifying the costs and benefits of individual policies. For instance, the evidence showing considerable benefits from the NDLP may be exaggerated if in fact the WFTC has also had some contributory or complimentary impact on those participating on NDLP.

Second, existing policies have been targeted at particular groups, making it difficult to estimate whether the effects would apply more universally. The NDLP for instance, has so far only been applied to lone parents, although recent recommendations have suggested rolling it out to all families (Harker, 2006). The WFTC only affects working parents, and not those unable or unwilling to work. Currently, only 1-2% of parents not in employment participate in welfare to work (Harker, 2006) reflecting both the limited eligibility of programmes such as the NDLP and their voluntary nature. This is particularly true of the Childcare Tax Credit, which was taken up by only a tiny proportion of families (Paull and Brewer, 2003).

In addition, the positive effects associated with some policies may reflect one-time "windfall" effects, due to the previously low rates of employment of lone mothers, and the lack of previous policies addressing their needs (Dolton et al., 2006). This may mean the current estimates overstate the likely impact of the programmes over the longer term.

Third, and most significantly, there is little evidence, either short-term or long-term, of the effect of policies on child outcomes, as opposed to parental outcomes (such as employment). Evidence from the US suggests that programmes containing earnings supplements may have a more beneficial effect than mandatory employment programmes. In addition, there is evidence that for parents with basic skills needs, providing education may have a positive effect on child outcomes at school. This suggests that the current "work first" emphasis in welfare to work schemes may need adjusting to best meet the needs of some families.

The limited magnitude of the changes in income from the programmes in the UK (average additional earnings for those leaving the NDLP was found to be £115 per week) (Evans et al., 2003) gives reason to be sceptical over the likely size of effect on children. Joshi (2000) and other studies found that a large change in economic conditions was likely to be necessary to have any significant impact on children. On the other hand, if the programmes are the first element of a long-term involvement in the labour market by parents, the initial earnings effects may underestimate the longer-term benefits to children.

5 Parental Involvement

Having discussed the existing evidence on welfare to work interventions seeking to improve child outcomes through improving the earnings and employment outcomes of parents, we now discuss initiatives that aim to directly alter aspects of parenting behaviour.

For ease of exposition, we have split these interventions into three separate sections. In this section, we discuss programmes that aim to increase parental involvement in their child's education (outside of school), while in section 6; we focus on programmes that seek to change parenting behaviour through interventions within the home (by improving parental knowledge base and behaviour). In section 7, we discuss parent training classes.

We begin this section with a brief overview of some of the major interventions that have been implemented and evaluated in the United Kingdom and elsewhere. The interventions take a number of different forms, ranging from the relatively intensive HIPPY programme (in the US and elsewhere) that involves a series of home visits, to programmes that rely almost exclusively on the provision of materials to parents such as Bookstart (in the UK).

5.1 Parental Involvement Interventions

5.1.1 UK Interventions

Peers Early Education Partnership (PEEP)

PEEP is a birth to five intervention aiming to improve the life chances of disadvantaged children in Oxford by raising educational attainment. Unlike both PCHP and HIPPY, there is a group-based element and home visits are provided by nurses rather than volunteers.

A longitudinal evaluation of the study has been undertaken (Evangelou et al., 2005) and found that there was no effect of the programme on socio-economic development until the children were aged 5, when participants registered an advantage in 5 out of 7 measures of self-esteem. Children whose parents participated in PEEP showed greater progress over time in various measures of cognitive development at different ages, although they did show cognitive disadvantages at the age of 2 and 4.[18]

[18] In methodological terms, this is consistent with the longitudinal model not completely overcoming selection bias, i.e. PEEP parents and their children are not being accurately compared with otherwise similar parents and their children.

Some effects were also noted on parents, with PEEP parents rated significantly higher on the quality of the care-giving environment at age 2, and parents reporting significant effects on parent-child interaction in the first year of the child's life. However, no significant differences were found in favour of either group at the age 4 or 5.

Family Learning

In contrast to the (primarily) home-based programmes discussed in this section, family learning is largely centre-based and involves both parents and children. Family learning is defined as the "learning which brings together different family members to work on a common theme for some, if not for the whole, of a planned programme" (OFSTED, 2000).

The most common forms of family learning programme in the UK are family literacy schemes with family numeracy becoming increasingly popular (OFSTED, 2000). Family literacy programmes are based generally on the US Even Start programme. The key element of family learning is the intergenerational element, involving families working together to produce benefits for both adults and children. This offers a way of breaking negative intergenerational transmission of educational outcomes, through teaching parents both for themselves, and also how to support their learning (Callaghan et al., 2001).

Evaluations of family learning have shown positive effects on children and adults. In a two-year follow-up of a family literacy programme, Brooks et al. (1997) show the basic skills gains to children had been maintained, as well as employment gains among parents (many of which were attributed to the programme). In addition, 60% of parents had undertaken additional study, and 56% were involved with their child's school. This result was supported by the OFSTED (2000) review of family learning provision, which found that where adult achievement was good, over 50% of participants progressed to further education or to more challenging jobs.[19]

Evaluation of family learning in Lancashire found that 45% parents felt that participation had led to more involvement with their children. Furthermore, around a third felt that their child was doing better at school and a fifth felt their child's behaviour had improved. These effects were greater for parents that left courses 1-4 years earlier (Horne and Haggart, 2004).

[19] The OFSTED review included visits to 28 local authorities and 3 voluntary organisations, including inspecting 90 classes were inspected (around a third were joint parent and children sessions). Discussions were held with participants, organisers and local authority staff, and, where possible, work was examined.

However, although there is evidence that family learning can have positive literacy outcomes, it is not clear that the intergenerational element of the programmes is key to achieving these benefits. OFSTED (2000) found that teaching was more effective in the child or parent only sessions, suggesting that the intergenerational element may be unnecessary (Desforges et al., 2003). Hannon (1999) has argued that the focus on combined child and adult programmes has limited the number of families that are likely to attend and hence diminished the potential gains compared to more flexible literacy provision.

Bookstart

The Bookstart programme is, in comparison to other programmes, not very intensive. Launched in Birmingham in 1992, the programme aimed to boost literacy and child-parent links through increased reading resulting from the provision of books to parents at their child's 7-9 month developmental health check. It is now a national programme with support from Sure Start.

Several evaluations of Bookstart have been carried out, although none involving rigorous research designs (Collins et al., 2005). However, the evaluations generally show positive results on attitudes to books and reading amongst children participating in Bookstart. A longitudinal study of Bookstart children, using a matched comparison group, showed that participants had better levels of teacher assessment and test score results at Key Stage 1 (Wade and Moore, 2000). However, Collins et al. (2005) find that parental involvement is crucial and constant interaction between health visitors and librarians may be needed to promote the Bookstart philosophy.

5.1.2 Other Interventions

Parent-Child Home Programme (PCHP)

The Parent-Child Home Programme (originally the Mother-Child Home Programme) was initiated in the United States in 1965, seeking to promote early school readiness amongst at-risk[20] children. The programme was wholly based on home-visits from volunteers, looking to promote parent-toddler (age 1-3) verbal interaction through reading and playing. The programme is now present in over 150 community-based sites worldwide.

A long-term evaluation of the programme (Levenstein et al., 1998) has shown that the programme has had positive long-term effects on graduation rates amongst participants. This study analysed the school graduation rates of five yearly programme cohorts against a randomised control group.

[20] At-risk status was defined as having 5 of 8 listed factors: child IQ score under 100, single parent family, unemployment of mother, unemployment of father, family receiving AFDC payments, parent who did not finish high school, poverty status of family, and older sibling in a Chapter 1 remedial programme.

Of an initial group of 209 at-risk students, 123 remained in the Pittsburgh school system for the duration of the evaluation, and were included in the analysis. The results indicated that programme participants were significantly more likely to graduate than non-participants (84.1% versus 53.9%) and less likely to drop out of school (16% versus 40%). However, if all those that had been chosen to receive the intervention, but had dropped out before it was administered, were included (i.e. an intention to treat basis), the results, while still large, lose statistical significance[21].

Home Instruction for Parents of Pre-school Youngsters (HIPPY)

The HIPPY programme started in Israel in 1969 and has since spread to other countries including Germany, New Zealand, Australia, South Africa, Canada the United States. The programme seeks to improve school readiness through enhancing the home literacy environment, the quality of parent-child interaction and parents' ability to help children learn. HIPPY is aimed at children between the ages of 3 and 5 when they start kindergarten or pre-school. Unlike the PCHP, all children are eligible for HIPPY support (not just those that are at-risk). The programme is largely based on home visits (administered by paraprofessionals), but also incorporates group meetings. Within the US, the programme can last as long as two or three years, with free materials and activities provided for each year of the programme. Participating parents work with their children for about 15 minutes each day and home visits occur roughly bimonthly, or at least 15 times a year.

HIPPY programmes have been adapted to meet both the needs of local communities and participating families, and so there is some variation in the actual management and delivery of the programme by region. A number of evaluation studies have taken place across several countries, with several finding positive impacts on children's academic and cognitive outcomes (Westheimer, 2003).

Randomised trials have also shown some positive effects in the US. A two-cohort study in New York showed significant and large positive effects on cognitive skills and reading tests through to the end of second grade, although these effects were not replicated in the second cohort (Baker et al., 1999). Although not a randomised trial and therefore less methodologically robust, a further study was carried out in Arkansas[22].

[21] This is a common finding in the literature and implies that rolling out programs on a nationwide basis will still not necessarily reach the most at risk children as these are the children who have parents who are most likely to drop out of such programs

[22] The evaluations differed in that, whereas the control group in the New York programme were enrolled in high-quality preschool programs, in Arkansas participated in any other preschool programs during the first year of HIPPY. In both programs most children were enrolled in kindergarten in the second year (Baker et al., 2002).

Again, positive effects were found in the first cohort affected by the initiative, but not the second cohort. The differences between cohorts could not be explained in either trial (Baker et al., 1999). A later quasi-experimental longitudinal study examined the impact of HIPPY on school performance during third and sixth grades. In comparison to children with no preschool experience, the programme had a modest positive impact on school suspensions, classroom behaviour, and test scores at both third and sixth grades (Bradley and Gilkey, 2002).

5.2 Summary of Parental Involvement Evidence

5.2.1 Efficacy of parental involvement programmes

Parenting interventions to promote child educational outcomes seem to show mixed results. There are some positive findings for both parents and children, however, these findings are often mixed with less positive results and are difficult to interpret. In the PEEP project for example, a positive effect on the care-giving environment was found at age 2, but not at other ages. Similarly, evidence on HIPPY found positive results for one cohort, but not for others. Furthermore, where results are positive, they are also often modest in size or on the borders of statistical significance (e.g. Bradley and Gilkey, 2002; Levenstein et al., 1998). The findings are further complicated by the lack of rigorous evaluation of many interventions. This also makes it difficult to determine the key elements of different projects given that all have some positive effects, and difficult to compare between them. As such, there are no clear-cut results over the use of volunteers (e.g. HIPPY) or nurses (PEEP), or whether programmes should be targeted (PCHP) or more general (HIPPY).

5.2.2 Cost-Benefit Analysis

There are few examinations of the costs and benefits to these programmes, with few controlled trials as the starting point. Aos et al. (2004) have, however calculated the benefits to a number of early intervention programmes, including two of those discussed above. These are presented in Table 1 below. Their findings are based on a review of existing evaluations of early intervention programmes and the monetisation of the benefits.

The estimates include the benefits from a reduced incidence of crime, lower substance abuse, improved educational outcomes, decreased teen pregnancy and births, fewer teen suicide attempts, reduced child abuse or neglect and reduced domestic violence. Despite this, the estimates of the benefits may be too low, as a number of other benefits may have been excluded, due to the difficulty of monetising them. Further, no effect on siblings is considered and there is no estimation of the potential reduction in public service usage as a result of each programme. In addition, the cost information used is unlikely to be wholly accurate, due to a lack of detailed information for each evaluation (Gomby, 2005). With these caveats in mind, the results for two parental involvement programmes are set out in the table below.

Table 1: Summary of Cost-benefit findings - Parental Involvement Programmes

	Benefits	Costs	Benefits / Dollar	Benefits - Costs
Parent-Child Home Programme	$0	$3,890	$0.00	-$3,890
HIPPY (Home Instruction Programme for Preschool Youngsters)	$3,313	$1,837	$1.80	$1,476

Source: Aos et al. (2004)
Note: Using a discount rate of 3%.

While the HIPPY programme has a positive benefit-cost ratio, the Parent-Child Home Programme does not. It should be noted however that this reflects the results of evaluations of the programmes, and as such is reliant on the quality of the studies.

While there have been no economic evaluations of the other interventions discussed here, it does appear that some of the interventions are very cheap, if they can provide positive results. Both Bookstart, based purely on the provision of materials, and family learning projects (OFSTED, 2000) are low-cost and could provide similar benefits.

6 Home visitation

While the programmes discussed in the previous section tend to be focused on parental involvement, the interventions discussed in this section are less homogenous in their goals. In contrast to the educational focus above, home visitation programmes tend to have a primary goal of improving parents' behaviour and knowledge with the ultimate objective of improving parental self-sufficiency.

