

EARLY YEARS

KNOWLEDGE REVIEW 1

Narrowing the gap in outcomes for young children through effective practices in the early years



Centre for Excellence and Outcomes in Children and Young People's Services

The Centre for Excellence and Outcomes in Children and Young People's Services (C4EO) identifies and coordinates local, regional and national evidence of 'what works' to create a single and comprehensive picture of effective practice in delivering children's services. Using this information, C4EO offers support to local authorities and their children's trust partners, working with them to improve outcomes for children, young people and their families.

It is focusing its work on eight national themes identified in Every Child Matters:

- Early Years
- Disability
- Vulnerable/Looked-after Children
- Child Poverty
- Safeguarding
- Schools and Communities
- Youth
- Families, Parents and Carers.

In addition to the above themes, C4EO is also undertaking a piece of work looking at early intervention, prevention and integrated delivery.

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The Centre is also supported by a number of strategic partners, including the Improvement and Development Agency, the Family and Parenting Institute, the National Youth Agency and the Institute of Education.

There is close and ongoing cooperation with the Association of Directors of Children's Services, the Local Government Association, the NHS Confederation, the Children's Services Network, the Society of Local Authority Chief Executives, Ofsted and the regional government offices.

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Misia Coghlan

Caroline Bergeron

Karen White

Caroline Sharp

Marian Morris

Rebekah Wilson

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Written by Misia Coghlan, Caroline Bergeron, Karen White, Caroline Sharp, Marian Morris and Rebekah Wilson

This report is available online at www.c4eo.org.uk

**Centre for Excellence and Outcomes in Children and Young People's Services
(C4EO)
8 Wakley Street
London
EC1V 7QE
Tel 020 7843 6358
www.c4eo.org.uk**

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Summary

This knowledge review tells us what works in narrowing the gap in outcomes for young children through effective practices in the early years. It is based on a rapid review of the research literature involving systematic searching, analysis of key data, validated local practice examples and the views from both people using services and service providers. It summarises the best available evidence that will help service providers to improve services and, ultimately, outcomes for children, young people and their families.

The National Foundation for Educational Research (NFER) carried out this review on behalf of the Centre for Excellence and Outcomes in Children and Young People's Services (C4EO). NFER also conducted the data analysis.

Key messages

- Poverty has the greatest influence on children's outcomes in the early years. It affects at least 2.9 million children and young people in the UK – particularly those from Pakistani and Bangladeshi backgrounds. Poverty can lead to poor health and poor academic progress (especially communication, language and literacy; mathematical development; and personal, social and emotional development). A joined-up approach to tackling child poverty is crucial (see Chapters 5 and 7).
- Providing support for children and families whose first language is not English is also vital. Poverty and English as an additional language (EAL) needs are the root cause of most of the associations between ethnicity and child outcomes. Few attainment differences between ethnic groups remain at age five, and none remain at age seven, once these factors are considered (see Chapters 4 to 7).
- Developing strategies to help parents engage in their children's learning and development, as well as their own education, is important. A positive home learning environment (HLE) can help counter the effects of poverty on children's learning and development throughout the early years. A good level of education among mothers (especially having a degree) can also help to achieve this (see Chapters 4, 5 and 7).
- Attending pre-school can have a positive impact on children's academic and social development – a benefit that can be sustained into later schooling. Attendance can be particularly helpful for children from poorer socio-economic backgrounds and for those for whom English is not their first language. Early years interventions can narrow the gap between disadvantaged children and other children in terms of their cognitive development, as well as their social and behavioural development (see Chapters 5 and 7).
- The quality of early years provision is important. High-quality early years provision has been found to have a positive impact on the cognitive and social development of young children and to impact on their later learning (see Chapter 7).

Who are the key stakeholders?

- children aged under five
- parents/carers of the under-fives
- providers and staff working in early years settings (maintained, private, voluntary and independent) including children's centres, Early Years centres, nurseries, schools and playgroups, and other childcare providers
- local authority early years and childcare services, including health and social care professionals
- specialist frontline professionals (for example, health, family and ethnic minority service providers)
- policy-makers.

Key stakeholders' contributions are valuable in the process of improvement

- Children aged under five require supportive learning environments that are sensitive to their needs, culturally relevant and support them in making the transition from pre-school to mainstream education. This is particularly important for poor children and those with language difficulties.
- Parents/carers of the under-fives can play a vital role in their children's learning and well-being through creating a positive HLE.
- Staff working in early years settings, as well as early education and childcare providers, can make a real difference to children's outcomes by ensuring that provision includes sufficient free-play time and targeted literacy and language support. Staff need training to support children with EAL, engage in 'sustained shared thinking' with children and to encourage parents to provide effective HLEs.
- Local authority early years and childcare services need to engage in culturally sensitive outreach/family support to ensure that all children, especially those living in poverty, take up pre-school places. They can also introduce systems for assessing, monitoring and supporting children's development. Working with other services such as housing, community development and policing is also necessary to provide secure schools and neighbourhoods where poor children feel safe and are able to fulfil their potential.
- Specialist frontline professionals have a particular role to play in narrowing the gap in outcomes for young children, for example, through welfare and English language support.
- Policy-makers have committed to eradicate child poverty by 2020. It is crucial that they both heighten awareness of the learning and development needs of the under-fives within this agenda and create an infrastructure through which the needs of vulnerable children and their families can be addressed.

What data is available to inform the way forward?

The quality of national data relevant to narrowing the gap in outcomes for young children has improved. However, the datasets do not adequately capture details of young children's enjoyment and happiness (in and out of school) as well as other issues that are listed as evidence-base gaps below.

National datasets relevant to narrowing the gap for children from birth to five year olds include:

- Department for Children, Schools and Families (DCSF) data on Foundation Stage Profile results
- DCSF data on numbers of three- and four-year-olds accessing the free entitlement to childcare
- Office for National Statistics data on birthweight
- Department of Health data on obesity of children in reception year and the prevalence of breast-feeding at six to eight weeks from birth
- Households below average income data on child poverty.

The evidence base

Research relating to narrowing the gap in outcomes for young children through effective practice in the early years has increased considerably over the past decade. The quality of national data on outcomes enables a comparison between the characteristics of children who do well and those who do less well. Although there is a growing body of information regarding the impact of national and regional initiatives, there is, however, still a need for:

- more evidence from national indicators on young children's enjoyment
- a greater range of evidence on children's emotional and social development, including the evaluation of initiatives designed to improve sociability, wellbeing and resilience
- a closer examination of the mechanisms – in addition to the HLE – that cause poverty to have such a pervasive impact on outcomes for young children
- a focus on children's experiences, including collecting children's own views and experiences
- research investigating effective practice for improving children's outcomes within childminding
- studies of the impact of approaches designed to improve outcomes for children from diverse backgrounds.

Knowledge review methods

This knowledge review is the culmination of an extensive knowledge-gathering process. It builds on a scoping study and research review, both of which are available on the C4EO website.

Research literature was identified through systematic searches of relevant databases and websites, recommendations from the Theme Advisory Group (a group of experts in early years policy, research and practice) and 'reference harvesting' (considering studies cited in identified literature). The review team used a 'best evidence' approach to systematically select literature of the greatest relevance and quality to include in the review. This approach attempts to eliminate bias in the selection of literature to ensure that the review's findings are as objective as possible.

Data contained within the review was obtained by a combination of search methods but primarily by obtaining online access to known government publications and access to data published by the Office for National Statistics. The NFER also conducted an analysis of Foundation Stage Profile data of children who reached the end of the Foundation Stage in 2007 and 2008, using a statistical technique called multi-level modelling. This enabled the comparison of the impact of certain background characteristics (including ethnicity and level of deprivation) on the level of achievement, when other background characteristics were taken into account.

The review also contains examples of local practice sent in from the sector, which have been assessed and validated by specialists in early years as part of an ongoing process to gather evidence-informed local practice. Evidence has also been gathered from service providers during discussion groups at C4EO knowledge workshops, while evidence from people using services was collected from C4EO's parents and carers' and children and young people's panels.

1. Introduction

This review aims to draw out the key ‘what works?’ messages in narrowing the gap in outcomes for young children in the early years. It addresses three questions that were set by the C4EO Theme Advisory Group (TAG), a group of experts in early years policy, research and practice. The questions are:

1. What is the evidence of different outcomes for children from diverse backgrounds and with different characteristics (for example, in terms of their cultural background, ethnicity, language, poverty/deprivation and other relevant factors)?
2. In what ways do early years learning environments impact on a child’s sense of identity and understanding of diversity?
3. What is the evidence to support specific approaches that help children from all backgrounds and with diverse characteristics to access the curriculum and make good progress in the early years?

The review is based on:

- the best research evidence from the UK – and where relevant from abroad – on what works in improving services and outcomes for children and young people
- the best quantitative data with which to establish baselines and assess progress in improving outcomes
- the best validated local experience and practice on the strategies and interventions that have already proved to be the most powerful in helping services improve outcomes, and why this is so
- service user and provider views on ‘what works?’ in terms of improving services and outcomes.

C4EO will use the knowledge review to underpin the support it provides to children’s trusts to help them improve service delivery and, ultimately, outcomes for children and young people.

Definitions of key terms

The following definitions were agreed by the Theme Advisory Group:

- **Early years learning environments** – all forms of group provision available for children aged seven years and under outside of their homes. Childminding was not searched for, but consideration was given to all types of early childhood settings (including childminding) that emerged when searching the literature.

- **Inclusion** – a process of identifying, understanding and breaking down the barriers to participation and belonging – this definition was developed by the Early Childhood Forum in 2003 (National Children's Bureau 2008).
- **Outcomes** – broadly related to the five Every Child Matters outcomes (i.e. be healthy, stay safe, enjoy and achieve, make a positive contribution and achieve economic well-being).
- **Curriculum** – the content of activities and interactions experienced by children in early years environments. These may be adult- or child-initiated, and extended by adults for learning and development. The definition also includes aspects of the environment, equipment and materials used for learning.

The review considered children between birth and seven years of age, although some longitudinal studies extending beyond this age range were included.

Types of evidence used

The research included in this review was identified through systematic searching of key databases, reference harvesting or recommendations from the TAG. All research included has been appraised to ensure that the evidence presented is the most robust available.

The review also contains examples of local practice that have been gathered from the sector and assessed by specialists in the early years as having a positive impact on outcomes (see Appendix 3 for C4EO's validated local practice assessment criteria).

Evidence has also been gathered from service providers during discussion groups at C4EO knowledge workshops (events at which the authors presented findings from the Early Years main reviews). Meanwhile, evidence from parents and carers has been collected via the C4EO panel run by the Family and Parenting Institute and from children and young people through the panel run by the National Children's Bureau. The National Children's Bureau also carried out interviews with parents, staff and children at a nursery school and with young parents involved in the Young Peoples Project <http://www.youngpeoplesproject.com/home.html>.

Strengths and limitations of the view

Strengths of the review include:

- identifying the best available evidence from research and national datasets to inform specific questions
- comprehensive and documented searching for relevant information
- an analysis of the quality and strength of evidence
- guidance from an advisory group on the issues of greatest importance in early childhood research, policy and practice.

Limitations of the review include:

- the very tight deadlines that the review had to meet, which limited the ability of the team to extend and develop the evidence base through reference harvesting and hand searching
- the fact that the review was limited to English-speaking countries only.

2. Policy context

The *Ten-year strategy for childcare* (HM Treasury *et al* 2004) states that flexible, high-quality childcare should be made affordable to all families. Providing the right childcare and support in the early years plays a crucial role in reducing disadvantage and promoting positive outcomes. However, the data shows that gaps in outcomes between different groups of children are already in place by the early years. There have been a number of recent policy developments designed to help narrow this gap in outcomes. Some of these developments, of particular relevance to this review, include:

- The *Children Act 2004* (England and Wales. Statutes 2004) places an early years outcomes duty on all local authorities. Each authority is required to address the gaps in achievement between different groups of children at the end of the Foundation Stage.¹
- The *Childcare Act 2006* (England and Wales. Statutes 2006) creates a further duty on local authorities to improve the five Every Child Matters outcomes for all children in their locality and to reduce inequalities between them. Local authorities also have a duty to ensure that enough childcare is available to meet the needs of parents locally. Local authorities are to work in partnership with their strategic health authority, primary care trust and Jobcentre Plus to achieve this goal.
- Sure Start has been a vital part of the Ten-year Childcare Strategy. Sure Start children's centres have changed the way services are offered to young children and their families, aiming to improve outcomes for all children. Originally designed to support children and their families in the most disadvantaged areas, Sure Start continues to help the poorest children access childcare provision and early learning (see Chapter 7). The policy goal now is that by 2010, every community should be served by a Sure Start children's centre, ensuring that every child gets the best start in life.

January 2009 saw an update of the *Ten-year strategy for childcare* with *Next steps for early learning and childcare* (HM Government 2009). It built on recent achievements in early learning and childcare and set out proposals for further action together with areas for discussion and consultation. The long-term policy goal is that at least 90 per cent of five-year-olds should develop well across all areas of the Foundation Stage Profile by 2020.

Early 2009 also saw the Government announce its intention to legislate and therefore fulfil its commitment to end child poverty by 2020, through the consultation paper *Ending child poverty: making it happen* (HM Treasury 2009). A Child Poverty Bill is making its way through the parliamentary processes [at the time of writing]. The Bill places a new duty on local authorities and their partners to cooperate to reduce child poverty in their area.

In relation to narrowing the gap in outcomes for disadvantaged children, a key policy commitment has been to provide free early learning and childcare places to 15 per cent of the most economically disadvantaged families with two-year-olds in every local authority

¹ The Early Years Foundation Stage (EYFS) became a statutory requirement from September 2008. It brings together: *Curriculum guidance for the foundation stage* (2000), the *Birth to three matters* (DfES 2002) framework and the *National standards for under eights daycare and childminding* (DfEE 2003), building a coherent and flexible approach to care and learning. All providers are required to use the EYFS to ensure that whatever setting parents choose, they can be confident that their child will receive a quality experience that supports their development and learning.

by September 2009, with the long-term ambition to provide such provision for every two-year-old whose parents want such a place. All three- and four-year-olds are entitled to 12.5 hours per week – rising to 15 flexible hours from September 2010 – of free early learning for 38 weeks of the year. The extended entitlement has been, since September 2009, available to the 25 per cent most deprived children in every local authority.

Beyond this, the Next Steps document emphasises the importance of empowering families. The areas needing development include:

- helping families to support children (taking better account of families' needs, extending flexible working and reviewing parental leave, commissioning new research in this area)
- creating more flexibility in the free entitlement for two- to four-year-olds and increasing after-school options for children from the age of five
- making information for parents more comprehensive and easier to compare (both with respect to affordability and quality)
- giving simple and fair financial support to families.

More broadly, the continuing commitment to eradicating child poverty in the UK – as set out, for example, in the 2008 report *Ending child poverty: everybody's business* (HM Treasury *et al* 2008) – and the 2009 Child Poverty Bill, provide the driving force for improving the life chances of those from deprived backgrounds and narrowing the gap in outcomes from the earliest years.

3. The evidence base

This section provides an overview of the extent of the evidence base. The evidence base for this knowledge review consists of five main sources:

- A literature review updating the research review (Coughlan *et al* 2009) with new references as suggested by the Theme Advisory Group (TAG).
- Validated local practice gathered from specialists in the early years sector and assessed by an expert panel as having a positive impact on outcomes.
- Stakeholder views gained through the Centre for Excellence and Outcomes in Children and Young People's Services (C4EO) organised group discussions about key issues affecting children's learning in the early years – including the views of parents, carers and, separately, local service providers.
- Data from national datasets, including data from known government publications and data published by the Office for National Statistics.
- Analysis of Foundation Stage Profile data of children who reached the end of the Foundation Stage in 2007 and 2008.

The TAG nominated references for inclusion in the literature review that either helped to fill gaps identified in the previous research review (Coughlan *et al* 2009) or related to studies published after the review. These references were assessed by the review team for relevance, and the resulting new references were incorporated into the review. In total, 56 references relating to the three research questions were included in the literature review, incorporating the following updates:

- six new references were included in answer to the first review question
- one additional reference was included in answer to the second review question
- ten new references were included in answer to the third review question.

In addition, five new references were incorporated into the review relating to the policy context.

Two studies were particularly important to all three questions in this review, namely: the Effective Provision of Pre-School Education (EPPE) study and the National Evaluation of Sure Start (NESS). These studies are well designed and comprehensive, and use high-quality measures and sophisticated analysis.

- EPPE is a large-scale study of the progress of approximately 2,800 children through pre-school and primary school. It has assessed children at different ages using a variety of research approaches.
- NESS has provided a very comprehensive evaluation of Sure Start local programmes, focusing on a sample of 5,883 children and comparing their outcomes to children not living in Sure Start areas.

Most of the sources of evidence for Question 1 were either recommended by the TAG, or drawn from national datasets. Information for this question was fairly comprehensive and robust. The inclusion of three sources of evidence relating to young children's safety has addressed an evidence gap that had been identified in a previous stage of this review.

The evidence for Question 2 was drawn from mainly small-scale qualitative studies, using methods such as observations and interviews. Such studies were considered by the team to be best suited to understanding the experiences, views and feelings about the impact of the early years environment of children from different backgrounds. However, the evidence was somewhat thin in places.

A wide range of research methods was used in the studies reviewed in relation to Question 3, including both large- and small-scale studies. A number of studies combined quantitative and qualitative methods, offering robust and holistic insights.

Strengths of the review include:

- identifying the best available evidence from research and national datasets to inform specific questions
- comprehensive and documented searching for relevant information
- an analysis of the quality and strength of evidence
- guidance from an advisory group on the issues of greatest importance in early childhood research, policy and practice.

Limitations of the review include:

- the very short time in which this review was carried out, which limited the ability of the team to further extend and develop the evidence base
- searches were limited, particularly for the second review question. Time was limited for reference harvesting and hand searching
- the original search strategy was not explicitly organised around the five Every Child Matters outcomes, although the evidence on outcomes is presented this way
- the review was limited to English-speaking countries only.

Although all of the evidence was assessed for robustness of design, some quantitative studies do not provide insights into the causes of the findings and some of the qualitative studies provide limited evidence of effectiveness. It was difficult to relate the research findings on successful interventions for children with diverse characteristics to the evidence on children's sense of identity and understanding of diversity.

The review highlighted a numbers of areas that would benefit from more data and further research. These include:

- more evidence from national indicators on young children's enjoyment and safety
- a greater range of evidence on children's emotional and social development, including evaluation of initiatives designed to improve sociability, well-being and resilience
- a closer examination of the mechanisms, in addition to the home learning environment, that cause poverty to have such a pervasive impact on outcomes for young children
- a focus on children's experiences, including collecting children's own views and experiences
- research investigating effective practice for improving children's outcomes within childminding.
- studies of the impact of approaches designed to improve outcomes for children from diverse backgrounds.

4. What do people using services and service providers tell us about what works?

The experiences of parents and carers and those providing services to children and their families have much to add to our knowledge of ‘what works’ in narrowing the gap in outcomes for young children through effective practice in the early years. However, it is important to remember that this section is drawn from group discussions with parents and carers and, separately, with local service providers to discuss key issues affecting children’s learning in the early years. It is therefore based on their experiences and opinions rather than the research evidence on which the rest of this review is based.

Three main messages emerge from the conversations:

- Good communication with parents, and enabling them to access information, has a crucial role to play in supporting children’s learning and development.
- Greater integration and partnerships between all early years service providers, particularly health providers, is needed to support children’s learning and development.
- A more strategic approach, including better alignment of initiatives and longer-term funding, is necessary if children are to reach their potential.

Views from people using services

The Centre for Excellence and Outcomes in Children and Young People’s Services (C4EO) panel of parents and carers gave their feedback on learning for young children. They were also asked to discuss their views on the quality of their local services for children’s early learning and development, as well as the kinds of support they would find most useful. In-depth interviews with parents, staff and children were also carried out at one nursery school in Kent.