Home visitation programmes vary widely in design, and can have a wide range of goals, recipients and content, linked by their method of delivery and a focus on parents of younger children. As opposed to the parenting classes discussed in the next section, home-based provision aims to take a more holistic view of the family situation by observing all elements of parental behaviour and child's upbringing. In addition, home visitation makes parent participation in programmes easier, as they do not need to organise transport, childcare, or take time off work (Sweet and Appelbaum, 2004). Home visitation programmes also generally share a focus on prevention, rather than curing existing difficulties (such as conduct disorder).

While these factors are common, home visitation can cover a wide range of interventions, differing across many dimensions, such as type of family involved or the outcome targeted, the type of staff involved (e.g. nurses or paraprofessionals), the length and intensity of the services provided and recruitment methods (Sweet and Appelbaum, 2004). These differences make evaluation and comparison of programmes complex, especially due to the wide range of evaluation methods that are also used (Sweet and Appelbaum, 2004).

There has been large growth in the number of home visitation programmes over the past 15 years. This is true both in the United States, where public funding has grown since 1993 (Gomby et al., 1999), and in the UK, where home visitation is a key component of the Sure Start model (Bull et al., 2004). There remains little evidence of the success of UK home visitation initiatives, and the majority of studies with any degree of evaluation evidence are US-based (Bull et al., 2004). While there are thousands of projects in the US, these are fairly represented by three of the better-evaluated nationally implemented programmes (Gomby et al., 1999). Within the UK, as far as we are aware, the only widespread programme to be evaluated is the Home-Start programme. These programmes and their evaluations are discussed below.[23]

[23] As well as the three US programs discussed in this section, Gomby et al. (1999) also mention three other major home visitation programs. These include the HIPPY programme, which was discussed in section 5, Hawaii's Healthy Start, which is the forerunner of Healthy Families America and The Comprehensive Child Development Project, which contained a large pre-school education element and so is not included (as discussed in section 3).

6.1 Home visitation Interventions

6.1.1 UK Interventions

Home-Start

Home-Start provides informal support for families with young children based on home visits. The programme aims to "give parents a break" and offer practical help and reassurance, and is voluntary.

A randomised controlled trial of the programme (McAuley et al., 2004) found that over 11 months, there was no significant effect on the intervention group in comparison to the control group on any of the quantitative measures assessed, although the qualitative review found that mothers appreciated the support the programme offered. Interestingly, mothers at follow-up were experiencing significantly less parenting stress and fewer symptoms of depression both in the control and intervention group. This suggests that time and experience of parenting naturally lead to a reduction in parenting stress. This should be borne in mind in evaluating benefits to interventions with no relevant control groups.

6.1.2 US Interventions

Nurse Family Partnership (NFP)[24]

The NFP was first implemented in Elmira (New York) in 1977, and has since been replicated in Memphis (1986) and Denver (1997). The programme is focused on first time mothers; particularly those at-risk (based on low income, single parent status, or aged less than 17). The NFP programme has three major goals:

- To improve pregnancy outcomes by helping women engage in good preventive health practices, including obtaining thorough prenatal care from their healthcare providers, improving diet, and reducing their use of cigarettes, alcohol and illegal substances;
- To improve child health and development by helping parents provide responsible and competent care; and
- To improve the economic self-sufficiency of the family by helping parents develop a vision for their own future, plan future pregnancies, continue their education and find work.

[24] Factual information on the programme is sourced from the programme website and Olds (1999b).

The NFP programme provides home visits by nurses to first-time mothers, beginning during pregnancy and continuing through the second year of their child's life. Visits occur as often as every 1-2 weeks, varying according to the mother's needs and the age of the child. Visits last between 75 and 90 minutes and focus on changing parental behaviour that is in conflict with the goals set out above. Specific interventions are developed depending upon the results of maternal, child, and family functioning assessments. Nurses are highly trained, with a minimum of a bachelor's degree and receive specific training over the first year of their involvement in the programme.

Three major evaluation studies of the Elmira programme have taken place, at ages 2, 4 and 15.

The Elmira sample included mainly (85%) at-risk mothers (based on being either under 17, single parents, or having a low socioeconomic status) with 89% being white. The programme was shown to have had an impact on participants' pregnancy outcomes, their parenting behaviour, and maternal life outcomes (Olds (1999b)). Programme mothers were shown to have had a reduced incidence of smoking and improved diet, while young mothers had babies with a higher birth weight.

Children of smokers developed better than their counterparts in the control group. Children of home-visited mothers were less likely to receive emergency treatment both at 2 and 4 years (Olds et al., 1986). Where child abuse was reported, the cases with programme children were found to be less serious by the age of four (Olds et al., 1999a).

Those participants in the Elmira programme have been followed up 15 years after completion of the programme, providing a rare evaluation of the effects of a programme beyond the early years. Surprisingly, the evaluation evidence indicates stronger effects on participants than at the time of the trial, with differences in State verified reports of child abuse and neglect between participants and non-participants decreasing over the period. This effect was greatest for women that were from lower socio-economic groups, as well as unmarried women at the time of registration (Olds et al., 1997).

The programme's impact on more vulnerable women was also shown in other areas. The 15-year follow-up showed positive effects on maternal outcomes for low-income unmarried women, but none for the sample as a whole. At-risk home-visited women averaged fewer subsequent pregnancies, spent less time on welfare or in receipt of food stamps and had fewer behavioural problems (either substance abuse or arrests). Similarly, while anti-social behaviour of the group as a whole was unchanged at the follow-up, there were positive impacts on children of poor, unmarried women.

Intervention group children had fewer incidences of running away, fewer arrests, fewer convictions and violations of probation, fewer lifetime sex partners, fewer cigarettes smoked per day and fewer days consuming alcohol. There were however no effect on acts of delinquency or misbehaviour at school (Olds et al., 1999a).

The Memphis trial sought to replicate the Elmira results, with a focus on low-income African-American women, emphasising the areas where the programme had most success. In a two-year follow-up, programme mothers were shown to have had fewer pregnancies and slightly fewer months on welfare than non-participants. There were no differences in child development, but there were positive effects on frequency of hospitalisation and the home environment. The effects on pre-term delivery and on women's smoking habits were not replicated, although the programme did increase service use (Kitzman et al., 1997).

The Denver trial sought to examine the difference between providing the programme with nurses or paraprofessionals (Olds et al., 2002; Korfmacher et al., 1999). This suggested that the programme was more effective when provided by trained professionals. In comparison to the control group, a greater number of significant differences were found for the nurse-visited group than for the paraprofessional-visited group. Further, nurses undertook more visits than paraprofessionals, while paraprofessionals spent significantly more time per visit and made more unsuccessful attempts at contact than did nurses.

Healthy Families America (HFA)[25]

Along with the Nurse Families Partnership, Healthy Families America is the dominant model of home visitation in the United States (Mitchell-Herzfeld et al., 2005). The programme has three goals:

- to promote positive parenting;
- to enhance child health and development; and
- to prevent child abuse and neglect.

The HFA programme was launched in 1992, and drew largely on the experiences of the Hawaii Healthy Start programme. The programme now exists in over 430 communities across 35 US states and in Canada, with over 47,500 families enrolled. Services differ between communities, but many of the features are similar across programmes, all of which share common principles.

[25] Factual information is based on the programme website, Mitchell-Herzfeld et al.(2005) and Martin (1999)

Unlike the NFP, which targets only first-time parents, HFA is open to all parents. Families are targeted following screening of the community to identify families at risk of parenting problems.[26] Parents can also voluntarily register up to three months before the birth of their child. Services begin at birth and continue until up to the age of five. Visits begin on a weekly basis, with the frequency reducing as families meet certain goals. The services provided are similar to the NFP, with the key difference being that visits are made by paraprofessionals, rather than fully trained nurses. Home visitors are not required to have a university degree, and are selected on the basis of personal characteristics rather than education or qualification attainment.

Several evaluations of the project have been carried out in different localities and regions, although the majority lacked a comparison group or used quasi-experimental designs, and often failed to find significant positive effects (Daro and Harding, 1999). In particular, little evidence was found of reduced child abuse, which is a key aim of the programme. For instance, a 3-year study in Hawaii (Duggan et al., 1999, Duggan et al., 2004a, Duggan et al., 2004b) failed to find any effect on the rate of child protective services reports between the (participating and non participating) groups at age 2, and no effect on either official or self-reported measures of child abuse at age 3. At age 2, the intervention group showed positive effects relative to the control group on maternal use of non-violent discipline, levels of maternal stress and parental competence. However, by age 3 the intervention had no impact on the prevalence of partner abuse, maternal substance use or maternal mental health, and only limited evidence of an effect on neglectful behaviours.

A recent randomised trial of Healthy Families New York of over 1,000 families has, however, shown more positive effects (DuMont et al., 2006; Mitchell-Herzfeld et al., 2005). Mothers reported having engaged in fewer acts of very serious physical abuse, minor physical aggression and psychological aggression at the end of the first year, and fewer acts of serious physical abuse at the end of the second year.

This indicates that the programme did have a positive effect on the probability of child abuse in the early years of life, although this needs to be qualified by the severity of abuse inflicted. At the end of the first year, the policy had an impact on reducing pervasive minor impacts and severe abuse, whereas the policy only had an impact on the incidence of severe acts of abuse at the end of the second year. During the first year, other positive effects were found on parenting attitudes and knowledge, fewer low-weight babies, better access to health insurance and reduced parental depression and substance use.

[26] Assessment (normally carried out in the hospital or home) is based on family's interests and concerns. The family is then linked to appropriate community resources, with those at risk of parenting difficulties encouraged to participate in home visitation.

Parents as Teachers (PAT)[27]

The PAT programme began in Missouri as a pilot project in 1981 and was implemented across the state in 1986. The project has now grown to over 2,000 sites in the US, and other countries including Australia, Canada, New Zealand, and the UK. The programme has five major goals:

- to empower parents to give their children the best possible start in life through increased knowledge of child development and appropriate ways to foster growth and learning;
- give children a solid foundation for school success;
- prevent and reduce child abuse;
- increase parents' feelings of competence and confidence, and
- develop true home-school-community partnerships on behalf of children.

Unlike both the NFP and HFA programmes, PAT believes that all parents may need to be supported and hence provides the service on a voluntary basis to parents of children from birth to five years old. Programme services include both individual, home-based instruction and also group interactions between parents to share experiences and build informal support networks.

In addition, the programme monitors children's progress and seeks to ensure families are linked with community services. Home visits are usually one hour long, and are monthly, fortnightly or weekly dependent on family needs and the location of the programme (and local budgetary restrictions). Individual programmes decide their staff composition, but those with professional experience are recommended.

[27] Factual information on Parents as Teachers is based on the programme website, and Winter (1999).

Early evaluations of the programme relied on quasi-experimental research and research with small samples (Wagner and Clayton, 1999). More recent evaluations have used an experimental approach. A three-site evaluation[28] examined the effect on parents with children at age 1, 2 and 3 (Wagner et al., 2001). For one particular site[29], parenting knowledge, behaviours and parent-child interactions were assessed. Fairly consistent small positive effects were found in the first and third assessments, but not in the second. In this example, the control group seemed to contain knowledgeable parents, which may have imposed "ceiling effects" on the intervention[30]. There was little evidence of an effect on child development measures, but some moderate effects on the prevention of child injury at the second and third assessment. Only one measure (parent happiness within the first evaluation) showed statistically significant results compared to the control group across the three years. Similar moderate positive results were also found in the earlier evaluations across the three sites (Wagner and Spiker, 2001).

6.2 Summary of Home Visitation Evidence

6.2.1 The efficacy of home visitation programmes

The four programmes discussed above (which offer the best evaluations of home visitation programmes) and the reviews of a wider range of interventions indicate that there are in general some benefits to home visitation programmes, although the one UK study did not show any positive effects. However, for many interventions and a range of child outcomes, these effects are likely to be modest. Evaluation of home visitation programmes has tended to focus on five areas of outcomes including (Gomby et al., 1999):

- Promotion of enhanced parent knowledge, attitudes or behaviour;
- Promotion of children's health - including birth outcomes (such as birth weight) and utilisation of preventative services (such as immunisation);
- Promotion of children's development (including cognitive behaviour and behaviour);
- Prevention of child abuse and neglect;

[28] The three sites comprised an Eastern seaboard urban community, a mid-size southern city and a large Western city.

[29] A three year evaluation was possible only at the first (Eastern seaboard) site due to high attrition. Results from earlier evaluation showed a similar small positive effects (Wagner and Spiker, 2001).

[30] The HFA programme is voluntary. Therefore, getting a true comparison group is difficult due to unobservable characteristics that may cause parents to volunteer.

- Enhancement of maternal life course (employment, education and future birth rates).

Several programmes have found positive results in some measures of parenting behaviour and attitudes, including the three US studies discussed above.

One of the most common measures for the assessment of whether there is any impact is the Home Observation for Measurement of the Environment (HOME) inventory[31]. Meta-analysis of twelve studies shows large and significant effect of home visitation programmes on this measure (Kendrick et al., 2000). The wide range of measures used, and their inherent subjectivity means that these results should be treated with some caution. In addition, often these measures are assessed through self-reporting, making them subject to bias from parents' desire to please and imperfect recall (Elkan et al., 2000).

The evidence on the promotion of child health is more limited. Few programmes offer evidence on pre-term births and birth weight. The Elmira (NFP) study found effects on young teen mothers and smokers (Olds et al., 1986) but these results were not repeated in the Memphis evaluation (Olds et al., 1999). The recent study of HFA in New York indicated that mothers that registered pre-natally had significantly fewer low birth weight babies, although there was no effect in pre-term births. The HFA study also reported a positive effect on of the proportion of children with health insurance at one year although there appeared to be no effect on several other outcomes, including well-child visits and number of immunisations (Mitchell-Herzfeld et al., 2005).