The home learning environment

The home learning environment (HLE) is a measure of the extent to which parents take part in learning environments with their children (see Chapter 5). A positive HLE helps to foster good habits and openness to learning. Children with poorer HLEs fall behind. However, parents said that the importance of the activities that contribute to the HLE needs to be made clearer to parents. They suggested that better communication and information from early years professionals would help to achieve this.

Parents mentioned that problems can arise when parents lack the knowledge to do the best for their children and said they need to be encouraged to seek support and help. Home visiting by those who understand both young children’s learning and how to build relationships with parents was considered a very powerful tool in achieving this. It was also said that schools need to work harder to encourage a high-quality HLE.

Views of parents of young children on services

Parents and carers' views on the quality of pre-school and early learning services for children in their localities were mixed. Some areas were said to have a wide range of services but these were often over-subscribed and quality was said to be patchy. Moreover, many valuable projects are rolled out on short-term funding and parents felt such projects might be vulnerable, due to an over-reliance on service provision from the voluntary sector and parents.

Parents highlighted the need for confidence-building, parenting courses, and better and earlier promotion of the services and facilities available locally. They remarked upon not always being sure where to go for this information. Parents also asked for more feedback from early years professionals, particularly about problems or concerns with their children.

Parents who felt supported and listened to, gave positive feedback. For example, when describing her child's nursery, one mother said: 'We as parents are always very welcome, and there are other courses that are run here that parents are invited to and you can meet other parents to bounce ideas off... People who work here listen to us and as a result we change how things are done here, so that it fits better. But anywhere else I have not been asked, ever.'

Providing more flexible services, for example, extended schools and wraparound care, was another area where parents and carers felt more could be done to support their parental roles.

Young parents, in particular, may need clearer and more accessible information on how best to support their child's learning and development needs. For example, one young mother said she would appreciate help with the transition from nursery to primary school, saying: 'I have personally looked for information on it [transition] and have found a small booklet that's very vague ... It does not say what you do or where you go.'

Children's views

Children's comments showed that they valued friendships with staff and other children and liked having a wide variety of activities to choose from. Like adults, children appreciated having staff who listen to them and take account of their views. Even very young children have strong opinions and are capable of giving feedback about services, as one nursery child said: 'They [nursery staff] always play with me and love me. If they did not want to play with me, that would be a bad adult. If they didn't listen to me, that would be bad too.'

Views of service providers

C4EO held nine regional workshops to discuss the findings from an earlier version of this review. Local service providers were asked to identify the key strategic issues for their areas in terms of the research evidence described in the previous C4EO review. They were also asked to discuss the opportunities or 'levers' available to them to make an impact. In addition (as mentioned above), staff at one nursery school also provided in-depth feedback on what they felt was effective practice in their work.

The key importance of joined-up working

The role played by health services – and the need to integrate this field of work within early years partnerships – recurred as a key strategic issue in regional workshops with local practitioners. Health visiting is a universal service: health visitors have very early contact with all families and their role in detecting early support needs and working with other early years services could be further developed. This would improve targeting and outreach work, for example, in identifying pockets of deprivation that might otherwise remain hidden.

More generally, health visiting services have an important role to play in improving the HLE and services providers said there needs to be greater clarity and purpose about home visitors' respective roles.

Sharing health data with other service providers was said to be critical. There was a call for more consistency across local authorities with regard to sharing information and datasets across early years services.

Engaging with childminders and linking them to local partnerships was highlighted by service providers in many regional discussions. Service providers in the workshops said that bringing different groups of early years workers together (such as childminders, extended school teams, Early Years Foundation Stage workers) made a real difference to young children's outcomes.

Strategic approaches to young children and their families

When asked about opportunities or levers available to local practitioners, some service providers highlighted *Every child a talker* (DCSF 2008b, 2009c) and the *Early education pilot for two year old children* (Smith *et al* 2009a), as being particularly helpful initiatives. One workshop participant reported that her local authority had used the latter as the basis for training. Case studies from *Narrowing the gap* (LGA 2008) were referred to as 'incredibly powerful' by one participant.

Many of those commenting wanted more strategic approaches and funding. This included the need to sustain initiatives over a period to allow sufficient time for impact. Related to this was the need for longer-term funding because, as one provider said, 'How do you ensure these initiatives/activities get embedded when the funding dries up?'

There was also a feeling among providers that initiatives were not always sufficiently aligned or coordinated and that the process of linking services (for example, education and health) needed further development in many areas.

Some service providers said the most effective way of working was to adopt a more strategic approach – using shared wisdom and experience – and to build upon existing work and good practice. For example, in one authority, the managers of children's centres used case studies to assess the impact of their provision on certain children and discussed these at their monthly meetings.

Moreover, some service providers said that better staff training was needed to improve the quality of early years provision; they also requested better methods of measuring the impact of provision for young children. These sentiments were echoed across all regions.

Nursery staff views

The link between home and pre-school settings was seen as very important by nursery teachers. They spoke of the need to acknowledge openly children's experiences at home. One teacher said: 'We talk to the children, talk about their home lives and try and make links with home.'

This particular nursery had a very diverse intake, with 40 per cent of children from another country and speaking English as a second language. The headteacher explained her approach as follows: 'We first of all try and find out where they are from and what languages they speak. Every child is different and regardless of where they come from and regardless of their background you have to treat each child as [an] individual and you have to accommodate whatever their needs are.'

A teacher gave a specific example of her work in this area: 'There is a little girl who has just started talking and I am very proud because I did it with her [...] I think just giving them that extra special time and making them feel appreciated and wanted in the nursery and using some of their first language – learn it from the parents – that builds their confidence. It makes that link between the child, the home and the school.'

The importance of giving parents information to build their confidence was also acknowledged. As one teacher said: 'We have open sessions here with social workers, health workers. We look at the needs of parents and see if there is anything we can put together.'

5. What does the evidence tell us about outcomes for young children from different backgrounds?

Evidence presented in this section is drawn from large-scale surveys and datasets. The research team focused on data collected in England wherever possible, but also used data from the UK. Two key sources were the Millennium Cohort Study (MCS) and the Effective Provision of Pre-School Education (EPPE) project. The MCS is a longitudinal study of a sample of 18,818 children born in the UK in the year 2000/01. It provides evidence on children aged nine months to five years (Hansen and Joshi 2008). The EPPE study is described in Chapter 3.

Both the MCS and the EPPE studies are high-quality, comprehensive and large-scale programmes of research following a cohort of children over time. They sampled higher proportions of children living in poverty and from minority ethnic backgrounds than are present in the general population. This ensures that there are sufficient numbers in each group to provide robust statistical analyses of the influence of different background characteristics. We also drew on national statistics and conducted some additional analysis of the Foundation Stage Profile (FSP).

We have interpreted the term ‘different backgrounds’ broadly, to include children’s ethnicity, language, poverty/deprivation and other relevant factors such as maternal education. We have not focused on differences in children’s outcomes related to individual characteristics, such as a child’s sex, relative age or special educational needs (SEN).

Summary of Every Child Matters outcomes for young children from different backgrounds

We examined the achievement of children with different characteristics in relation to the five Every Child Matters (ECM) outcomes.

- For **economic well-being**, we examined child poverty data. In 2007/08, just under a quarter of children and young people in the UK were living in poverty (before housing costs).
- Children from black and minority ethnic (BME) families are at high risk of living in poverty. For example, whereas 25 per cent of white children are living in poverty (after housing costs), 61 per cent of Pakistani and Bangladeshi children and young people are affected.
- There is much information about children’s **achievement**, but none on enjoyment. Children’s achievement is influenced positively by their mother’s level of education and negatively by living in poverty. Children whose mothers have degrees do better throughout pre-school and primary school than children whose mothers do not.
- Socio-economic status (SES) has a strong influence on children’s attainment throughout the early years. Children from lower SES backgrounds make less progress throughout pre-school.

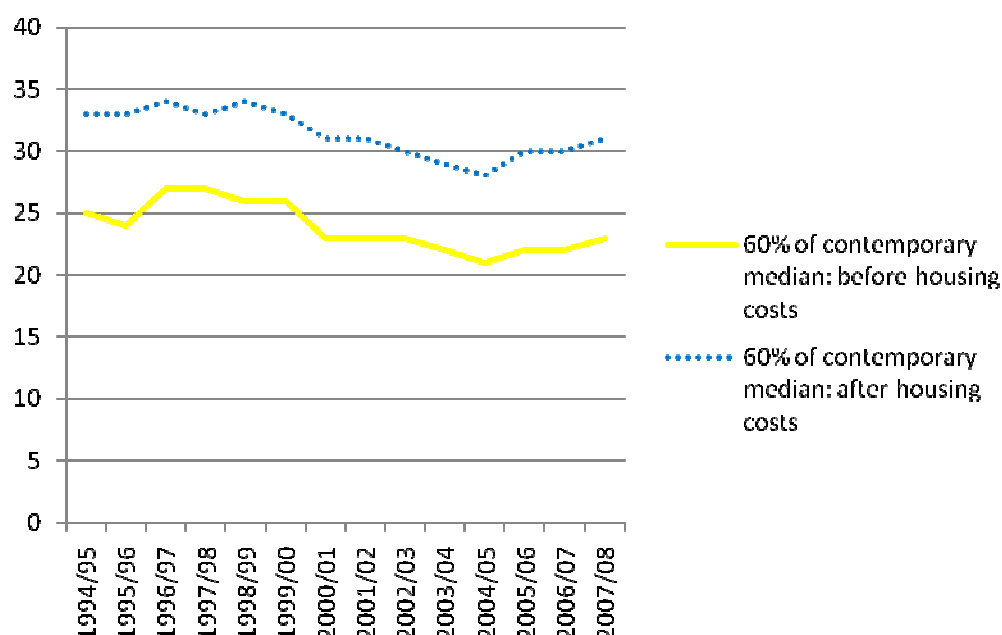
- Young children who speak English as an additional language (EAL) do less well, especially in tests of verbal skills. Children with EAL perform better in non-verbal tests. The gap reduces between the ages of three and seven as children's fluency in English improves.
- Ethnicity is associated with a few differences in early literacy and numeracy achievement up to age five. Most apparent differences between children from different ethnic groups are due to poverty and EAL.
- The home learning environment (HLE) has a greater influence on a child's intellectual and social development than parental occupation, education or income. What parents do is more important than who they are, and a home environment that is supportive of learning can counteract the effects of disadvantage in the early years.
- Young children's **health** is negatively affected by living in poverty. Living in poverty is associated with a low birthweight, suffering from poor general health and specific health conditions (such as speech and eyesight problems). There is a complex pattern of differences in health outcomes for children from different ethnic groups.
- The evidence on **staying safe** suggests that young children's safety is negatively related to living in poverty.
- The evidence on **making a positive contribution** is based on staff assessments of children's social behaviour. Sociability and independence are positively associated with the quality of the HLE. They are also related positively to a mother's level of education and negatively to living in poverty.
- More negative behaviours are associated with living in poverty and having a younger mother.
- There were stronger negative relationships between staff ratings of children's behaviour and EAL than ethnicity at ages three and five. There was no association between EAL and negative behaviour at age seven.