The multi-site evaluation of PAT also suggests some possible benefits to children's health, such as immunisation (Wagner and Spiker, 2001). Reviews of several studies however, find little consistent positive effect on similar outcomes (Bull et al., 2004; Elkan et al., 2000).

Effects on child development are also mixed. The PAT programme showed some positive effects, but these were small and only on some specific outcome measures (Wagner and Spiker, 2001). The Elmira project showed some benefits to children of low income parents (Olds et al., 1999). Elkan et al. (2000) conclude that home visitation seems able to improve mental health functioning, although more research is required to determine whether this is limited to children with low birth weight, premature birth or failure to thrive.

[31] The HOME inventory is designed to measure the quality and quantity of stimulation and support available to a child in the home environment.

The Elmira project found large effects on a range of behavioural measures at the age of 15 (Olds et al., 1999), while Elkan et al. (2000) found that home visitation can help parents monitor behaviour problems. However, these findings relied on maternal reporting, and there is some evidence that they were not durable.

As one of the major aims of home visitation, at least in the US[32], is to reduce child abuse and has been a major focus of several studies. The Elmira 15-year follow-up has shown a large impact on this incidence of child abuse, while positive also impacts were shown by the HFA evaluation (DuMont et al., 2006).

However, many studies (including the HFA one) have had to rely on measures of parental self-report, as measures using official reports have shown no policy effect. This is likely to suffer from reporting bias as visited families are observed to a much greater extent than non-reporting families.

This problem, in addition to the variation in the likely effects depending on the alternative target populations, makes any conclusive evidence on the effects of child abuse difficult to assess (Elkan et al., 2000). There is, however, some positive evidence on reducing rates of childhood injury (Bull et al., 2004).

Few studies have sought to investigate the effects on maternal life course of home visitation programmes with little evidence of positive impacts (Bull et al., 2004). The one major study in this area, due to its long-term follow-up, is the Elmira programme. This indicates that for poor, unmarried (largely teen) women, there are large impacts on the length of time spent on welfare, the number of births, the incidence of substance abuse and number of arrests in the 15-year follow-up (Olds et al., 1999a). Similar positive effects were also found for the two-year follow-up in Memphis (Kitzman et al., 1997). The one-year follow-up of the HFA New York programme failed to find statistically significant impacts on maternal life course outcomes, apart from certain sub-groups (Mitchell-Herzfeld et al., 2005).

Overall, therefore, the evidence on effects from home visitation programmes is mixed. Several measures rely on maternal self-reporting and other metrics, which limit the reliability of the findings presented. Reduction of child abuse, which is one of the key aims of many programmes, has proved difficult to measure due to reporting bias.

[32] UK interventions tend to be focused more preventing child injury (Bull et al., 2004)

There does, however, seem to be a positive effect on parenting behaviour, despite methodological concerns, with the majority of studies showing some positive impact. In respect of child outcomes' however, the evidence is limited, especially as most evaluations are focused on the years close to birth when the programme is administered. The major exception to this, the Elmira NFP programme, has shown very large positive results for both parents and children in low-income families upon reaching the age of 15. Interestingly, these effects are larger than those illustrated in the evaluations during or immediately after the initial intervention, suggesting that similar positive results could result from other programmes, which have not been evaluated over the longer time frame.

However, there may be a concern that these results are not replicable if provided nationally. The characteristics of parents that volunteer for these programmes may be very different from those that don't and this limits both the impact and the potential benefits that might result. In addition, it may not be possible to deliver programmes that rely on a professional or highly qualified workforce. As these programmes expand, it is possible that the quality of the service delivered may fall, resulting in no impact on either parental or child outcomes.

In addition to the "pure" home visitation programmes discussed above, several programmes incorporate home visits with child interventions (such as centre-based care). Examples of these programmes include the Perry Preschool Programme and the Syracuse Family Development Centre. Generally however, the parent intervention is not examined separately from the overall programme. Evidence from the Early Head Start programme showed that centre-based care combined with home visitation produced the widest range of positive impacts, compared to home visitation or centre-based care separately (Love et al., 2005). However, programmes were developed separately to best address the needs of the population, and so this does not provide robust evidence of one programme approach over another. A randomised trial investigating the additional benefits of combining home visitation with centre-based care found that a combined home visitation and day-care programme produced positive effects in child development, but a pure home visitation service had no positive effects (Wasik et al., 1990).

Within the United Kingdom, the Sure Start programme has sought to bring together a wide range of services (including early education, childcare, health and family support) for families with children under 5 years old. Originally developed as Sure Start Local Programmes (SSLPs) aimed at disadvantaged areas, recently, the emphasis has moved towards the formation of Children's Centres that provide a range of integrated services.

The early evidence on SSLPs did provide some evidence of positive impacts on child development (improved child behaviour and social competence at 36 months) and parenting (less 'household chaos' at 9 months, and more acceptance by mothers of their child's behaviour at 36 months). However, the majority of outcome indicators were statistically insignificant, and effects were sometimes limited to sub-groups (such as non-teen parents). There was also evidence of some adverse effects on children growing up in SSLP areas (NESS Team, 2005).

Despite the large scale evaluation process (the National Evaluation of Sure Start), it is difficult to identify the effects of any particular parenting intervention as part of Sure Start. This is both because of the nature of the intervention (Sure Start covers a wide suite of services, which are not separately evaluated) and the evaluation design (randomised allocation was not used, either for individuals or geographic areas) (Rutter, 2006).

6.2.2 Cost-Benefit Analysis

Few economic evaluations of home visitation services exist, although those that do are generally positive (Elkan et al., 2000). The lack of long-term intervention information makes full economic evaluation of the programmes difficult, and the majority of studies have been cost analyses.

However, two recent evaluations have looked to perform full economic cost benefit analyses based on the effects mentioned in individual studies. Aos et al. (2004) and Karoly et al. (2005) analysed a number of childhood interventions, including the NFP, HFA and PAT programmes, with the results presented in Table 2 below.

Table 2: Summary of Cost-benefit findings - Home Visitation Programmes

	Benefits	Costs	Benefits / Dollar	Benefits - Costs
Parents as Teachers	$4,300	$3,500	$1.23	$800
Nurse Family Partnership for Low Income Women	$26,298	$9,118	$2.88	$17,180
Nurse Family Partnership – Higher risk*	$41,419	$7,271	$5.70	$34,148
Nurse Family Partnership – Lower risk*	$9,151	$7,271	$1.26	$1,880
Home visitation for At-risk Mothers and Children**	$10,969	$4,892	$2.24	$6,077
Healthy Families America	$2,052	$3,314	$0.62	-$1,263

Source: Aos et al. (2004); Karoly et al. (2005).
Note: Using a discount rate of 3%, 2003 dollars.
* Karoly et al. (2005)
** Average for a group of programmes. Some of these programmes include services such as preschool.

As the table indicates, the evidence is positive for a number of programmes, with the NFP programme producing the highest benefits. In one analysis that considered the average benefits across several home-visiting programmes, it was found that there were significant benefits. However, as some of these programmes included pre-school elements and other strands of parent and child interventions, caution must be applied in assuming the benefits can be solely attributed to home visitation programmes.

As shown in the table, there have been three different cost-benefit analyses of the NFP programme.[33] The indications are that the programme was most effective when serving high-risk individuals in Elmira ($5.70), although, the programme would have been cost-effective even if aimed only at the low risk sample, with a cost-benefit ratio of $1.26.

There is little cost-benefit analysis within the UK. One study has shown that an intensive home visitation programme could be cost effective compared to a standard home-visiting service (Barlow et al., 2007). In addition, a survey of primary school parents provided some evidence that society values the reduction of child maltreatment greater than the associated costs. This provides support for the continuation of home visitation (and other) programmes aiming to achieve this (Barlow et al., 2007).

[33] The Karoly et al. (2005) study only estimated the benefits from the Elmira programme, as opposed to Aos et al. (2004) who assessed the benefits from the Elmira, Memphis and Denver evaluations.

6.2.3 Conclusion

Overall, there is some clear evidence of benefits to home visitation programmes, based both on medical assessments and economic evaluation. Positive effects are in evidence for programmes operated by nurses or paraprofessionals, and depending on whether they are targeted or universal. The results for the NFP programme are particularly convincing, as this is the only programme that has undertaken a long-term evaluation. The evidence from this programme shows that interventions are likely to be significantly more cost-effective if targeted at at-risk individuals. However, caution must be applied in generalising these results to the UK, given cultural and other differences with the United States.

7 Parent Training

Following the discussion in the previous two sections of interventions aimed at parental involvement and at improving parenting in the home (though home visitation), this section assesses the available evidence on parent training. Parent training shares some goals of home visitation programmes, but is generally offered outside the home and tends to be narrower in focus. There are two major approaches to parent training programmes: *behavioural* and *relationship*. Behavioural programmes focus on teaching parent skills to improve child behaviour, whereas relationship training emphasises the need for understanding and communication between parent and child. These elements are not exclusive and often overlap in parenting programmes (Dretzke et al., 2004).

Parent training covers an extremely heterogeneous range of interventions. Courses can take place in a range of locations (including the home, clinics and community settings) and vary significantly in their goals, theoretical orientations, and modes of delivery. Most parent training programmes are behavioural in nature, looking to improve child outcomes through improving parenting skills, although some programmes focus on improving parent-child relationships. In the UK particularly, the majority of programmes are focused on treating child behavioural problems, such as conduct disorder.

7.1 Parent Training Interventions

7.1.1 UK Interventions

Parent training programmes have become increasingly popular in the UK and in December 2005 the National Institute for Health and Clinical Excellence (NICE) recommended the use of group-based parent training/education programmes in the management of children with conduct disorders. Parenting programmes are also becoming increasingly popular with parents. Patterson et al. (2002) found that 18% of parents had attended a parenting programme and 58% showed interest in attending one in the future. Although a broad range of programmes have been implemented in the UK such as Mellow Parenting, the Parents Altogether Lending Support (PALS) programme and the Incredible Years programme (see Moran at al. (2004) for a fuller list), there have been few rigorous evaluations. The major exception to this is the Incredible Years programme, but as this was developed in the US it is discussed in section 7.1.2 below.

7.1.2 Other Interventions

Despite the growing number and demand for parent training programmes, only two major programmes (Incredible Years and Triple P) have been rigorously evaluated over time. These are discussed in more detail below.

In comparison to the many of the parent involvement and home visitation interventions discussed in sections 5 and 6, parent training programmes are less centrally controlled[34]. Parent training is based on a common model and curriculum, which can be used and developed locally by different sites. As a result, the ultimate delivery of these types of programmes has a varied focus rather than a consistent target group, location, or method of intervention. This makes an assessment of programmes (either individually or in aggregate) relatively less useful in assessing general cost effectiveness.

Incredible Years

The Incredible Years programme has been developed by Carolyn Webster-Stratton in Seattle, and has since been implemented in a number of countries (including Norway and the United Kingdom). The programme's major aim is to prevent, reduce and treat aggression and conduct disorder problems in young children. Other aims include enhancing child social competence and promoting parent competencies, and strengthening relationships between parents and children. As well as group-based parenting, the programme also incorporates classroom-based interventions.

The parenting programme is provided in groups of 10 to 14 parents of children aged 2-12, and is based on "videotape modelling". This involves watching and discussing a range of video clips seeking to promote parenting skills including how to play with, praise, motivate and discipline children.

The Incredible Years programme has been replicated in several countries, and has undergone several randomised controlled trials. Several positive results have been found, both in the US and the UK. Recent trials within the UK have shown positive effects in reducing child problem behaviour in a range of settings, including Sure Start Centres (Hutchings et al., 2007), the Family Nurturing Network charity (Gardner et al., 2006) and local Child and Adolescent Mental Health Centres (Scott et al., 2001). When the programme has been implemented with a particular focus on prevention of adverse outcomes, positive impacts on child mental health and problem behaviour have been found (although still focussed on children of below average mental health) (Patterson et al., 2002).

Triple P Positive Parenting Programme

The Triple P parenting programme was originally developed by a team at The University of Queensland, Australia. The programme is essentially

[34] The NFP, for instance, requires extensive consultation and assessment before allowing a group to become a "NFP Implementing Agency". Factors considered include the need for NFP services and the presence of other similar programs nearby, the number of low-income, first-time births in the catchment area and the ability to recruit trained nurses. Becoming a NFP agency involves the signing of a formal contract setting out the mutual obligations of the national and regional agencies.

preventative in nature and has been replicated in several countries, including the UK (e.g. Parentline). The programme incorporates five levels of intervention for parents of children aged 0-16. The levels increase in intensity from level 1, which is a universal parent information strategy, to level 5, which offers individually tailored family intervention for parents of children with child behaviour problems.

The existing evidence on the Triple P programme is based on a series of Australia-based trials, carried out by the originators of the programme. Over twenty trials have been implemented, with various degrees of methodological robustness. These have evaluated the impact of different levels of intensity of the programme in different settings (see Sanders et al. (2003) for a full list) and have shown a number of positive results on child behaviour problems and parenting skills. As yet, however, no evaluations of the programme have been carried out within the UK.

7.2 Summary of Parent training Evidence

7.2.1 Efficacy of Parent Training

The majority of evaluations of parent training programmes have assessed the ability of programmes to address child behavioural problems (such as conduct disorder[35]). There is increasingly strong evidence that parent training produces positive results in addressing child conduct disorder, including both children that already have behaviour problems and those at high risk of developing difficulties in the future. However, the heterogeneity of both the programmes themselves, and the evaluation techniques used in the studies makes comparison of programmes and the identification of the key elements of programmes difficult. These problems are further exacerbated by the lack of methodological rigour in many studies. In addition, there remains little evaluation of relationship parenting programmes, with the majority of the literature focussed on behavioural programmes (Dretzke et al., 2004).

There are several studies indicating that parent training can have positive impacts on both parents and children. This includes both reviews of multiple evaluations (e.g. Dretzke et al., 2004) and randomised controlled trials of individual studies (e.g. Hutchings et al., 2002). The majority of studies remain US-based, but recent evaluations have indicated that benefits from parent training can also be achieved in the UK, based around the Incredible Years programme (discussed above) While there are methodological problems with a number of these studies[36], the majority of reviews are able to draw positive

[35] Conduct disorder refers to a persistent and pervasive pattern of antisocial behaviour in childhood or adolescence (Scott et al., 2001).

[36] Problems are largely due to selection bias, performance bias, detection bias and attrition bias. For instance, the systematic review by Dretzke et al. (2004) was able to identify only 6 studies of good or adequate quality.

conclusions (Dimond and Hyde, 1999). The positive effects are not limited to child outcomes, with impacts also found on a range of other outcomes, including parental depression (Hutchings et al., 2006), maternal anxiety, self-esteem and relationship with her partner (Barlow et al., 2003) and parenting behaviour (Lundahl et al., 2006).

Despite this evidence supporting short-term benefits from parent training, there is limited information examining the extent to which the effects endure. Follow-up studies carried out a few months after the evaluation have shown positive effects, (Dretzke et al., 2004), but few studies have examined the effects over a period of years.

Some positive effects have been illustrated over a period of 18 months (Gardner et al., 2006) (although this did not include a control group) and 4 years (Hutchings et al., 2004) (for intensive treatment only). Dimond and Hyde (1999) found that 14 (of 15) studies assessed showed a positive effect on child behaviour at follow-up[37]. These studies, however, do not tend to include control groups and so must be treated with extreme caution as the positive effects may merely reflect reversion to the mean (Dretzke et al., 2004). Furthermore, there is no evidence of effects persisting as children move into adolescence, with few follow-ups of longer than 5 years. In addition, the measures used to assess these existing studies rely on clinical scales, and have not considered "real world" outcome measures (e.g. test scores or crime rates).

Some scepticism over the ability for effects to endure over time is suggested by qualitative evaluation of the programmes. Many parents, having learned better parenting techniques in a clinic, may have difficulty in applying them at home (Mockford and Barlow, 2004). Several barriers exist in implementing new parenting behaviour, including the need to break existing habits (of themselves and their partners), the incorporation of new techniques into busy schedules and gaining the support of their partner in implementing the techniques learned. Furthermore, discrepancies in parenting behaviour between the parent that attended the course and the other parent may lead to increased parental conflict.

There is therefore, a body of evidence showing that parent training can positively affect both parents and children at least in the short-term. However, this does not mean that all parent training programmes are effective. As discussed above, parent training programmes are extremely heterogeneous, and may only be appropriate in some situations or settings. Despite the number of positive impacts shown in the literature, some studies fail to find any effect of parenting programmes, while others show effects

[37] Of 15 studies, 8 had a follow-up of 1 year, 4 of 2-3 years, 2 of 3-10 years, and 1 of ten years. All the studies supplying information on parental well-being and societal and health service outcomes showed positive effects.

only on some indicators[38]. Much of the existing evidence relies on the two well evaluated programmes discussed above, and many interventions (including some popular programmes) do not rest on the same evidence base (Gardner et al. 2004).

Despite these caveats, parent training can be flexible and offered in a number of different settings. This has been illustrated by the replication of the Incredible Years programme in different countries and different settings, including clinics, primary schools and health service centres (Gardner et al., 2004).[39] The Triple P programme in particular, with its multi-level strategy, is designed to be appropriate in a wide range of contexts.

Despite this flexibility, there remain some questions over the ability of parenting programmes to produce benefits in the wider community. Despite recent studies, the majority of evidence remains based on trials in specialist clinics and comprised of volunteers (Scott et al., 2001). Evaluations are often carried out by the designers of the intervention, and there may be conflicts of interest as a result. Comparisons between studies and assessment of the relative effectiveness of different programmes remain difficult, due to the differences in project set-up and evaluation, as well as the common methodological flaws.

Furthermore, it is not clear how universal a service parenting programmes are. It has been suggested that parent training may be "more cost effective, more pervasive in impact, and less stigmatising if they were offered as a preventive measure before children were socially excluded and diagnosed as having oppositional defiant disorder or conduct disorder" (Webster-Stratton, 2001). Level 1 of the Triple P programme (replicated in the UK through the Parentline service) seeks to achieve this through widespread provision of information to parents. However, there is not yet evidence to support the effectiveness of such interventions.

Existing interventions have focused on programmes that have been offered to children either with, or at risk from conduct disorder and other behavioural problems. It is difficult to rigorously evaluate programmes where they are offered more widely, due to the difficulty of generating a control group. Some evidence from the Triple P programme in Australia suggests that such interventions can have a positive effect, but a reliance on self-reporting means that such results should be treated with caution (McTaggart and Sanders, 2003; Zubrick et al., 2005). The proportion of the population that could benefit from parent training is still unclear, and there remains a need to show improvements in children with above average levels of mental health

[38] Dretzke et al. (2004) found that of 28 studies comparing programs to a control, 6 had a statistically significant result in favour of parent training for all child outcome measures, 17 had a mix of positive and neutral findings, and 3 had just neutral.

[39] This flexibility is also shown by the fact that the effectiveness of the programme does not appear to vary between settings (Harrington et al., 2000).

(Patterson et al., 2002).

A further concern in deciding the most appropriate intervention group for parent training is that there is also evidence in the United States that children from families of lower socio-economic groups gain less from parenting programmes than other groups (Lundahl et al., 2006). Given that these groups are often seen as most at risk of poor outcomes, this is obviously a concern. The implementation of the Incredible Years programme in the UK has however, shown benefits when provided in socially disadvantaged areas (Hutchings et al., 2007) and to predominantly low-income families. (Gardner et al., 2006).

7.2.2 Cost-Benefit Analysis

Although there is a substantial literature examining the medical benefits to parent training, there has been little analysis of the economic costs and benefits of the programmes. Romeo et al. (2005) found only four economic evaluations of parenting or family therapy interventions, three of which were based in North America. In part this is because of the type of outcomes produced in the medical trials discussed above. The emphasis on behaviour scales and effect sizes is difficult to translate into monetary benefits (Aos et al., 2004), while the absence of longitudinal studies is a further hindrance.

With this difficulty in estimating benefits, the main evidence available has related to the cost of programmes. These indicate that parent training is relatively cheap, especially when group-based. From the UK, estimates of costs per family (within the NHS) range from £603 - £899 for group in-community provision and £423 - £629 for group in-clinic provision. Even the most expensive form of provision, individual in-home training, is estimated to cost £3,839 per family, which remains much lower than the potential savings resulting from the investment (Dretzke et al., 2004). Other estimates suggest the costs may be even lower (Dimond and Hyde, 1999). Providing a group-based community intervention in Wales, cost between £1,289 and £1,933, including start-up costs and the provision of crèche facilities (Edwards et al., 2007).

While this indicates that parent training is not particularly expensive, especially when group-based, it remains difficult to compare this to the benefits, due in part to the inability to relate changes in conduct disorder to economic or social benefits.[40] To attempt to measure societal benefits, studies have analysed the difference in public service use between children with conduct disorders and those without.

[40] In, for instance the form of Quality Adjusted Life Years (QALYs). Dretzke et al. (2004) indicate the cost per QALY gained dependent on the gain from successful treatment, but this remains of little use as there is "no basis on which to identify one analysis as a suitable basis for…decision making" (McCabe et al., 2005).

Those with conduct disorders cost public services[41] 10 times more than a individuals with no problems between the ages of 10 and 28 (£70,019 compared to £7,423), while youths with less severe conduct problems cost an estimated £24,324 (Scott et al., 2001)[42].

Using these estimates, the Triple P programme has been estimated to save £19.5 million, compared to its £4.6 million costs (University of Queensland, 2004; Dretzke et al., 2004). McCabe et al. (2005) model the net costs of providing different types of parent training to address conduct problems or (the more serious) conduct disorder in children aged 3-8. The predicted results are shown in Table 3 below.[43]

Table 3: Incremental costs of Parent Training Programmes

Programme type	Programme cost (per family)	Mean additional cost (conduct disorder)	Mean additional cost (conduct problems)
Average (based on Dretzke et al.)	£1,279	£613	£722
Group In-clinic	£500	-£70	-£30
Group In-community	£720	£90	£240
Individual In-clinic	£2,000	£1,380	£1,500
Individual In-home	£3,000	£2,400	£2,600

Source: McCabe et al. (2005); NICE (2005b)

The table illustrates the net public service costs for the children receiving the intervention, where a negative additional cost implies that the savings are

[41] Public services were measured across six domains: foster and residential care in childhood, special educational provision, state benefits received in adulthood, breakdown of relationship (domestic violence and divorce), health and crime.

[42] These results should be treated with caution, as they are based on a small group of children from a socially deprived London area and hence may not be generalisable (Dretzke et al., 2004).

[43] Children were categorised into three groups: no problems, conduct disorder and conduct problems. Based on a hypothetical cohort of children, the model then estimated the likelihood of parent training moving a child from conduct disorder to conduct problems, or conduct problems to no problems, using the effects estimated in previous studies. All the different type of parent training were assumed to have equal benefits, but different costs.

greater than the cost of the intervention.[44] The savings are greatest (additional costs are smallest) when programmes are aimed only those children with the most serious problems (i.e. with conduct disorder).

Although the model's findings indicate that only group in-clinic parent training programmes offer savings, this is largely because the model used only a one-year horizon – i.e. it was assumed that there are no longer-term effects of parent training. This not only ignores any longer term effects on social service usage as measured in the model, but also precludes any benefits from potential savings in the criminal justice system as adults, or better educational outcomes achieved by the child. Further, the benefits included in the model were limited to savings achieved by a few public services. As well as the outcomes mentioned above, this also excludes possible savings due to less use of youth justice bodies or reduced public service usage by parents (e.g. due to improved psychosocial health).

Analysis of the change in service costs over a six-month period suggests that a parent training programme will not pay for itself in the short-run. The implementation of the Incredible Years programme in Sure Start centres in Wales (Edwards et al., 2007) found a net cost to the intervention group of £1,992. Cost-effectiveness analysis showed that the programme was more effective for children with more severe problems.[45] In comparison to the possible savings identified by Scott et al. (2001), costs remain low, with the maximum cost of £5,486 associated with returning a child to below the clinical cut-off point (the average being £1,344).

7.2.3 Conclusion

There is some evidence showing that there are benefits to parent training and this is supported by the existing cost-effectiveness analysis. However the extent of the analysis remains limited due to the lack of studies examining the long-term effectiveness of parenting programmes. While it appears that the cost of parent training is low, further evidence of the long-term monetised benefits is needed. However, the long-term benefits of any parenting programme would only have to be small to make the very small investments in parenting programmes efficient.

[44] This includes savings from the reduced public service usage (including NHS, social services, voluntary services and education services) resulting from the improvements in child behaviour and the cost of the parent training.

[45] The cost effectiveness ratio was £37 per 1 point change on the Eyberg (child behaviour) scale for the "high intensity" group, compared to £73 on average and £92 for a "mild" group.

8 Conclusions

In the previous sections of this report, we have provided a review of the existing international evidence on parenting interventions. In this final section, we highlight the key conclusions arising from this analysis, and the lessons that can be learned for policy formulation in the UK.

Welfare to work policies

Both welfare to work schemes and the New Deal for Lone Parents have increased the number of parents in the labour force, and reduced the number of workless households. Evidence on the NDLP has indicated that this has had a net benefit to society of around £4,500 per new job created. However, as a parenting intervention (as opposed to a labour market intervention) the evidence is patchy, as there is no evidence of any effect on children of these initiatives. Some evidence in the US has shown that there are benefits to children from welfare to work schemes, but these tend to result from increases in family income (based on earnings supplements) combined with employment rather than directly from household employment *per se*. In addition, given the role of parental education in determining child outcomes, basic education and training may be an important component of welfare policies aimed at improving child outcomes. Further research is needed into the relationship between employment, family income, education and child development.

It is also possible that the positive effects on parental employment seen so far have been due to a one-off "windfall" due to the previous lack of projects seeking to help parents in the workplace. Prior to 1997 (and the implementation of these welfare to work policies) the proportion of lone parents in work was extremely low, and little attempt had been made to address their particular needs. It may be that the positive effects found so far, reflect the impact of harvesting the "low hanging" fruit and that more costly interventions will be necessary to achieve similar benefits in the future. Longer-term evaluation of the reforms is needed to see if the effects are maintained over time.

While there has been evidence that these projects have resulted in positive outcomes for their participants, they have only reached a small group of parents with particularly low incomes, and an even smaller proportion of parents overall. The interventions, in their current form, do not reach many of the parents who are most in need. Apart from a small group of (willing) lone parents, families that are not already participating in the labour market (either employed or engaged in job search) are not helped by these policies, although they are likely to be the most socially disadvantaged. Policies aimed directly at parents, such as the childcare tax credits, have only been available to a small group of parents.