Achieving economic well-being

In 1999, the government set a target of ending child poverty by 2020: with an interim target of halving child poverty by 2010. Progress towards meeting this target is shown in Figure 1. It includes the proportion of children² in poverty in the UK (defined as 60 per cent of the median household income) both before and after taking account of housing costs.

² A child is defined as an individual aged under 16, or an unmarried 16- to 18-year-old in full-time education.

Figure 1. Trends in the proportion of children living in poverty, 1994/95–2007/08



Source: Adams *et al* 2009³

Figure 1 shows that in 2007/08 just under a quarter (23 per cent) of children in the UK were living in poverty (using the measure before housing costs, which is the measure used for official targets). This represents 2.9 million children (Adams *et al* 2009). Child poverty has decreased by 500,000 children (17 per cent) since 1998/1999, when the target was set. However, the number of children living in poverty has risen slightly since 2004/05 (when child poverty reached its lowest level since 1987).

Taking 2007/08 as the starting point, a further 1.2 million children would have needed to have been lifted out of poverty for the 2010 target to be met. This would have meant reducing the number of children in poverty by 400,000 per year for the following three years (in comparison with an average reduction of 60,000 per year achieved over the past nine years) (Brewer *et al* 2009).

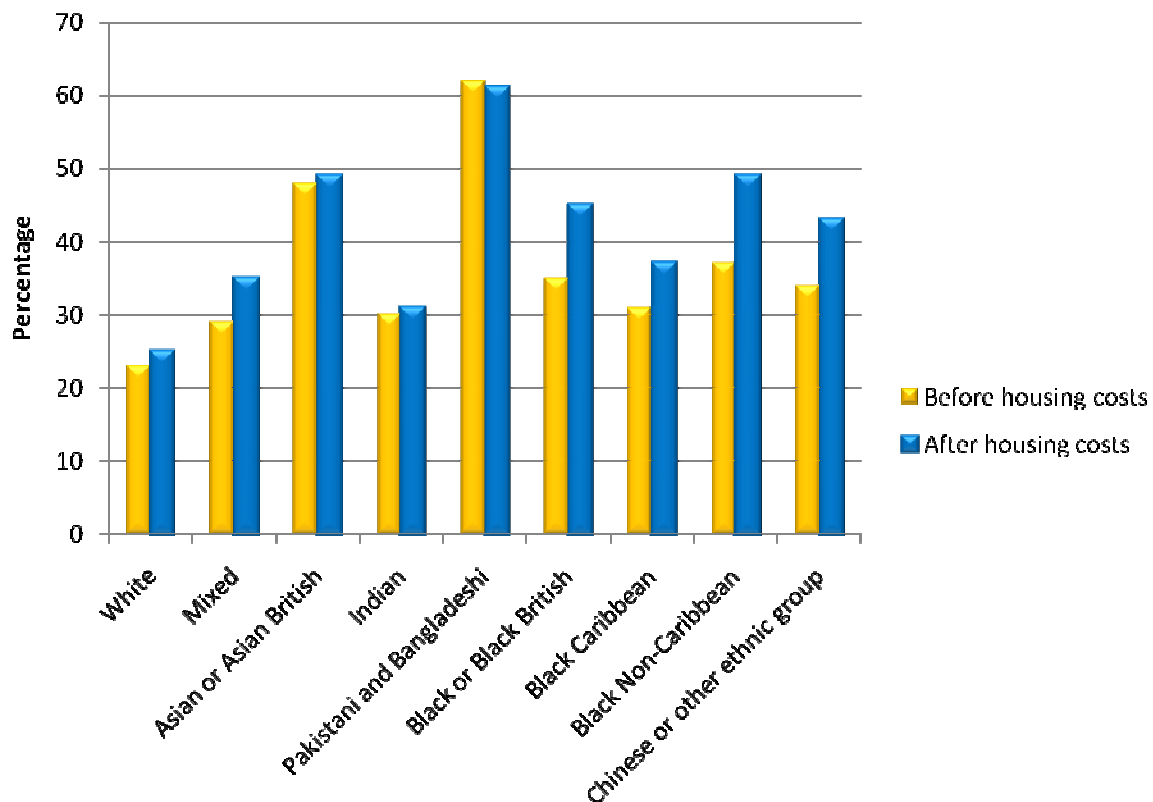
The government targets are based on the definition of poverty before housing costs. As housing costs represent a large proportion of the income of poor families, the number of children in poverty in the UK in 2007/08 jumps to 4 million (around 31 per cent of all children) once housing costs⁴ are taken into account. This represents an increase of 100,000 children since 2006/07, and is statistically higher than the number of children living in poverty in 2004/05, reflecting an upward trend in child poverty (Brewer *et al* 2009).

³ Data from 1998/99 onwards is for the UK, earlier data is for Great Britain with estimates for Northern Ireland imputed for the years 1998/99 to 2001/02

⁴ Housing costs include rent, mortgage payments and community/council water charges, but not power or community charges.

Children from minority ethnic families are particularly likely to be living in poverty, as shown in Figure 2.

Figure 2. Children living in low-income households by ethnicity in 2007/08, United Kingdom



Source: Adams *et al* 2009

Figure 2 shows that Pakistani and Bangladeshi children are at a particularly high risk of living in low-income households. After housing costs, 25 per cent of white children were living in low-income households in 2007/08. In contrast, the majority (61 per cent) of Pakistani and Bangladeshi children were living in low-income households. There were also high proportions of children from other BME backgrounds living in low-income families, including children from black non-Caribbean families (49 per cent) black or black British (45 per cent) and Chinese and other ethnic groups (43 per cent).

Income effects in early childhood tend to be greater than effects in late childhood. An increase in family income between the age of nine months and three years is associated with a small positive effect on educational progress and behaviour (Plewis and Kallis 2008).

Enjoying and achieving

There is more evidence available on enjoyment and achievement than for any of the other four ECM areas. However, the team was unable to find any national statistics on young children's enjoyment (relating to aspects such as enjoying school and recreation) so the evidence in this section is exclusively related to children's achievement.

There is evidence on young children's achievement in terms of their performance in teacher assessment and tests, including the FSP, Key Stage 1 national curriculum assessments and other cognitive tests. Cognitive tests measure skills such as literacy and numeracy, and non-verbal reasoning skills.

Family background

Family background has an influence on children's achievement throughout the early years. Achievement is influenced positively by the mother's level of education and negatively by living in poverty. Children's achievement in the early years is also influenced if they are using English as an additional language.

Children who are born extremely preterm (i.e. 25 weeks or earlier) are at high risk of poor attainment in school, particularly in mathematics. One study of premature babies found that by the age of 11, half of the children who were born extremely pre-term were rated as having below average attainment by their teachers, compared with only 5 per cent of their classmates (Johnson *et al* 2009). Mathematics attainment at age 10 is also affected by low birthweight and lower parental education, occupation and income status. On the other hand, better mathematical skills were linked with the quality of the learning experienced in the home, pre-school and primary school (Melhuish *et al* 2008).

Of all of the background characteristics, maternal education is the most influential in determining children's achievement in the early years. The EPPE research team found that a mother's education, as measured by her highest qualification, is a very powerful predictor of achievement for her children from ages three to seven (Sammons *et al* 2004). Young children whose mothers have degrees do better than children whose mothers do not. Sylva *et al* (2008) also found that the mother's education had a powerful influence on children's later attainment in Key Stage 2 national assessments, when they reached the age of 11.

Poverty has a negative influence on children's academic achievement throughout the pre-school years (Sylva *et al* 2004). National data shows that poor children (i.e. those living in the most deprived wards in England) have a much lower attainment in the FSP than children who live in less deprived areas. That being said, this gap in attainment has closed somewhat – it was 17 per cent in 2007, 16 per cent in 2008 and 15 per cent in 2009 (DCSF 2008d and e, 2009b). National data for 2009 shows that the achievement gap between the lowest 20 per cent of children and the mean is 34 per cent – a narrowing of two percentage points compared to the 2008 baseline (DCSF 2009b).

Early Years Foundation Stage Profile

The EYFSP records each child's progress and learning needs at the end of the Early Years Foundation Stage. Profiles must be completed in any government-funded setting in which children complete the Early Years Foundation Stage. For most children, this is at the end of the reception year in primary school. The EYFSP is based on early childhood practitioners' observations and assessments in six areas of learning:

- personal, social and emotional (PSE) development
- communications, language and literacy (CLL)
- mathematical development
- knowledge and understanding of the world
- physical development
- creative development.

Staff must complete summary profiles for each child reaching the end of the Foundation Stage, four weeks before the end of the summer term (when children are four to five years old).

The National Foundation for Educational Research (NFER) carried out some additional analysis especially for this review, looking at the results of 1,058,681 children who reached the end of the EYFS in 2008 (further details of this analysis can be found in Appendix 2).

It should be noted that some variables that are predictors of achievement at other key stages are not yet available on the FSP dataset. These include:

- Speakers of languages other than English; information on the languages children speak was collected during the Annual Schools Census, but is not recorded in the anonymised dataset released for analysis. Such information may be available in future years.
- Data on attendance at pre-school/school during the Foundation Stage, which was not on the dataset released for analysis (the collection of such data is not included in the census for nursery schools).