However, combining this information with the evidence on the effect of parental income on child outcomes suggests that if any of these welfare programmes do actually increase parental income then we are likely to see small but positive effects on child achievement and outcomes.

Parenting Involvement/ Behaviour Interventions

A wide range of parenting interventions aimed at changing parent behaviour, including parent involvement schemes, home visitation and parent training, have shown positive effects on children. However, a lack of robust and long-term evaluation means that a lack of certainty over the scale or durability of the benefits persists.

Studies have shown a mixture of positive and insignificant results, and where impacts are statistically significant the magnitude of the effects are modest. The most positive results rely on a few major programmes, and care must be taken in drawing conclusions from these studies, particularly those undertaken outside the United Kingdom.

With this in mind, we should not expect too much from parenting programmes. Even the most intensive home visitation programme consists of around 100 hours of intervention with families (Gomby et al., 2005), while parent training generally consists of around 20 hours of classes. Given the complexity of the issues that these programmes are intended to address, this is not a large amount of time, and expectations should be formed accordingly.

Despite this, the broad range of programmes that illustrate positive effects on both children and adults suggest that they can play a role in government policy. However, the mixed nature of the evidence suggests that they alone are insufficient to promote child development. It is particularly hard to draw strong conclusions in light of the limited evidence on the long-term effects of parenting programmes. Further research is needed on the effect of parenting programmes on long-term educational and criminal justice outcomes in order to allow a proper understanding of how effective these policies are in changing children's life courses.

Further long-term evaluation will also allow methodologically robust and accurate evaluation of these programmes. The low costs of parenting programmes in comparison to the costs of crime and unemployment benefits in adulthood suggests that if programmes have any sort of lasting impact then they will be cost effective. The existing evidence supports this belief; however, with the exception of the Nurse Family Partnership, current studies rely on assumptions rather than evaluation evidence.

The lack of robust evaluation of different types of parenting programmes makes the comparison of alternative programmes difficult. Parenting programmes can be either preventative (such as most home visitation programmes) or curative (such as parent training). Both types of policy can have positive impacts, and as such both are likely to have a role to play in parenting policy.

In developing preventative parenting programmes, it is important to understand whether these are best aimed at the entire population, or targeted at particular groups. While the lack of evidence prevents firm conclusions, existing studies seem to indicate that there are greater benefits from more targeted programmes. However, as universal programmes have also produced positive outcomes for participants, it may be that expanding the target population simply dilutes, rather than eliminates potential benefits. If further research evidence supports these findings, then policymakers will need to consider the trade-off between greater individual benefits from a more focused intervention against the smaller benefits from broader participation.

A number of other questions remain to be resolved in developing appropriate parenting programmes, such as whether programmes should be provided by nurses or paraprofessionals, or should be voluntary or mandatory. The evidence that directly compares different elements of parenting programmes is limited, and it is difficult to isolate the impact of individual elements of programmes from the programme as a whole.

Parenting programmes need to be rooted in the overall early childhood education context. While some parenting programmes can benefit a number of child outcomes, other interventions may help address a broader range of issues (Kumpfer, 1998). There may be benefits to providing parenting programmes in combination with other initiatives, such as centre-based care. However, it is not clear whether such policies will cost-effective in comparison to "pure" parenting programmes.

However, it appears that a wide range of parenting programmes work, and a range of policy solutions may be needed to address the different needs of different parents and children. In particular, programmes aiming specifically at fathers appear necessary. Few programmes currently involve fathers, and there is little evidence addressing their involvement in parenting programmes. As the evidence on the importance of paternal involvement with children grows, identifying interventions that can improve their behaviour will become increasingly necessary.

Early interventions may need top-ups. We know very little about whether very early interventions are in themselves sufficient or whether there is a need to have on-going parenting interventions to achieve an appropriate return on the taxpayer's investment. To understand this, it is necessary to take much longer-term studies of follow up interventions, and the continued use of observational data and real world outcomes to try to determine (and disentangle) the impact of parental characteristics and behaviours.

Caution needs to be taken when considering the national roll out of potentially successful pilot initiatives. In some cases, this is because of the nature of those participating in a particular programme (volunteer versus mandatory) may lead to a bias in the results and the inappropriate conclusion that the pilot warrants further expansion. More generally, programmes that rely on a skilled workforce to deliver the intervention need to be expanded slowly. The limited pool of skilled professionals available to provide particular parenting interventions may hinder the rapid deployment of a successful pilot. However, the lack of an appropriately trained workforce might also negatively affect other initiatives already in the field.

Summary

Overall, the existing evidence shows that parenting programmes are likely to be cost effective and provide benefits to parents and children. However, despite the growing interest in this area, the number of robust, long-term evaluations of parenting programmes is limited. Further research is needed to identify which programmes can produce benefits. The existing (mainly US-based) evidence suggests that the greatest benefits will be produced from targeting lower income, at-risk families, however it remains uncertain whether this is true in the UK context.

9 References

Parenting

Brooks-Gunn, J., Han, W. and Waldfogel, J. (2005) "Maternal Employment and Child Outcomes in the First Three Years of Life: The NICHD Study of Early Child Care", Child Development 73(4):1052-1072.

Blanden, J. and Gibbons, S. (2006) "The Persistence of Poverty Across Generations: A view from two British cohorts", Joseph Rowntree Foundation/Policy Press.

Blanden, J. and Gregg, P. (2004) "Family income and educational attainment: a review of approaches and evidence for Britain", Oxford Review of Economic Policy, 20 (2), pp. 245-263.

Blanden, J., Gregg, P. and Machin, S. (2005) "Intergenerational Mobility in Europe and North America", Report prepared for the Sutton Trust.

Blanden, J., Gregg, P. and Macmillan, L. (2007) "Accounting for Intergenerational Income Persistence: Noncognitive Skills, Ability and Education", IZA Discussion Papers 2554, Institute for the Study of Labor (IZA).

Blow, L., Leicester, A. and Windmeijer, F. (2005) "Parental Income and Children's Smoking Behaviour: Evidence from the British Household Panel Survey", Institute for Fiscal Studies, London.

Catsambis, S. (2001) "Expanding knowledge of parental involvement in children's secondary education: connections with high schools seniors' academic success", Social Psychology of Education, 5, 149-177.

Catsambis, S. and Garland, J. (1997) "Parental involvement in students' education during middle school and high school", Report No. 18, Center for Research on the Education of students Placed at Risk (CRESPAR), Office of Educational Research and Improvement, U.S. Department of Education.

CED (2006) "The economic promise of investing in high-quality pre-school: Using early education to improve economic growth and the fiscal sustainability of states and the nation", Research and Policy Committee, Committee for Economic Development.

Chevalier, A. (2004) "Parental Education and Child's Education: A Natural Experiment", Institute of Study of Labour, IZA Discussion Paper Series, Discussion Paper No. 1153, Bonn.

Chevalier, A., Harmon, C., O'Sullivan, V. and Walker, I. (2005) "The impact of parental income and education on the schooling of their children", IFS Working Papers W05/05, Institute for Fiscal Studies, London.

Dearden, L., Machin, S. and Reed, H. (1997) "Intergenerational Mobility in Britain", The Economic Journal, 107, 47-66, Oxford.

Desforges, C. and Abouchaar, A. (2003) "The Impact of Parental Involvement, Parental Support and Family Education on Pupil Achievements and Adjustment: A Literature Review", Department for Education and Skills, Research Report 433.

Ermisch, J. and Francesconi, M. (2001) "The Effects of Parents' Employment on Children's Educational Attainment", mimeo, June, University of Essex.

Ermicsh, J., Francesconi, M and Pevalin, D. (2001) "Outcomes for Children of Poverty", DWP Research Report Number 158.

Fan, X. and Chen, M. (2001) "Parental involvement and students' academic achievement: A meta-analysis", Educational Psychology Review, 13(1) 1-22.

Feinstein, L. (2003) "Inequality in the Early Cognitive Development of British Children in the 1970 cohort", Economica, 70, 73-97.

Feinstein, L. and Symons, J. (1999) "Attainment in secondary school", Oxford Economic Papers, 51, 300-321.

Feinstein, L. and Duckworth, C. (2006) "Are There Effects Of Mothers' Post-16 Education On The Next Generation? Effects On Children's Development And Mothers' Parenting", Wider Benefits Of Learning Research Report No19, Centre for Research on the Wider Benefits of Learning, Institute of Education, London.

Feinstein, L. and Sabates, R. (2006) "Does Education Have An Impact On Mothers' Educational Attitudes And Behaviours?", Wider Benefits Of Learning Research Report No16, Centre for Research on the Wider Benefits of Learning, Institute of Education, London.

Flouri, E. and Buchanan, A. (2004) "Early father's and mother's involvement and child's later educational outcomes", British Journal of Educational Psychology, vol. 74, 141-153.

Gregg, P., Washbrook, E., Propper C. and Burgess, S. (2005) "The effects of a mother's return to work decision on child development in the UK", The Economic Journal, 115, F48-F80, Oxford.

Gutman, L. and Feinstein, L. (2007) "Parenting behaviours and children's development From infancy to early childhood: Changes, continuities and contributions", Wider Benefits Of Learning Research Report 22, Centre for Research on the Wider Benefits of Learning, Institute of Education, London.

Han, W., Waldfogel, J. and Brooks-Gunn, J. (2001) "The Effects of Early Maternal Employment on Later Cognitive and Behavioural Outcomes", Journal of Marriage and the Family 63, 336-354.

Hango, D. (2005) "Parental Investment in Childhood and Later Adult Well-Being: Can More Involved Parents Offset the Effects of Socioeconomic Disadvantage?", Centre for Analysis of Social Exclusion, Discussion Paper 98, London School of Economics and Political Science.

Hill, J., Waldfogel, J., Brooks-Gunn, J. and Han W. (2005) "Maternal Employment and Child Development: A Fresh Look Using Newer Methods", Developmental Psychology, Vol. 41, No. 6, 833–850.

Hobcraft, J. (1998) "Intergenerational and Life-Course Transmission of Social Exclusion: Influences and Childhood Poverty, Family Disruption and Contact with the Police", Centre for Analysis of Social Exclusion, Discussion Paper 15, London School of Economics and Political Science.

Hoghughi, M. and Speight, A. (2000) "Good enough parenting for all children--a strategy for a healthier society", Archives of Disease in Childhood, Feb;82(2):113-20.

Joshi, H. (2000) "Family Resources and Child Development", Paper prepared for the final Conference of the Children 5-16 Program London, October 20-21, Centre for Longitudinal Studies Institute of Education.

Karoly, L., Greenwood, P., Everingham, S., Hoube, J., Kilburn, M., Rydell, C., Sanders, M. and Chiesau, J. (1998) "Investing in Our Children What We Know and Don't Know About the Costs and Benefits of Early Childhood Interventions", Washington DC: RAND Corporation.

Karoly, L., Kilburn, M. and Cannon, J. (2005) "Early Childhood Interventions: Proven Results, Future Promises", Washington DC: RAND Corporation.

Kiernan, K. (2005) "Non-residential Fatherhood and Child Involvement: Evidence from the Millennium Cohort Study", Centre for Analysis of Social Exclusion, Discussion Paper 100, London School of Economics and Political Science.

Nechyba, T., McEwan, P. and Older-Aguilar, D (1999). The impact of family and community resource on student outcomes: An assessment of the international literature with implications for New Zealand. Available from: http:
www.minedu.govt.nz/web/document/document_page.cfm?id=5593andp=58.

Ruhm, C. (2005) "Maternal Employment and Adolescent Development", IZA Discussion Paper 1673, Bonn.

Ruhm, C. (2004) "Parental Employment and Child Cognitive Development", Journal of Human Resources 39(1): 155-192.

Sammons, P., Sylva, K., Melhuish, E., Siraj-Blatchford, I., Taggart, B., Grabbe, Y. and Barreau, S. (2007) "Influences on Children's Attainment and Progress in Key Stage 2: Cognitive Outcomes in Year 5", Effective Pre-school and Primary Education 3-11 Project (EPPE 3-11), Department for Education and Skills, Research Report 828.

Schoon, I. and Parsons, S. (2002) "Competence in the face of adversity: the influence of early family environment and long–term consequences", Children and Society, 16, 260-272.

Schoon, I., Bynner, J., Joshi, H., Parsons, S., Wiggins, R. and Sacker, A. (2002) "The influence of context, timing and duration of risk experiences for the passage from childhood to midadulthood", Child Development, 73 (5) 1486-1504.

Sigle-Rushton, W. (2004) "Intergenerational and life-course transmission of social exclusion in the 1970 British Cohort Study", CASE Paper 78, London School of Economics: ESRC Centre for the Analysis of Social Exclusion.

Sylva, K., Melhuish, E., Sammons, P., Siraj-Blatchford, I. and Taggart, B. (2004) "The Effective Provision of Pre-School Education (EPPE) Project: Findings from Pre-school to end of Key Stage 1", London: University of London, Institute of Education.

Temple, J. and Reynolds, A. (2007) "Benefits and costs of investments in preschool education: Evidence from the Child-Parent Centers and related programs", Economics of Education Review 26, pp 126-144.