The NFER constructed a multi-level model to take account of the fact that some variables are interrelated and clustered together. Characteristics in the model included the child's age, sex, SEN status, whether they were receiving free school meals and whether the child lived in an area of high deprivation. It also included school-level variables, such as school type and size and time variables (including data from 2007 and 2008).

Overall, 51.9 per cent of children achieved the threshold considered to indicate a 'good level of overall achievement' (78 or more points, including at least six points in each of the PSE and CLL measures). The child's age and sex emerged as the dominant factors in predicting the probability of good development. For every month over the average age (of four years and five and a half months) the probability of achieving the threshold increased. Girls outperformed boys in every measure and children with SEN had lower scores than their peers with the same characteristics, but no identified support needs.

Background characteristics

Children's background characteristics are of particular interest to this review. The analysis found a relationship between EYFSP results and ethnic background, with children from Gypsy Roma, Irish Traveller, Bangladeshi and Pakistani ethnic groups, in particular, achieving lower scores⁵ (see Appendix 5). Deprivation is associated with lower levels of development. For example, children receiving free school meals⁶ showed a significantly lower probability of achieving the threshold for a good standard of development. Children receiving free school meals are only half as likely as their classmates to achieve the threshold, although the multi-level analysis showed that the probability of a good overall level of achievement for these children increased between 2007 and 2008 by more than three percentage points. While differences in scores are statistically significant for all six learning areas, the differences are greatest for communication, language and literacy; mathematical development; and PSE development.

The impact of certain background characteristics (and some of the changes that have taken place over time) can be illustrated by comparing the probabilities of children with different characteristics attaining a good level of achievement (at least 78 points across the six areas of learning).

The probability of a white boy of average age living in an area with average deprivation levels having a good level of achievement in the EYFSP in 2008 was 46.7 per cent (43.5 per cent in 2007). By comparison:

- a white girl with the same characteristics had a probability of 64.2 per cent; this was 60 per cent in 2007, suggesting that the gap between girls and boys continues to widen
- a Pakistani boy in 2008 had a probability of 38.1 per cent compared with a probability of 33 per cent in 2007, suggesting that the gap in attainment between Pakistani pupils and others may be narrowing
- a white boy receiving free school meals in 2008 had a probability of 33.4 per cent, compared with a probability of 29.8 per cent in 2007, suggesting that the gap between the most and least disadvantaged children may be narrowing.

⁵ It is possible that some of these differences may be related to children speaking a first language other than English, but we are unable to estimate the extent of this because children's language status was not included in the dataset for analysis.

⁶ Free school meals is only a partial measure of poverty in Key Stage 1. This is because young children are more likely than older children to have packed lunches (Sylva *et al* 2004) and take-up of free school meals is not even across all ethnic groups (see Appendix 5).

The lowest probability of attaining a good level of achievement in the EYFSP is found in children from Irish Traveller (17.4 per cent in 2008) and Gypsy/Roma backgrounds (14 per cent in 2008).

Further information provided by the Department for Children Schools and Families (DCSF) indicates the characteristics of those children whose EYFSP scores put them in the bottom 20 per cent in the most recent results available (children assessed in 2009⁷):

- boys account for over 60 per cent of the bottom 20 per cent
- one in three children whose first language is not English are in the bottom 20 per cent
- children living in the most deprived areas constitute over half of the children in the bottom 20 per cent
- August-born children are three times as likely to be in the bottom 20 per cent than September-born children
- about 60 per cent of children with SEN are in the bottom 20 per cent – accounting for over a quarter of all children in the lowest-scoring group.

Socio-economic status

It is interesting to consider how trends in attainment change as children progress from pre-school to school. The EPPE study found that SES has a strong influence on child outcomes throughout the early years from the age of three (Melhuish *et al* 2001). Children from lower SES backgrounds made less progress through pre-school than children of professional parents, and had lower achievement at age five (Sammons *et al* 2002). At age seven, children of parents working in professional and other non-manual jobs did better in their Key Stage 1 assessments than children from all other groups. The largest gap was between children of parents with professional jobs and children of semi-skilled or unskilled manual workers (Sammons *et al* 2004).

The EPPE study also used eligibility for free school meals (FSM) as an indicator of poverty. At age five, children who are eligible for FSM had lower literacy and numeracy achievement (Sammons *et al* 2002). At age seven, children who are eligible for FSM had lower achievement at Key Stage 1. However, FSM proved to be a less important indicator of achievement than the influence of a mother's highest qualification or SES (Sammons *et al* 2002).

English as an additional language

In 2007/08, around 15 per cent of English five-year-olds spoke English as an additional language (EAL) (DCSF 2008a). Not surprisingly, children with EAL tend to have lower attainment in the early years. The EPPE study found that at age three, children with EAL had lower overall achievement in tests of verbal skills, but they were achieving as expected in non-verbal reasoning skills (Melhuish *et al* 2001). At age five, children with EAL attained much lower scores in language, and lower scores in numeracy, than children

⁷ Personal correspondence with Ann Wilsdon, Quality and Standards Division, DCSF. Data currently unpublished.

whose first language is English (Sammons *et al* 2002). Similarly, the Millennium Cohort Study (Hansen and Joshi 2008) found five-year-olds with EAL were 28 months behind on verbal reasoning (Jones and Schoon 2008). Interestingly, they were also between two and six months behind on non-verbal reasoning. At age seven, the EPPE study found that children with EAL had lower Key Stage 1 scores in both literacy and maths than children with English as a first language, although the difference was relatively small (Sammons *et al* 2004). But overall, the EPPE study showed the impact of EAL on achievement reduces considerably between the ages of three and seven, reflecting improvements in English fluency as children progress through pre-school and school (Sylva *et al* 2004).⁸

Ethnicity

Ethnicity is associated with some differences in early literacy and numeracy achievement, but the picture is not a straightforward one. While five-year-olds from white UK, Pakistani and mixed ethnicity groups achieved as predicted by their other characteristics, children from black Caribbean and black African ethnic groups attained higher than expected in literacy and lower than expected in numeracy (Sammons *et al* 2002). Children from Indian, Bangladeshi and other ethnic groups attained higher than expected scores in both literacy and numeracy (Sylva *et al* 2008). Ethnicity was not a good predictor of achievement at age seven (Sammons *et al* 2004). The only relationship between ethnicity and achievement was that white European children had lower attainment in reading at Key Stage 1. Ethnicity is not a good predictor of achievement at age 11 (Sylva *et al* 2008).

A closer examination of the relationship between ethnicity and achievement demonstrates that poverty, combined with having EAL, is largely responsible for the relationship between belonging to a black or minority ethnic group and poorer achievement in the early years (Melhuish *et al* 2001).

The influence of the home learning environment

One of the main explanations for the relationships between poverty, maternal education and achievement is the influence of the home learning environment (HLE) on young children (Sylva *et al* 2004). The HLE is a measure of the extent to which parents take part in learning activities with their children. These include:

- reading to children
- playing with letters and numbers
- taking children to the library
- painting and drawing
- teaching children nursery rhymes and songs
- taking children on visits
- arranging for children to play with their friends at home.

⁸ The latest phase of the EPPE study (Sylva *et al* 2008) asked parents to report on whether there was a need for EAL support; this is a slightly different measure of EAL than that used in preceding phases.

Children with a positive HLE achieve better in the early years and throughout primary school. While the effect of background characteristics on reading and maths achievement diminishes as children grow older, the impact of the quality of the HLE still has very strong effects on academic outcomes at the ages of seven (Sammons *et al* 2004) and it is still influential at the age of eleven (Sylva *et al* 2008).

A greater amount of home learning has been found to take place when mothers have a high level of education and belong to a higher social class group. Less home learning takes place when the mother is working full-time, when there are larger numbers of children in the family, and in BME households (Smith *et al* 2009b). There is a pattern of professional groups having a higher quality HLE than middle social class groups, who have a higher quality HLE than low social class groups (Sylva *et al* 2008). But the EPPE study found that the quality of the HLE has a greater influence on a child's intellectual and social development than parental occupation, education or income (Sylva *et al* 2004). The key message is that what parents do is more important than who they are, and a home environment that is supportive of learning can counteract the effects of disadvantage in the early years.

Being healthy

Most of the evidence for this section comes from the Millennium Cohort Study. The evidence demonstrates that poverty has the greatest impact on young children's health, although there are also some differences in health outcomes related to ethnic background.

Health outcomes are affected by poverty from birth onwards. Having a low birthweight⁹ is often used as a measure in studies of social inequality. This is because it is associated with poorer health outcomes, in both the short and long term, including infant death (Moser *et al* 2008). National data from England and Wales (ONS and DH 2008) shows that babies born from poorer, manual social backgrounds are more likely to have a low birthweight than babies from non-manual social backgrounds. Similar findings were reported in the Millennium Cohort Study (Dezateux *et al* 2004), which found that on average, professional parents have the heaviest babies, while parents with semi-routine and routine jobs have the lightest babies.

The Millennium Cohort Study found that at age five, children in poor families fare much worse in terms of both their reported general health, and also specific health conditions. Specific health conditions suffered by higher proportions of children from poor backgrounds include speech and eyesight problems, toothache, asthma and attention-deficit hyperactivity disorder (ADHD) (Sullivan and Joshi 2008). Obesity is also related to poverty, with a higher proportion of children below the poverty line categorised as obese (6.6 per cent) when compared with children above the poverty line (4.7 per cent) (Sullivan and Joshi 2008).

There is a complex pattern of differences in health outcomes for children from different ethnic groups. In terms of birthweight, there are clear trends for babies from white backgrounds to be heavier. National data from England and Wales in 2005 shows that

⁹ A low birthweight is defined as less than 2,500 grams (around five and a half pounds).

white British babies were the heaviest, followed by white non-British babies (Moser *et al* 2008). The percentage of babies of low birthweight was almost double in the Caribbean and all three Asian groups (ranging from 10.9 to 9.8 per cent) than that in the white groups (5.6 per cent). Babies from Indian and Bangladeshi backgrounds weighed 300g less than white babies, on average. Similarly, the Millennium Cohort Study found that babies of Pakistani, Indian, Bangladeshi, black and mixed origin mothers weigh less than babies of white mothers (Dezateux *et al* 2004).