Waldfogel, J. (2004) "Social Mobility, Life Chances and the Early Years", Centre for Analysis of Social Exclusion Discussion paper 88, London School of Economics and Political Science.

Parenting Interventions: Supporting family income

Bainbridge, J., Meyers, M. and Waldfogel J. (2003) "Child Care Policy Reform and the Employment of Single Mothers ", Social Science Quarterly 84 (4) 771–791.

Brewer, M., Clark, T. and Goodman, A. (2003) "What really happened to child poverty in the UK under Labour's first term?", The Economic Journal, 113, F240-F257, Oxford.

Blow, L, Walker, I. and Zhu, Y. (2005) "Who benefits from child benefit?", University of Warwick.

Brewer, M. and Browne, J. (2006) "The Effect of the Working Families' Tax Credit on labour market participation", IFS Briefing Note 69.

Blundell, R., Brewer, M. and Shephard, A. (2005) "Evaluating the labour market impact of Working Families' Tax Credit using difference-in-differences", HM Customs and Revenue, Working Paper 4.

Bradshaw, J. (2006) "Child Support", Joseph Rowntree Foundation.

Brewer, M., Duncan, A., Shephard, A. and Suarez, M., (2006) "Did working families' tax credit work? The impact of in-work support on labour supply in Great Britain", Labour Economics, Elsevier, vol. 13(6) pp 699-720, December.

Brewer, M. and Shephard, A. (2004) "Has Labour made work pay?", Institute for Fiscal Studies.

Chase-Lansdale, P. and Pittman, L. (2002) "Welfare Reform and Parenting", The Future of Children, 12 (1).

Clark-Kauffman, E., Duncan, G. and Morris, P. (2003) "How Welfare Policies Affect Child and Adolescent Achievement", American Economic Review, 93, 299-303.

Dolton P., Azevedo, J. and Smith, J. (2006) "The econometric evaluation of the New Deal for Lone Parents", Department for Work and Pensions, Research Report No. 356

Evans, M., Eyre, J., Millar, J. and Sarre, S. (2003) "New Deal for Lone Parents: Second Synthesis Report of the National Evaluation", Leeds: CDS.

Francesconi, M. and Van der Klaauw, W. (2004) "The consequences of "in-work" benefit reform in Britain: new evidence from panel data", Institute for Social and Economic Research, Working Paper 2004-13.

Gregg, P. and Harkness, S. (2003) "Welfare reform and lone parents employment in the UK", Centre for Market and Public Organisation, Working Paper 03/072.

Gregg P., Harkness, S. and Macmillan, L. (2006) "Welfare to work policies and child poverty: A review of issues relating to the labour market and economy", Joseph Rowntree Foundation.

Gregg, P., Waldfogel, J. and Washbrook, E. (2005) "Expenditure Patterns Post-Welfare Reform in the UK: Are low-income families starting to catch up?", Centre for Analysis of Social Exclusion, Discussion Paper 99, London School of Economics and Political Science.

Han, W. and Waldfogel, J. (2001) "Child Care Costs and Women's Employment: A Comparison of Single and Married Mothers With Pre-School-Aged Children", Social Science Quarterly, Volume 82, Number 3 pp. 552-568(17).

Harker, L. (2006) "Delivering on Child Poverty: what would it take?", Report for the Department for Work and Pensions.

Hasluck, C., McKnight, A. and Elias, P. (2000) "Evaluation of the New Deal for Lone Parents: Early Lessons from the Phase 1 Prototype – Cost Benefit and Econometric Analyses", Department for Work and Pensions, Research Report 110.

Leigh, A. (2005) "Optimal design of earned income tax credits: evidence from a British natural experiment", Australian National University, Centre for Economic Policy Research, Discussion Paper 488.

Magnuson, K. and McGroder, S., (2002) "The Effect of Increasing Welfare Mothers' Education on Their Young Children's Academic Problems and School Readiness", Joint Center for Poverty Research Working Paper.

Marsh, A. and Vegeris, S. (2004) "The British lone parent cohort and their children 1991-2001", Department for Work and Pensions, Research Report 209.

Millar, J. and Evans, M. (eds) (2003) "Lone parents and employment: International comparisons of what works", Paper prepared for the Department for Work and Pensions.

Morris, P. et al. (2001) "How Welfare and Work Policies Affect Children: A Synthesis of Research", New York: Manpower Demonstration Research Corporation.

Nicholls, J. and Simm, C. "The childcare tax credit element of Working Families Tax Credit: a qualitative study", Inland Revenue, Research Report 7.

Paull, G. and Brewer, M. (2003) "How can suitable, affordable childcare be provided for all parents who need it to enable them to work?", Submission to the Work and Pensions Select Committee Inquiry: IFS Briefing Notes, BN34.

Plewis, I. and Hawkes, D. (2005) "Feasibility study into the effects of low income, material deprivation and parental employment on outcomes for children both in adulthood and as children", Department for Work and Pensions, Working Paper 20.

Sutherland, H. and Piachaud, D. (2001) "Reducing child poverty in Britain: An assessment of government policy 1997-2001", The Economic Journal, 111, F85-F101, Oxford.

Family Education

Aos, S., Lieb, R., Mayfield, J., Miller, M. and Pennuci, A. (2004) "Benefits and costs of prevention and Early intervention programs for youth", The Washington State Institute for Public Policy, Document No. 04-07-3901, Olympia, Washington.

Baker, A., Piotrkowski, C. and Brooks-Gunn, J. (1999) "The Home Instructional Program for Preschool Youngsters (HIPPY)", The Future of Children, 9(1), 116-133.

Bradley, R. and Gilkey B. (2002) "The Impact of the Home Instructional Program for Preschool Youngsters (HIPPY) on School Performance in 3rd and 6th Grades", Early Education and Development, v13 n3 pp 301-11.

Brooks, G., Gorman, T., Harman, J., Hutchison, D., Kinder, K., Moor, H. and Wilkin, A. (1997) "Family Literacy lasts. The NFER Follow-up Study of the Basic Skills Agency's Demonstration Program", National Foundation for Educational Research and Basic Skills Agency.

Callaghan, G., Newton, D., Wallis, E., Winterton, J. and Winterton, R. (2001) "Adult and Community Learning: what, why, who, where?", London: DfES Research Report 262.

Collins, F.M., Svensson, C. and Mahony, P. (2005) "Bookstart: Planting a seed for life", London: Roehampton University.

Evangelou, M., Brooks G., Smith S. and Jennings D. (2005) "Birth to School Study: A Longitudinal Evaluation of the Peers Early Education Partnership (PEEP) 1998-2005", DfES Research Report SSU/2005/FR/017.

Hammond, C. and Gough, M., (2000) "A note on Family Learning", The Wider Benefits of Learning Centre.

Horne, J. and Hoggart, J. (2004) "The Impact of Adults' Participation in Family Learning - A Study Based In Lancashire", National Institute for Adult and Community Learning.

Levenstein, P., Levenstein, S., Shiminski, J. and Stolzberg, J. (1998) "Long-term impact of a verbal interaction program for at-risk toddlers: An exploratory study of high school outcomes in a replication of the mother-child home program", Journal of Applied Developmental Psychology, 19, 267-286.

McNally, S. and Machin, S. (2004) "Large Benefits, Low Cost: Is the Government's National Literacy Strategy Effective?", Centrepiece 9, no. 1 (2004), pp. 2-7.

National Literacy Trust (2001) "Parental involvement and literacy achievement: The research evidence and the way forward. A review of literature prepared by the National Literacy Trust", Consultation Paper.

OFSTED (2000) "Office for Standards in Education, Family Learning: a survey of current practice", London: Crown copyright.

Wade, B. and Moore, M. (2000) "A Sure Start with Books. Early Years", vol. 20, no. 2, pp 39-46.

Westheimer, M. (2003) "Parents Making a Difference: International Research on the Home Instruction for Parents of Preschool Youngsters Program", Jerusalem: The Hebrew University Magnes Press.

Home Visitation

Barlow, J., Stewart-Brown, S., Davis, H., Mackintosh, E., Kirkpatrick, S., Jarrett, P. and Mockford, C. (2007) "The Oxfordshire Home visitation Study" In Beecham, J. and Sinclair, I. (2006) "Costs and Outcomes in Children's Social Care", London: Jessica Kingsley.

Bull, J., McCormick, G., Swann, C. and Mulvihill, C. (2004) "Ante- and post-natal home-visiting programs: a review of reviews", London: Health Development Agency.

Daro, D. and Harding, K. (1999) "Healthy Families America: Using Research to Enhance Practice", The Future of Children, 9(1), pp 66-90.

Duggan, A., MacFarlane, E., Windham, A., Rohde, C., Salkever, D., Fuddy, L., Rosenberg, L., Buchbinder, S. and Sia, C. (1999) "Evaluation of Hawaii's Healthy Start Program", The Future of Children, 9(1), pp 66-90.

Duggan, A., McFarlane, E., Fuddy, L., Burrell, L., Higman, S. Windham, A. and Sia, C. (2004) "Randomized trial of a statewide home visitation program to prevent child abuse: Impact in preventing child abuse and neglect", Child Abuse and Neglect, 28(6), 597-622.

Duggan, A., McFarlane, E., Fuddy, L., Burrell, L., Higman, S. Windham, A. and Sia, C. (2004) "Randomized trial of a statewide home visitation program to prevent child abuse: Impact in reducing parental risk factors", Child Abuse & Neglect, 28(6), 623-643.

DuMont, K., Mitchell-Herzfeld, S., Greene R., Lee E., Lowenfels, A. and Rodriguez, M. (2006) "Healthy Families New York Randomized Trial: Impacts on Parenting After the First Two Years", New York State Office of Children and Families. Working Paper Series.

Elkan, R., Kendrick, D., Hewitt, M., Robinson, J., Tolley, K., Blair, M., Dewey, M., Williams, D. and Brummell, K. (2000) "The effectiveness of domiciliary health visiting: a systematic review of international studies and a selective review of the British literature", Health Technology Assessment 4: (13).

Gomby, D. (2005) "Home Visitation in 2005: Outcomes for Children and Parents", Working Paper No 7, Invest in Kids Working Group, Committee for Economic Development.

Gomby, D., Culross, P. and Behrman, R. (1999) "Home visitation: Recent program evaluations—analysis and recommendations", The Future of Children, 9(1).

Kendrick, D., Elkan, R., Hewitt, M., Dewey, M., Blair, M., Robinson, J., Williams, D. and Brumell, K. (2000) "Does home visitation improve parenting and the quality of the home environment? A systematic review and meta-analysis", Archives of Disease in Childhood Vol: 82, pp 443-451.

Kitzman, H., Olds, D., Henderson, C., Hanks, C., Cole, R., Tatelbaum, R., McConnochie K., Sidora, K., Luckey, D., Shaver, D., Engelhardt, K., James, D. and Barnard, K. (1997) "Effect of Prenatal and Infancy Home Visitation by Nurses on Pregnancy Outcomes, Childhood Injuries and Repeated Childbearing: A randomized Controlled Trial", Journal of the American Medical Association, Vol. 278, No. 8, pp 644-652.

Korfmacher, J., O'Brien, R., Hiatt, S. and Olds, D. (1999) "Differences in Program Implementation Between Nurses and Paraprofessionals Providing Home Visits During Pregnancy and Infancy: A Randomized Trial", American Journal of Public Health, Vol. 89, No. 12, pp 1847-1851.

Love, J., Kisker, E., Ross, C., Raikes, H., Constantine, J., Boller, K., Brooks-Gunn, J., Chazan-Cohen, R., Tarullo, L., Brady-Smith, C., Fuligni, A., Schochet, P., Paulsell, D. and Vogel, C. (2005) "The effectiveness of Early Head Start for 3-year-old children and their parents: Lessons for policy and programs", Developmental Psychology, 41, pp 885-901.

Martin, J. (1999) "Healthy Families America", The Future of Children, 9(1), , Appendix A.

Mitchell-Herzfeld, S., Izzo, C., Greene, R., Lee, E. and Lowenfels, A. (2005) "Evaluation of Healthy Families New York (HFNY): First Year Program Impacts", Rensselaer, N.Y.: New York State Office of Children and Family Services, Bureau of Evaluation and Research, Albany, N.Y.: Center for Human Services Research, University at Albany.

National Evaluation of Sure Start Team (2005) Report 13: "Early impacts of Sure Start local programs on children and families", London: HMSO.

Olds, D., Robinson, J., O'Brien, R., Luckey, D., Pettitt, L., Henderson, C., et al. (2002) "Home visitation by paraprofessionals and by nurses: A randomized controlled trial", Pediatrics, 110(3), pp 486-496.

Olds, D., Henderson C., Kitzman, H., Eckenrode, J., Cole, R. and Tatelbaum, R. (1999a) "Prenatal and Infancy Home Visitation by Nurses: Recent Findings", The Future of Children, Volume 9(1).

Olds, D. (1999b) "The Nurse Home Visitation Program", The Future of Children, Volume 9, Number 1, Appendix C.

Olds, D., Henderson, C., Cole, R., Eckenrode, J., Kitzman, H. and Luckey, D. (1998) "Long-term effects of nurse home visitation on children's criminal and antisocial behavior: 15-year follow up of a randomized trial", Journal of the American Medical Association, 280(14), 1238-1244..

Olds, D., Henderson, C., Tatelbaum, R. and Chamberlin, R. (1986) "Improving the delivery of prenatal care and outcomes of pregnancy: A randomized trial of nurse home visitation", Pediatrics 77(1): 16-28.