By age five, white children are over twice as likely as Pakistani and Bangladeshi children to be reported to be in excellent health. But children from Pakistani/Bangladeshi, Indian and black backgrounds are less likely to have a long-standing health condition than white children (Sullivan and Joshi 2008). This may be because mothers from Pakistani and Bangladeshi backgrounds are less likely to smoke in pregnancy and are more likely to breast-feed their babies (Sullivan and Joshi 2008). While over a third of white mothers in the Millennium Cohort Study reported smoking at some point during pregnancy, less than 5 per cent of mothers from Pakistani and Bangladeshi backgrounds reported doing so (Dezateux *et al* 2004). Children of black ethnic origin are the most likely to be obese (Sullivan and Joshi 2008).

Staying safe

The aims for 'staying safe' (DCSF 2008c) include:

- avoiding accidental injury and death
- safety from crime and anti-social behaviour
- security, stability and a good standard of care.

The research team found quite limited national indicators for these aspects.

The available evidence suggests that staying safe is negatively related to child poverty, and especially parental unemployment. The evidence shows that this is true both of how safe families feel and how safe they actually are (in terms of injury and death rates).

At age five, non-working families are less likely to think that the area they live in is safe, or to consider it an excellent area for raising children (Ketende and McDonald 2008).

In England, the proportion of children aged between three and five years old admitted to Accident and Emergency departments is 5 per cent higher in disadvantaged areas (Sullivan and Joshi 2008). Overall rates of death from injury and poisoning in children have fallen in England and Wales over the past 20 years, except for rates in children in families in which no adult is in paid employment (Edwards *et al* 2006). Children of parents who have never worked or are long-term unemployed are 13 times more likely to die from unintentional injury than children of parents from higher socio-economic backgrounds (Audit Commission 2007). According to an analysis of data from the Avon Longitudinal Study, the strongest risk of child maltreatment relates to socio-economic deprivation. Parents were at greater risk of being investigated for maltreatment and of their child being placed on the 'at risk' register where their family was affected by unemployment, poor

housing, overcrowding, or inadequate social networks. Parental characteristics, including being younger, low educational achievement, psychiatric history or a history of childhood abuse, also contributed to the risks for children (Sidebotham *et al* 2002).

In contrast with poverty, ethnicity does not appear to have a consistent link with the few indicators we were able to find for 'staying safe'. Fewer children aged between three and five are admitted to Accident and Emergency departments in areas with a high proportion of people from minority ethnic backgrounds (Sullivan and Joshi 2008). Families from white or Indian ethnic backgrounds are more likely than families from Pakistani/Bangladeshi or mixed ethnic backgrounds to think that their area is an excellent place to raise children. On the other hand, families from white, Pakistani or Indian backgrounds are more likely to feel that the area they live in is very safe than are families with black, mixed or other ethnic origins (Ketende and McDonald 2008). Making a positive contribution

Aims of the ECM framework (DCSF 2008c) relating to this outcome include:

- children engaging in positive behaviours in and out of school
- children developing positive relationships with others
- children developing the self-confidence to be able to deal with life changes.

The EPPE study measured child behaviour through questionnaires completed by pre-school staff and primary school teachers. Various social behaviours were measured including cooperation (such as following rules in games), positive social behaviours (such as sharing with other children, being kind to others), anti-social behaviour (such as temper tantrums, bullying and stealing) and anxious behaviour (such as easily scared, often unhappy).

The EPPE study found that a mother's education is related to child social behaviours. At age five, less well-educated mothers were more likely to have children reported to be anti-social, and less likely to have children reported as being cooperative or independent (Sammons *et al* 2003). There was a similar trend at age seven, with a higher level of maternal education being related to lower levels of reported anti-social behaviour, and to more positive social behaviour and self-control (Sammons *et al* 2004). Children with young mothers (aged 18 or under when they gave birth) were also more likely to be reported as being anti-social at age three (Melhuish *et al* 2001). The study found that poverty did not have a strong relationship with anti-social behaviour in pre-school although at age three, children of professional parents were reported as more confident than other children (Melhuish *et al* 2001).

There was a relationship between poverty and anti-social behaviour as children progressed to primary school. At age five, children of professional parents were reported as more sociable (Sammons *et al* 2003). Children who were eligible for free school meals were less likely to be reported by their teachers as being independent and cooperative, and more likely to be reported as being anti-social. At age seven, poor children were again reported as displaying fewer positive behaviours, having less self-control and as being more anti-social (Sammons *et al* 2004).

The EPPE study found a few differences in reported social behaviour among children from different ethnic groups. At age three, children of black Caribbean, black African and mixed ethnic backgrounds were reported as showing more anti-social and anxious behaviours (Melhuish *et al* 2001). At age five, black African children showed more cooperation than children from white UK backgrounds (Sammons *et al* 2003). Pakistani children were reported to be less sociable, but also less anti-social than white UK children. The EPPE study found no evidence of ethnicity having any relationship with staff ratings of child behaviour at age seven (Sammons *et al* 2004). Interestingly, there was a stronger negative relationship between staff ratings of behaviour and EAL than for ethnicity. At age three, children with EAL were reported as being less cooperative, less sociable with their peers, and less confident (Melhuish *et al* 2001). At age five, children with EAL were reported as being less cooperative and less independent than children who had English as a first language (Sammons *et al* 2003). At age seven, having EAL was not found to be related to child social behaviours (Sammons *et al* 2004).

Social behaviours were strongly related to the quality of the HLE. The HLE was found to be more important in influencing child social behaviours than either mother's education or child poverty. For five-year-olds, a higher quality HLE was related to being reported as being more independent, cooperative and sociable and less anti-social (Sammons *et al* 2003). Similarly at age seven, having a higher quality HLE was related to positive behaviour and sociability (Sammons *et al* 2004).

6. How do early learning environments impact on a child's sense of identity and understanding of diversity?

Key messages

- The evidence suggests that transition to pre-school and school poses particular challenges for children from minority ethnic backgrounds and children with English as an additional language (EAL).
- Children from minority ethnic groups often attempt to adapt to the dominant culture by adopting different identities. Unfamiliar cultural traditions and experiences can be alienating for children.
- Children with EAL can experience communication difficulties and this can cause frustration and affect their relationships with other children and staff.
- Early years practitioners who are properly equipped to work with children from culturally and linguistically diverse backgrounds can help to improve experiences for these children.

Guidance for Foundation Stage practitioners states that it is effective practice to 'encourage children to talk about their own home and community life and to find out about other children's experiences' (DCSF 2009a p 10). The report recommends that children, staff and parents should be helped to 'understand why people do things differently from each other and to talk about these differences'. An example of this kind of sharing in practice was provided by staff at a nursery school (see Chapter 4).

Most of the studies included in this section focused on children whose home environment differs from the majority population in terms of culture and language. The evidence is mainly qualitative in nature and studies were small in scale, using methods such as observation and interviews.

The transition between the home environment and early years settings is potentially stressful for all children. But children from minority backgrounds also have to cope with a culture and language that is unfamiliar to them. It is therefore not surprising that children from minority backgrounds are at a greater risk of demonstrating poorer behaviour and adjustment on entry to pre-school (Melhuish *et al* 2001).

Certain experiences that are difficult for children from different cultural backgrounds include eating unfamiliar food and relating to curriculum content focused on traditions and norms in the dominant culture. Children with EAL face additional communication challenges. For example, Barron (2007) observed children from Pakistani backgrounds in an English nursery. These children were highly engaged with visual and sensory experiences (such as dressing up or looking at displays) but story sessions without bilingual support failed to keep their attention. Ethnic differences seemed most marked when there was least understanding of children's conventions, practices and languages in

the nursery setting, creating boundaries and barriers for those children who were not familiar with the majority culture. For example, the children with the least fluency in English found it hard to understand Christmas celebrations. The lack of appreciation by staff of what was not shared in terms of experience and understanding led to marginalisation for these children (Barron 2007).

As noted previously, the Effective Provision of Pre-School Education (EPPE) study found that staff reported children with EAL to be less cooperative, less sociable with their peers, and less confident than children who speak English as their first language (Melhuish *et al* 2001). Evidence from the US found that English-only language interactions between Spanish-speaking children and English-speaking pre-school teachers were significantly related to behaviour and learning problems, and these children were much less able to tolerate frustration (Chang *et al* 2007).

Children's language skills play a vital role in their ability to form relationships with their teacher. In one recent study, teachers said that they felt less close to children with poorer levels of spoken English (Fumoto *et al* 2007). An Australian study (Sims and Hutchins 2001) looked at the transition from home to childcare for children from culturally and linguistically diverse backgrounds. This study includes an example of a child who repeatedly asked to go to the toilet, but was misunderstood and given drinks instead. He became very angry and refused to allow anyone to help him. A positive finding from this study was that bilingual support workers played an important role in helping children adjust to pre-school. They provided information, encouraged good relationships and helped other staff to understand both the nature and the scale of the changes that the children were experiencing.

Evidence from other studies suggests that the link between home and the early years setting can become disrupted when children adopt very different identities at home and school. In their study of North African bilingual children, Rich and Davis (2007) found that these children attempted to conform to the dominant culture (in a primary school with a predominantly white population). For example, they refused to acknowledge their home language in school for fear of being ostracised by other children. The study concluded that such separation can reduce the school's ability to develop positive home-school partnerships.

Another study suggests that the transition from the home to early years settings may serve to reinforce stereotyping along ethnic lines (Brooker 2006). This case study of an English reception class observed that children adapted to the early years environment by conforming to one of two group identities (English or Bangladeshi). There was a misplaced assumption by staff that children's stereotypical behaviour derived from parents' cultural beliefs and practices, whereas it was actually more influenced by children's attempts to fit in. The transition to school appeared to have simplified and strengthened children's affiliations to stereotypical attributes, despite the good intentions of their teachers.

Evidence from two studies in the USA suggests that children from poorer families may experience lower quality provision in early childhood settings. For example, Stipek (2004) found that didactic teaching approaches (whereby teachers directed children's learning) were more common in classrooms with higher proportions of disadvantaged children.

Another US study (McGill-Franzen *et al* 2002) found that pre-schools in socially disadvantaged areas offered a less stimulating and culturally relevant environment, with fewer and less attractive resources for children. We do not have any equivalent evidence from the UK, but this evidence underlines the importance of adequate investment in staff, training and resources in the early years.

The EPPE study carried out a number of case studies of effective practice in pre-school education (Siraj-Blatchford *et al* 2003). These showed that a key factor contributing towards quality provision was the practice of 'sustained shared thinking' (in which staff use strategies such as open-ended questioning to extend a child's learning). This encourages independence and gives children a responsibility for determining their own learning process. This approach was also found in effective teaching of children from asylum-seeking families described in Smyth (2006). Here, children developed their own learning through using and sharing pre-existing (cultural) knowledge in a collaborative and creative teaching environment:

'[The teacher] used making games as a strategy for the children to demonstrate knowledge about the local environment and discovered that ... they wanted to go much further than she had anticipated. For bilingual learners of all ages, play ... enables them to bring their own cultural knowledge and understanding to bear and enables collaboration with others. The children were not passive recipients of instructions ... but initiated play as a way to make sense of a new language and a new curriculum. The teachers had provided them with a stimulus that they then took control of and developed in ways in which the teachers could not have predicted.'

(p 103)

Evidence from the EPPE study (Siraj-Blatchford *et al* 2004) suggests that early learning environments with a strong focus on both planning for individual learning needs and promoting understanding of cultural differences are effective for children's cognitive, social and behavioural development, and help to achieve better outcomes for all children.

The evidence suggests that early years staff need support and development opportunities to help them to meet the needs of children from different cultural and language backgrounds. This could include raising awareness of the verbal and non-verbal communication strategies used by children placed in an unfamiliar environment. Adults working with these children need to be able to interpret a range of cues and signals in order to meet their needs.

Bilingual staff have a particularly valuable role to play in contributing to improving outcomes for children who speak the same language. Their knowledge and experience should be developed through models of professionalism and standards (Conteh 2007). This includes support/professional development for adults working with children who do not speak English as their first language, validating bilingual staff competencies and developing the role of bilingual staff.

7. What helps children from all backgrounds to access the curriculum and make good progress?

The research team reviewed evidence of what works in supporting children from different backgrounds to access the curriculum and make good progress. The team began by looking at whether or not differences existed in curriculum access among children from different backgrounds. Specific approaches designed to help children with particular characteristics were also considered. Most of these approaches focused on supporting young children's language and literacy development. The team also looked at the characteristics of effective early years environments in general, as research shows that high-quality pre-school provision benefits all children, including those from disadvantaged backgrounds.

Key messages

- The evidence shows that attending pre-school helps children from all backgrounds, especially those living in poverty.
- Not all children have access to pre-school, due to their family characteristics. In particular, children from poorer backgrounds, non-working households and Asian families have lower levels of participation in group childcare and some families choose not to take up their free entitlement.
- Government initiatives such as the Ten Year Strategy for Childcare, the free early education entitlement and Sure Start Children's Centres have helped to narrow the gap between advantaged and disadvantaged families to some extent, but the gap is still evident.
- The reach (i.e. awareness and use) of Sure Start children's centres has been found to be 'good' with over three quarters of a representative sample of parents and carers being aware of their local centre and 45 per cent having used or attended their centre.
- Interventions designed to develop literacy and language have been shown to improve outcomes for children at risk of low achievement, especially children living in poverty and children with English as an additional language (EAL).
- Effective approaches to help children with EAL include an interactive pedagogy, culturally sensitive teaching and an approach tailored to meet individual learning needs.
- The quality of the provision makes a real difference to children's outcomes. A focus on individual children's needs and helping to extend children's learning through 'sustained shared thinking', are characteristic of effective pre-schools.
- Free play is important because it enables children to explore their own interests and take responsibility for their own learning. In excellent pre-schools, children spend two thirds of the time in activities they have initiated themselves.
- Effective pre-schools employ highly qualified staff, have strong leadership and provide good opportunities for professional development.

Access and uptake of early years education and care

The Early Years Foundation Stage (EYFS) has removed the distinction between 'education' and 'care' to reflect how attending childcare enables young children to access the curriculum. As set out in the *Ten year Strategy for Childcare* (HM Treasury *et al* 2004), flexible, high-quality childcare should be made affordable for all families. The early education entitlement offers all three- and four-year-old children 12.5 hours of free, flexible childcare per week over 38 weeks a year. This will be universally extended to 15 hours from September 2010. The free entitlement can be used in any registered private, voluntary or independent (PVI) nursery, play school or pre-school that has been found to be satisfactory by Ofsted. Providing affordable childcare to support low-income families returning to work is essential in order to reduce child poverty. It also allows children from all backgrounds to access the benefits of an early curriculum that they would not otherwise be able to access (Sylva *et al* 2008).

Data regarding parents' use, views and experiences of childcare has been collated through surveys since the late 1990s to allow new government initiatives to be evaluated (for example, Speight *et al* 2009; Kazimirski *et al* 2008b). Parents of children from birth to age 14 are randomly selected from the Child Benefits Records to take part in the surveys. 'Childcare' is defined broadly, incorporating both formal childcare (nurseries, childminders, for example) as well as informal childcare (for example, grandparents and other relatives). Another series of surveys (Nicholson *et al* 2008; Phillips *et al* 2009, for example), which began in 2001, gathers data about registered childcare and early years providers. In the providers' survey, interviews were conducted with senior managers of childcare providers, headteachers, early years or Foundation Stage coordinators and childminders.

Recent parental surveys using data collected in 2008 (Speight *et al* 2009) and 2007 (Kazimirski *et al* 2008b; Smith *et al* 2009b) have found no evidence of the gap decreasing between higher and lower income families in terms of take-up of childcare. Families with higher incomes are more likely to report using both formal and informal childcare. This gap in terms of take-up of childcare is widest between disadvantaged families (i.e. large families, families with lower incomes, non-working households and lone parents) and more advantaged families when children are under two years old (Smith *et al* 2009b).

Nevertheless, the reach of Sure Start children's centres (i.e. awareness and usage) was deemed to be 'good' by researchers studying the impact such provision made (TNS Social 2009). This study, which surveyed 1,496 parents and carers, found that 78 per cent were aware of their local centre and 45 per cent had used or attended their centre. The authors point out that the profile of users was very similar to the profile of respondents overall – suggesting, therefore, that reach was 'good' throughout the target population (p 1). On this basis, the authors report 'no evidence' of particular groups 'monopolising the centres' or certain sub-groups being excluded from or failing to access the centres (p 1).

The gap between more advantaged and disadvantaged families in terms of uptake of childcare for three- and four-year-olds has narrowed as a result of the free early education entitlement, with the majority of families using centre-based childcare. However, although

the free entitlement to childcare is used by the majority of low-income families, these families are less likely than higher income families to take up their entitlement, despite it being free (Kazimirski *et al* 2008b; Speight *et al* 2009). In 2008, 75 per cent of families with a household income under £10,000 took up the entitlement, compared with around 90 per cent of families with a household income of over £20,000 (Speight *et al* 2009).

It is also more common for children in families where one or more parent works (whether from a lone parent or couple family) to receive the free entitlement than children living in households where there is no adult in paid employment (Kazimirski *et al* 2008b; Speight *et al* 2009). These findings suggest that more could be done to raise awareness of the free entitlement among low-income and non-working families.

Improving uptake of early childhood services among non-working families

Two services in Blackburn with Darwen Borough Council worked together to support non-working parents and carers. Early Years Excellence and Jobcentre Plus have developed a multi-agency approach to raising parents' awareness of early years provision. Jobcentre Plus now routinely refers parents to children's centre services for help, advice and guidance on a wide range of issues. A simple, low-cost electronic referral system, which lone parent advisers complete with parents, gives permission for initial contact to be made. Parents are then invited to an information session at the Children's Centre or in their own home, to discuss the services on offer and the next steps

The referral form has increased the take-up of children's centre services from people who had not previously accessed them and were making a benefit claim for the first time. Almost 300 referrals were made to one children's centre in the first few months of implementing the initiative, with high levels of referrals made to the majority of centres in the area. The following nine months saw 154 referrals across the borough for lone parents.

There is also a difference between disadvantaged and more advantaged families in terms of type of childcare used (Smith *et al* 2009b). Children from more advantaged families tend to use day nurseries, whereas children from disadvantaged families tend to use nursery classes, a combination of centre-based and informal provision (grandparents, for example), or not use any childcare provision. A reason for this difference may be that day nurseries are available during working hours (typically 8 am to 7 pm) so are more likely to be used by working families than nursery classes which are sessional, and are only available during school hours (9 am to 3.30 pm). Use of nursery classes matches the free education offer of 12.5 hours, whereas day nurseries are used for around twice as many hours (Smith *et al* 2009b), although parents have to pay for extra hours over and above the 12.5 hours free entitlement.

The reasons for using different types of childcare also vary according to family income. Families with higher incomes and families living in less deprived areas are more likely to report using childcare for economic reasons than less affluent families, because families with higher incomes are more likely to be in work. Conversely, low-income families are

more likely to report using childcare for child-related, educational reasons than higher income families (Kazimirski *et al* 2008b; Smith *et al* 2009b).

Despite this, as mentioned earlier, childcare is used by the majority of disadvantaged families (Kazimirski *et al* 2008b). As well as the free early education offer, another reason for the high uptake of centre-based provision by children from disadvantaged families is that the government initially focused on developing children's centres in deprived areas. Data from the providers' survey (Phillips *et al* 2009) shows that in 2008, 71 per cent of full day care providers in children's centres were based in the 30 per cent most deprived areas. This represents a decrease since 2007, when 77 per cent of full day care providers were located in the 30 per cent most deprived areas (Nicholson *et al* 2008). This change is most likely to be due to the national roll-out of children's centres into less disadvantaged areas.