Rutter, M. (2006) "Is Sure Start an effective prevention mechanism?", *Child and Adolescent Mental Health*, 11, pp135-141.

Sweet, M. and Appelbaum, M. (2004) "Is Home visitation an Effective Strategy? A Meta-Analytic Review of Home visitation Programs for Families With Young Children", Child Development, Volume 75, Number 5, Pages 1435 – 1456.

Wagner, M. and Clayton, S. (1999) "The Parents as Teachers Program: Results from two demonstrations", The Future of Children, 9(1), pp 91-115.

Wagner, M., Iida, E., Spiker, D., Hernandez, F. and Song, J. (2001) "Multisite Parents as Teachers Evaluation: Three-year findings at one community", SRI Project P07283, Menlo Park, CA: SRI International.

Wagner, M., Spiker, D., Hernandez, F., Song, J. and Gelrach-Dowie, S. (2001) "Multisite Parents as Teachers Evaluation: Experiences and outcomes for children and families", SRI Project P07283, Menlo Park, CA: SRI International.

Wasik, B., Ramey, C., Bryant, D., and Sparling, J. (1990) "A longitudinal study of two early intervention strategies: Project CARE", Child Development 61(6): pp 1682-1696.

Parenting Classes

Barlow, J. and Parsons, J. (2003) "Group-based parent training programs for improving emotional and behavioural adjustment in 0-3 year old children Cochrane Database of Systematic Reviews Issue 2.

Barlow, J., Coren, E. and Stewart-Brown, S. (2003) "Parent training programs for improving maternal psychosocial health", Cochrane Database of Systematic Reviews Issue 4.

Coren, E. and Barlow, J. (2001) "Individual and group-based parenting programs for improving psychosocial outcomes for teenage parents and their children", Cochrane Database of Systematic Reviews, Issue 3.

Dimond, C. and Hyde, C. (2000) "Parent education programs for children's behaviour problems: medium to long term effectiveness" Birmingham: West Midlands Development and Evaluation Service.

Dretzke, J., Frew, E., Davenport, C., Barlow, J., Stewart-Brown, S., Sandercock, J., Bayliss, S., Raftery, J., Hyde, C. and Taylor, R. (2004) "The effectiveness and cost-effectiveness of parent training/education programs for the treatment of conduct disorder, including oppositional defiant disorder, in children", Birmingham: West Midlands Health Technology

Assessment Collaboration, University of Birmingham.

Edwards, R., Céilleachair A. Bywater, T. and Hughes, D. and Hutchings, J. (2007) "Parenting program for parents of children at risk of developing conduct disorder: cost effectiveness analysis", BMJ.

Gardner, F., Hutchings, J. & Lane, E. (2004) "Three to eight years: risk and protective factors; effective interventions", In Sutton C., Utting, D. and Farrington, D. (Eds) "Support from the start: Working with young children and their Families to reduce the risks of crime and antisocial behaviour", London: Department for Education and Skills.

Gardner, F., Burton, J. and Klimes, I. (2006) "Randomised Controlled Trial of a Parenting Intervention in the Voluntary Sector for Reducing Conduct Problems in Children: Outcomes and Mechanisms of Change", Journal of Child Psychology and Psychiatry 47:11, pp 1123-1132.

Ghate, D. and Ramella, M. (2002) "Positive Parenting: The National Evaluation of the Youth Justice Board's Parenting Program", London: Policy Research Bureau of the Youth Justice Board.

Harrington, R., Peters, S., Green, J., Byford, S., Woods, J. and McGowan, R. (2000) "Randomised comparison of the effectiveness and costs of community and hospital based mental health services for children with behavioural disorders", BMJ 321: 1047-1050.

Hutchings, J., Bywater, T., Daley, D., Gardner, F., Whitaker, C., Eames, C. and Edwards, R. (2007) "Parenting intervention in Sure Start services for children at risk of developing conduct disorder: pragmatic randomised controlled trial", BMJ, pp 334:678.

Hutchings, J., Appleton, P., Smith, M., Lane, E. and Nash, S. (2002) "Evaluation of two treatments for children with severe behaviour problems: child behaviour and maternal mental health outcomes", Behavioural and Cognitive Psychotherapy, 30: 279-295.

Hutchings,, J., Lane, E. and Kelly, J. (2004) "Comparison of two treatments of children with severely disruptive behaviours: a four year follow up", Behavioural and Cognitive Psychotherapy, 32 (1) 15 - 30.

Kumpfer, K. (1998) "Selective prevention interventions: The Strengthening Families Program", NIDA Research Monograph Series 177, pp. 160–207.

Lane, E., Gardner, F. Hutchings, J. and Jacobs, B. (2004) "Eight to thirteen Years: Risk and protective factors; effective interventions", In Sutton C., Utting, D. and Farrington, D. (Eds) "Support from the start: Working with young children and their Families to reduce the risks of crime and antisocial behaviour", London: Department for Education and Skills.

Lundahl, B., Risser, H. and Lovejoy, M. (2006) "A meta-analysis of parent

training: Moderators and follow-up effects", Clinical Psychology Review Volume 26, Issue 1, pp 86-104.

McCabe, C., Sutcliffe, P. and Kalthenthaler, E. (2005) "Parent training programs in the management of conduct disorder", A report from the NICE Decision Support Unit and the ScHARR Technology Assessment Group.

McTaggart, P. and Sanders, M. (2003) "The Transition to School Project: Results from the classroom", Australian e-Journal for the Advancement of Mental Health, 2(3).

Mockford, C. and Barlow, J. (2004) "Parenting programs: some unintended consequences", Primary Health Care Research and Development, 5: 219–227.

Moran, P. and Ghate, D. (2005) "The effectiveness of parenting support", Children and Society, Volume 19 pp. 329–336.

Moran, P., Ghate, D. and van der Merwe, A. (2004) "What Works in Parenting Support? A Review of the International Evidence", DfES Research Report 574, Department of Education and Skills.

National Institute for Health and Clinical Excellence (2005a) "Parent training/education programs in the management of children with conduct disorders: Final Appraisal Determination", National Institute for Health and Clinical Excellence in association with the Social Care Institute for Excellence.

National Institute for Health and Clinical Excellence (2005b) "Parent training/education programs in the management of children with conduct disorders: Overview", National Institute for Health and Clinical Excellence in association with the Social Care Institute for Excellence.

Patterson, T., Mockford, C., Barlow, J., Pyper, C. and Stewart-Brown, S. (2002) "Need and demand for parenting programs in general practice", Archives of Diseases in Childhood, 87, 468-471.

Romeo, R., Knapp, M. and Scott, S. (2006) "The economic cost of severe antisocial behaviour in children and who pays for it", British Journal of Psychiatry.

Romeo, R., Byford, S. and Knapp, M. (2005) "Economic evaluations of child and adolescent mental health interventions: a systematic review", Journal of Child Psychology and Psychiatry, 46:919-30.

Sanders, M., Markie-Dadds, C. and Turner, K. (2004) "Theoretical, Scientific and Clinical Foundations of the Triple P – Positive Parenting Program: A Population Approach to the Promotion of Parenting competence", Parenting and Family Support Centre, The University of Queensland.

Scott, S., Knapp, M., Henderson, J. and Maughan, B. (2001) "Financial cost of social exclusion: follow up study of antisocial children into adulthood", BMJ 2001 323: 191.

Scott, S., O'Connor, T .and Futh, A. (2006) "What makes parenting programs work in disadvantaged areas? The PALS trial", Joseph Rowntree Foundation.

Scott, S., Spender, Q., Doolan, M., Jacobs, B. and Aspland, H. (2001) "Multicentre controlled trial of parenting groups for childhood antisocial behaviour in clinical practice, BMJ 323:1–7.

Scott, S. (2005) "Do parenting programs for severe child antisocial behaviour work over the longer term and for whom? 1 year follow up of a multi-centre controlled trial", Behavioural and Cognitive Psychotherapy.

Taylor, T. and Biglan, A. (1998) "Behavioural family interventions for improving child-rearing: a review for clinicians and policy makers", Clinical Child and Family Psychology Review 1:41-60.

University of Queensland (2004) "Triple-P Positive Parenting Program", Submission for Technology Appraisal by the National Institute for Clinical Excellence and the Social Care Institute for Excellence, Prepared by Parenting and Family Support Centre, The University of Queensland.

Zubrick, S., Northey, K., Silburn, S., Lawrence, D., Williams, A., Blair, E., Robertson, D. and Sanders, M. (2005) "Prevention of child behaviour problems vs universal implementation of a group behavioural family intervention", Prevention Science Vol 6., No. 4.

Annex 1 Summary of Intervention Studies

A1.1 Methodology

The tables below contain a summary of each of the studies included in the review that directly examine parenting interventions. These are organised by type of intervention, and the 'quality' of the study.

Key to Tables

Type

CE = Cost-Effectiveness

E = Evaluation

M = Meta-analysis

R= Review

Rank

Tier 1 - Qualitative identification of (main) costs and benefits only (e.g. increased participation)

Tier 2 - Quantitative assessment of benefits using subjective outcome measures (e.g. behavioural scales) or using less rigorous methodologies

Tier 3 - Robust non monetary quantification, of main costs and/or benefits (e.g. 4% increase in the likelihood of children aged 16 staying on in full time education)

Tier 4 - Monetary quantification of (main) costs and benefits where possible (e.g. 20,000 more young people staying on where lifetime benefit of staying on is £100,000 per person set against the total policy or initiative costs of £200m).

Table 4: Summary of Intervention Studies - Supporting Family Income

Authors	Year	Intervention	Type	Country	Targeted	Rank	Age of children	Key results
Bainbridge, Meyers, Waldfogel	2003	Childcare Subsidies	E	US	n/a	4	n/a	- $1,000 increase in child care payment has 11%-26% increase in probability of employment of single mother with child under 13 - dollar for dollar greater effects than those associated with tax changes
Blow, Walker and Zhu	2005	Child Benefit	E	UK	Universal	2	n/a	- child benefit disproportionately spent on adult assignable goods - result driven by unanticipated child benefit income
Blundell, Brewer, Shephard	2005	WFTC	E	UK	Working parents	3	n/a	- increased lone parents employment by 3.6ppts - 3.7ppts - effects on mothers with non-working partner of 2.6ppts-4.3ppts, no significant effect where partner worked - for men, 0.5ppts-1.5ppts where partner didn't work, or -1.0ppts to -1.8ppts if they did
Brewer, Browne	2006	WFTC	R	UK	Working parents	2	n/a	- probable that number of adults from workless households gaining employment outweighed those in two-worker households leaving employment
Brewer, Clark, Goodman	2003	Welfare reforms	E	UK	n/a	2	n/a	- statistically significant decline in child poverty in Labour's first term
Brewer, Duncan, Shephard, Suarez	2003	WFTC	E	UK	Working parents	3	n/a	- increased employment of lone mothers by 5.11ppts, reduction in participation of women in couples of 0.57ppts and increase among men of 0.75ppts - fall of 99,000 workless households with children
Brewer, Shephard	2004	Welfare reforms	R	UK	n/a	1	n/a	- mixed effect on financial work incentives - success in reducing worklessness
Chase-Lansdale, Pittman	2002	Welfare reforms	R	US	n/a	1	n/a	- welfare reform has limited effects on parenting - programs with greatest effect have more generous work supports / requirements

Table 4: Summary of Intervention Studies - Supporting Family Income

Authors	Year	Intervention	Type	Country	Targeted	Rank	Age of children	Key results
Clark-Kauffman, Duncan, Morris	2003	Welfare reforms	E	US	n/a	3	n/a	- earnings supplement programs had 8% s.d. positive effect on test scores for children aged 0-5 , other programmes did not - effects insignificant for children above the age of 5 - only earnings supplement programmes had a significant effect on family income ($1,500 - $2,000)
Dolton, Azevdo, Smith	2005	NDLP	E	UK	Unemployed lone parents	3	n/a	- additionality of 14.24ppts fall in exits from benefit (based on flow clients) - 20.45ppts effect on the 'stock'
Evans, Eyre, Millar, Sarre	2003	NDLP	E	UK	Unemployed lone parents	4	n/a	- participation increased exits from benefit to work by 24ppts - economic gain to society of £4,400 per extra job
Francesconi and Van der Klauuw	2004	WFTC	E	UK	Working parents	3	n/a	- 7ppts increase in number of lone mothers working more than 16 hours per week - large anticipation effects prior to start of programme
Gregg, Harkness	2003	Welfare reforms	E	UK	n/a	3	n/a	- of the 11 point rise in rate of employment of lone parents 1992-2002, 5 points can be attributed to policy reform
Gregg, Waldfogel, Washbrook	2005	Welfare reforms	E	UK	n/a	2	n/a	- low income families are catching up - expenditure on child related goods increasing disproportionately quickly
Han, Waldfogel	2001	Childcare Subsidies	E	US	n/a	3	n/a	- potential effects on married women's employment of 3ppts-14ppts - potential effects on single mothers of 5ppts-21ppts
Hasluck	2000	NDLP	R	UK	Unemployed lone parents	3	n/a	- after 18 months 3.3% more lone parents had left Income Support in NDLP areas than comparison areas - marginal cost of £1,000 per additional job

Table 4: Summary of Intervention Studies - Supporting Family Income

Authors	Year	Intervention	Type	Country	Targeted	Rank	Age of children	Key results
Leigh	2005	WFTC	E	UK	Working parents	3	n/a	- no significant participation effects on lone mothers or non-single fathers - 1.6% increase in non-single mothers employment
Magnuson, McGroder	2003	NEWWS-COS	E	US	n/a	2	n/a	- mothers' participation in educational activities had positive effects on child school readiness and academic problems
Morris et al.	2001	Welfare reforms	R	US	n/a	2	n/a	- programmes with earnings supplements had positive effects on children, mandatory employment services had few effects
Sutherland, Piachaud	2001	Welfare reforms	E	UK	n/a	1	n/a	- suggests child poverty will fall by about a third due to measures announced up to 2000

Table 5: Summary of Intervention Studies - Parental Involvement

Authors	Year	Intervention	Type	Country	Targeted	Rank	Age of children	Key results
Baker, Piotrkowski, Brooks-Gunn	1999	HIPPY	E	US	Universal	2	4-6 years	- both in NY and Arkansas, some positive effects on cognitive development in first grade but only in one of two cohorts
Brooks et al.	1997	Family Literacy	E	UK	Geographic	2	n/a	- children maintained basic skills gains over 2 year follow-up period
Evangelou, Brooks, Smith, Jennings	2005	PEEP	E	UK	Geographic	2	0-5 years	- PEEP children made significantly greater progress on cluster of skills related to literacy - PEEP children scored higher on measure of self-esteem at age 5
Hannon	1999	Family Literacy	R	UK	n/a	1	n/a	- claims of family literacy poorly linked to research evidence - in particular no evidence of need for intergenerational aspects
Horne, Haggart	2004	Family Learning	E	UK	n/a	1	n/a	- 45% of parents felt they talked and read more with their children - a third of parents stated their child was doing better at school
Levenstein et al.	1998	PCHP	E	US	At-risk	3	18 years	- participants less likely to drop out of school (15.7% vs 40.0%) and more likely to graduate (84.1% vs 53.9%)
Wade, Moore	2000	Bookstart	E	UK	Universal	3	7 years	- Bookstart children ahead on SATS (teacher assessment and test scores) at Key Stage 1 - e.g. level 2.6 vs 2.1 on reading, 2.5 vs 2 on writing assessments

Table 6: Summary of Intervention Studies - Home Visitation

Authors	Year	Intervention	Type	Country	Targeted	Rank	Age of children	Key results
Barlow et al.	2007	Home visitation	E	UK	At-risk	2	0-2	- few significant positive outcomes of more intensive compared to standard service - the intervention is always more costly, but also more effective - preliminary evidence that society is willing to pay to reduce the incidence of child maltreatment
Bradley, Gilkey	2002	HIPPY	E	US	Universal	2	9 and 12	- modest positive impact on school suspensions, grades, classroom behaviour, and achievement test scores at both ages
Bull, McCormick, Swann	2004	Home visitation	R	n/a	n/a	2	n/a	- evidence of improvements on parenting, cognitive development, some child behavioural outcomes - no or inconclusive evidence of effect on child abuse, immunisation rates or maternal participation in education or workforce
Daro, Harding	1999	HFA	R	n/a	n/a	1	n/a	- preliminary findings suggest programme may have most influence on parent-child interactions - no effects demonstrated on child development or maternal social support
Duggan et al. (multiple studies)	1999 - 2004	HSP	E	US	At-risk	2	2 and 3 years	**Age 2** - successful impact on maternal parenting, maternal use of nonviolent discipline, and number of injuries resulting from partner violence in the home. - no overall positive impact on maternal life skills, mental health, child development, home learning environment or parent-child interaction **Age 3** - programme did not prevent child abuse or promote non-violent use of child discipline or parental risk factors; modest impact on neglect
Elkan et al.	2000	Health visiting	R	n/a	n/a	2	n/a	- evidence of improvements on parenting, home environment and amelioration of child behaviour problems - no evidence of effect on physical development, child illness, maternal return to education, family size or child motor development

Table 6: Summary of Intervention Studies - Home Visitation

Authors	Year	Intervention	Type	Country	Targeted	Rank	Age of children	Key results
Gomby, Culcross, Behrman	1999	Home visitation	R	n/a	n/a	2	n/a	- no home visitation model reflects impressive or consistent benefits on child development and health - several models reflect benefits in parenting, only one reflects rigorous evidence of effect on maternal life course
Kitzman et al.	1997	NFP - Memphis	E	US	Socioeconomic	3	24 months	- no difference in cognitive development, fewer days where children were hospitalised (0.03 vs 0.16) and better pregnancy outcomes (13% vs 20% had pregnancy-induced hypertension) - no significant effects on mothers' educational achievement or length of employment, but fewer subsequent pregnancies (36% vs 47%)
Love et al.	2005	Early Head Start	E	US	Socioeconomic	2	0-3 years	- impacts on children and parents were greater for mixed-approach programs - positive impacts included cognitive development, child behaviour and parent behaviour
Olds et al. ; Korfmacher et al et al.	1999-2002	NFP - Denver	E	US	Socioeconomic	2	2 years	- greater number of significant differences in families visited by nurses rather than paraprofessionals - nurses completed significantly more visits, spent less time per visit and made fewer unsuccessful attempts than paraprofessionals
McAuley et al.	2004	Home-Start	E	UK	Universal	2	0-5 years	- no significant effects on parent stress and self esteem - no significant effects on child social and emotional development
Mitchell-Herzfeld et al.; DuMont et al.	2005 2006	HFA	E	US	Socioeconomic	2	1 and 2 years	**Age 1** - some positive effects on parenting, child behaviour and maternal life course (some limited to particular sub-groups) **Age 2** - programme mothers reported fewer acts of child abuse - young first-time mothers were less likely to engage in minor physical aggression (51% vs 70%)
NESS Team	2005	SSLPs	E	UK	Geographic	2	3 years	- positive effects on parental acceptance at 36 months and household chaos at 9 months - most outcome measures did not show significant effects

Table 6: Summary of Intervention Studies - Home Visitation

Authors	Year	Intervention	Type	Country	Targeted	Rank	Age of children	Key results
								- some adverse effects on certain sub-groups (particularly on children of teenage mothers)
Olds et al. (multiple studies)	1986-1999	NFP - Elmira	E	US	Socioeconomic	3	2,4 and 15 years	**Age 2** - nurse visited children seen in emergency departments 32% fewer times **Age 4** - effect on health care encounters endured (on average 1 visit per child to emergency room compared to 1.5) - positive developmental effects on children of smokers (4 points higher on mental development scale) **Age 15** - greater effects on reports of child abuse than at age 4 (0.29 verified reports vs. 0.54 for the control group) - positive effects on maternal life course and child behaviour for high risk sample only (poor unmarried women) - fewer subsequent pregnancies (1.5 vs. 2.2), fewer months on welfare (60 vs. 90 months) and food stamps (46.7 vs. 83.5) and fewer arrests (0.16 vs. 0.90) - children reported fewer instances of running away (0.24 vs. 0.60), fewer arrests (0.20 vs. 0.45) and fewer cigarettes smoked per day (1.50 vs. 2.50) and had fewer alcohol/ drug problems (0.15 vs. 0.34)
Sweet, Appelbaum	2004	Home visitation	M	n/a	n/a	2	n/a	- 3 of 5 child outcomes and 3 of 5 parent outcomes significantly different from zero - home visitation helps families with young children, but cost-effectiveness undetermined
Wagner et al. (multiple studies)	2001	PAT	E	US	Universal	2	2 and 3 years	**Age 2 (3 sites)** - pattern of small positive effects on parent outcomes - weak effects on child development - only social adjustment showed small positive effects **Age 3 (1 site)** - continued small positive effects on parenting - weak effects on child development
Wasik et al.	1990	Project CARE	E	US	Socioeconomic	2	0-5 years	- home visitation alone did not have any positive effects - positive effects on cognitive performance of home visitation combined with centre-based day care

Table 7: Summary of Intervention Studies - Parent Training

Authors	Year	Intervention	Type	Country	Targeted	Rank	Age of children	Key results
Barlow, Coren, Stewart-Brown	2003	Parent training	M	n/a	n/a	2	n/a	- positive effect on maternal depression, anxiety, self-esteem and relationship with spouse
Barlow, Parsons	2003	Parent training	M	n/a	n/a	2	0-3 years	- positive effects on child behaviour
Coren. Barlow	2001	Parent training	M	n/a	n/a	2	n/a	- positive impact on mother-child interaction, language development, parental attitudes, parental knowledge and maternal self-confidence
Dimond, Hyde	1999	Parent training	R	n/a	n/a	2	n/a	- positive effect on child behaviour and parental well-being - effects sustained in the medium to long term
Dretzke et al.	2004	Parent training	M	n/a	n/a	2	n/a	- effective treatment for treatment of behaviour disorders - some evidence of effectiveness as preventative treatment
Gardner, Burton, Klimes	2006	Incredible Years	E	UK	Children with behavioural problems	2	2-9 years	- positive effects on child behaviour and parenting but not maternal depression - all changes maintained at 18 month follow-up
Harrington et al.	2000	CAMHS	E	UK	Children with behavioural problems	2	3-10 years	- no significant effect of hospital vs community setting in costs or outcomes
Hutchings et al.; Edwards et al.	2007	Incredible Years	E CE	UK	Geographic	4	36-59 months	**Evaluation** - children had significantly reduced antisocial and hyperactive behaviour - reduction in parenting stress and improvement in parenting competencies

Table 7: Summary of Intervention Studies - Parent Training

Authors	Year	Intervention	Type	Country	Targeted	Rank	Age of children	Key results
								- reduction in parenting stress and improvement in parenting competencies - mean difference of 4.4 points on Eyberg child behaviour inventory, and 25.1 on intensity scale (effect sizes of 0.63 and 0.89) **Cost-effectiveness** - cost of £1,344 to return average child to below clinical cut-off point - cost of £4,486 to return highest intensity child to below cut-off point
Ghate, Ramella	2002	YJB	E	UK	Young offenders	2	12-14	- there was no difference in the level of benefit reported by parents who were referred voluntarily compared to those referred by a Parenting Order - parents showed significant positive changes in parenting skills and competencies - in year after programme reconviction rates of young children fell by around a third
Hutchings et al. (multiple studies) Muntz et al.	2002-2004	CAMHS	E CE	UK	Children with behavioural problems	3	2-10 years	**Original (6 months)** - both standard and intensive groups showed improvements in child behaviour, parental practices, mental health - evidence of significant change in maternal mental health for intensive treatment, but not standard treatment **4-year follow-up** - intensive group had significant effects on child behaviour, parental practices and mental health - BDI changed from 15.4 to 8.2 over 4 years - standard group effects were insignificant **Cost-Effectiveness** - no significant difference in cost or effects between intensive and standard treatment - more intensive programme could be said to be cost-effective under certain circumstances
Kumpfer	1998	SFP	E	US	Socioeconomic	3	6-12 years	- combining parenting, children's and family elements had greater effects that individual elements on 3 outcome areas - parenting programme alone benefited parental involvement and discipline behaviour, but harmed family relationships - 5 year follow-up (of entire programme) showed positive results compared to programme with no

Table 7: Summary of Intervention Studies - Parent Training

Authors	Year	Intervention	Type	Country	Targeted	Rank	Age of children	Key results
								family element - over 95% of parents reported improvements in several elements of parenting behaviour (including giving clear directions, rewarding good behaviour and use of consistent discipline)
Lundahl, Risser, Lovejoy	2006	Parent training	M	n/a	n/a	2	n/a	- effects on child behaviour immediately following training programs were small to moderate - parent training least effective for economically disadvantaged families
McCabe, Sutcliffe, Kaltenhaler NICE	2005	Parent training	CE	UK	n/a	4	n/a	- average costs of parent training of £1,279 - in group settings costs of conduct disorder far greater than costs of programmes (see Table 3) - savings of £70 for group-clinic programmes for children with conduct problems - for children with conduct problems 65% chance that programme will be cost saving or cost-neutral
McTaggart, Sanders	2003	Triple P	E	Australia	Universal	3	5-6 years	- schools where parents were offered the programme reported significantly lower levels of conduct problems - more children showed clinical changes on behaviour scale (33% vs. 13% of children with problems)
Mockford, Barlow	2004	Incredible Years	E	UK	Children with behavioural problems	1	3-12 years	- several positive consequences including increased confidence and less stress - also some difficulties in parenting with their partner such as changing established habits and finding time to parent together
Patterson et al.	2002	Incredible Years	E	UK	Children with behavioural problems	2	2-8 years	- reductions in child behaviour problems compared to the control group
Scott et al.; Scott	2001 2005	Incredible Years	E	UK	Children with behavioural	2	3-8 years	**Original (5-7 months)** - positive effect on child behaviour and parenting **1-year follow-up**

Table 7: Summary of Intervention Studies - Parent Training

Authors	Year	Intervention	Type	Country	Targeted	Rank	Age of children	Key results
					problems			- original improvement in the intervention group was maintained - children with most severe problems benefited the most - at risk factors (such as low income) did not reduce the effectiveness of the treatment
Scott, O'Connor, Futh	2006	SPOKES	E	UK	Children with behavioural problems	2	4-6 years	- positive effects on parenting (inc. sensitivity and child-centred parenting) - positive effects on child concentration but not antisocial behaviour or reading
Zubrick et al.	2005	Triple P	E	Australia	Geographic	2	3-4 years	- significant reductions in child behaviour problems and parental outcomes

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