Access and uptake of childcare in the early years does not appear to vary much according to ethnic background. However, Kazimirski *et al* (2008b) found that, in 2007, Asian families were less likely to take up the free early education offer than families from other ethnic backgrounds. Take-up of the free early education offer by ethnic background was not reported in 2008, although there were no significant differences between ethnic groups in terms of uptake of both formal and informal childcare by pre-school children. The childcare and early years providers' survey found good uptake of places by black and minority ethnic (BME) groups. In 2008, the average proportion of BME children attending full day care settings was 15 per cent per setting (Phillips *et al* 2009).

A main barrier to using childcare is affordability. This is particularly the case for low-income households and lone parents, who are more likely to report difficulties covering childcare costs (Kazimirski *et al* 2008b; Speight *et al* 2009). A reason for this may be that families from these backgrounds lack awareness of the help they are entitled to, such as the free early education entitlement (Clarke *et al* 2009) and the childcare element of the Working Families' Tax Credit (Kazimirski *et al* 2008b). It therefore seems that although the gap in terms of access and take-up of childcare is being narrowed through the free early years entitlement and increased availability of children's centres in deprived areas, current childcare options and work incentives are not entirely sufficient to enable families in the lowest income groups to move back into work. However, given the high percentages of children now attending free early years provision, it is recognised that some parents do not take up the offer because they simply choose not to, rather than primarily for reasons of affordability.

Compared to other European countries, where early years provision is usually wholly or mainly in the public sector, the UK has a range of providers in the private, voluntary and independent (PVI) sectors. However, the content of early years provision is becoming more integrated. From September 2008, the Early Years Foundation Stage has provided for a single framework of curricular requirements from birth to five. This parallels the situation in some other countries. Norway, Sweden and Finland, for example, have taken this even further by guaranteeing access to centre-based care for all children from the age of one. This care is provided in a single setting for all children until they are ready to enter school at the age of six or seven (Delhaxhe 2009). Historically, many countries in Europe have provided extensive and affordable full-time childcare for the over-threes and participation rates are high. The EU has recently emphasised its commitment towards

supporting early years provision and has set a target of at least 95 per cent of children aged four and over participating in early childhood education by 2020. In the UK, this participation rate has already been exceeded, although not necessarily on a full-time basis. In 2008, 98 per cent of four-year-olds took up at least some of their free entitlement (DCSF 2009d).

High-quality pre-schools

Two recent studies have found that attending pre-school has a positive impact on children's academic and social development, and this benefit can be sustained into later schooling (Sylva *et al* 2008; Smith *et al* 2009a). Attending pre-school can be considered good for all children, but it seems to be particularly helpful for children from poorer socio-economic backgrounds and those whose first language is not English. As a recent review of research by Springate *et al* (2008) has shown, there is considerable evidence that early years interventions can narrow the gap between disadvantaged and other children in terms of their cognitive development. This is also the case for social and behavioural development.

Evidence gathered for this review included a Canadian study (Geoffroy *et al* 2007) that shows that full-time community-based childcare services play a protective role for children of low socio-economic backgrounds. Most important of all for children's outcomes, however, is the quality of the pre-school provision. The Effective Provision of Pre-School Education (EPPE) study (Siraj-Blatchford *et al* 2003) investigated pre-schools where children achieved good or excellent outcomes. They found that such pre-schools:

- view cognitive and social development of children as complementary, and avoid prioritising one over the other
- provide children with a mix of learning through free play and group work initiated by staff. Free play is important because it enables children to explore their own interests and take responsibility for their own learning. In excellent pre-school settings, children spent around two thirds of their time in child-initiated activities
- provide opportunities for 'sustained shared thinking' between adults and children, whereby the child and the adult work together to extend and develop learning
- provide learning opportunities that are tailored to the needs of particular individuals and groups of children, such as those who do not speak English at home.

Warm, supportive and relaxed environments with a welcoming appearance are some of the characteristics of effective pre-schools identified in the EPPE study. These pre-schools had fairly good resources, although some had purpose-built open spaces while others were constrained by the environment they were using (Siraj-Blatchford *et al* 2003). Pre-schools promoting better academic outcomes for children (especially reading and mathematics at age six) were found to offer a balanced curriculum, including emphasising literacy, maths, science/environment, as well as catering for children of different genders, cultural backgrounds, abilities and interests (Sylva *et al* 2004). The type of accommodation was found to affect the activities offered to children. For example, where playgroups had to set up and dismantle equipment on a daily basis, this meant that they were less able to use certain types of equipment such as computers (Moyles *et al* 2002).

As well as identifying aspects of pedagogy and environment in effective pre-schools, the EPPE study has found that children from disadvantaged backgrounds had better outcomes in pre-schools where there was a mix of children from different socio-economic status (SES) backgrounds (Sylva *et al* 2008). Research has identified the need for pre-school staff to establish positive relationships with parents and encourage them to use pre-school services.

Researchers evaluating the early education pilot for two-year-olds identified the importance of high-quality early years provision (see Smith *et al* 2009a). The study found that the pilot had a positive impact on children who attended a setting of 'relatively high quality'. However, a third of the children did not attend such a setting, and the inclusion of less high-quality settings led to the finding that the pilot had no impact on children's cognitive and social development overall. In order to maximise the positive impact of free early education on the development of disadvantaged two-year-olds, the authors concluded that settings need to be 'of a relatively high quality'. They recommended that free places should be restricted to settings that have achieved an Ofsted inspection assessment of at least 'good' (p 130).

Extending pre-school provision to vulnerable two-year-olds and their families in Scotland has been found to improve parenting capacity. Parents developed new skills and expectations of their children, enabling them to cope with the 'terrible twos' (Woolfson and King 2008). The evaluation of outreach strategies for the two-year-old pilot emphasised the importance of regular and consistent communication, having a one-to-one approach with families and using existing community resources to reach disadvantaged families (Kazimirski *et al* 2008a). A welcoming and inclusive ethos helped mothers to accept Sure Start local programmes (Anning *et al* 2007). Parents also feel supported when provision is flexible and can cater to their needs (Toroyan *et al* 2004).

Because the home learning environment (HLE) has such a strong influence on children's outcomes, effective early childhood settings are found to share learning aims with parents and support the HLE (Anning *et al* 2007; Kazimirski *et al* 2008a; Siraj-Blatchford *et al* 2003; Toroyan *et al* 2004). Related to this, a survey of parents' involvement in their children's education and development showed that parents' desire to get more involved tends to be stronger in disadvantaged families (Peters *et al* 2007).

The skills, qualities and professionalism that practitioners bring to their work are central to effective practice (Moyle *et al* 2002). The EPPE study showed that strong leadership in curriculum and planning, together with low staff turnover, a supportive and clear philosophy and opportunities for professional development, are all characteristics of effectiveness (Siraj-Blatchford *et al* 2003).

Specific approaches

There are a number of specific initiatives that have shown positive outcomes for children in the early years, most of which focus on language and literacy. Children's grasp of language and literacy skills during the early years is fundamental to accessing the curriculum and making good progress. This was recognised by the Department for Children Schools and Families (DCSF) through the launch of *Every Child a Talker* – a national strategy designed to help children in early years settings enjoy experimenting with and learning language. The initiative builds on a wealth of training, support and expertise in early language within local authorities and guidance materials for practitioners have been published (DCSF 2008b, 2009c).

Language and literacy skills can be seen to form the basis for early learning and achievement (Potter 2007). As noted earlier, young children from socially disadvantaged backgrounds tend to have poorer (English) language and literacy skills, as do children with EAL (Melhuish *et al* 2001). This section presents some specific approaches to improving language and literacy skills, including four examples of validated local practice.

Improving children's reading and writing abilities through a movement programme

Early Years consultants working in North Tyneside noticed that children with poor body control were also achieving less well at primary school. They knew that children's capacity to learn can be limited by developmental delays, such as the retention of infant reflexes. They were convinced that the improvement of such reflexes, along with improved balance and coordination, could impact positively on children's ability to read and write.

The consultants conducted a pilot project, designed by the Institute for Neuro-Physiological Psychology (INPP), involving 15 to 20 minutes of simple daily exercises for children in reception classes, in an attempt to boost their movement through reflex development and inhibition.

Twelve children took part in daily exercises with two members of staff who were expertly trained. The staff members were supported by managers in their school in implementing the programme, screening children and using the INPP's test materials.

This intervention was found to improve children's bodily control. All 12 children who took part were in the bottom two groups academically at the start of the year, but seven had moved forward by the end of the year. The exercises also had a positive impact on the children's confidence and self-esteem.

The pilot has since been rolled out to 12 primary schools in the authority and more practitioners have been trained to use the technique.

Research suggests that specific interventions targeting language and literacy in the early years may help to narrow the gap between disadvantaged children and their peers (see Springate *et al* 2008). Two of the studies reviewed by the research team evaluated interventions focused on improving the language and literacy of young children from disadvantaged backgrounds (D'Anguilli 2005; McIntosh *et al* 2007). The programmes involved intensive teaching of reading strategies, guided reading, home reading programmes, phonological awareness, story retelling and story writing (D'Anguilli 2005; McIntosh *et al* 2007). The introduction of a district-wide literacy programme in the USA was associated with a reduction in severe reading disabilities from 26 to 4 per cent (D'Anguilli 2005). McIntosh *et al* (2007) suggest that phonological awareness can improve rapidly as the result of such interventions.

There is some evidence to suggest that literacy and language initiatives may have continuing effects on children's achievement. For instance, children from low SES families who took part in the literacy programme in US kindergartens (D'Anguilli 2005) showed good progress in their later school careers. Improvements transferred to success in areas other than literacy, including numeracy and problem-solving skills.

Children with EAL can also benefit from interventions designed to improve English language and literacy (Stuart 2004; D'Anguilli 2005; Silverman 2007). Silverman (2007) found that an initiative designed to improve vocabulary in pre-school resulted in rapidly improved vocabulary among children with EAL and reduced the language and literacy gap between them and their English-only speaking peers. Stuart (2004) studied a programme teaching phonics and phoneme awareness. The initiative improved spelling and word recognition among children with EAL, although it did not make a significant difference to children's reading comprehension scores.

Improving language skills in pre-school children through a song and rhyme project

Headteachers in deprived areas of Hampshire were concerned about poor speech, language and social skills in children entering reception class. A county-wide project called 'songs and rhymes' was introduced in 2005 to respond to the problem. As well as enhancing children's skills, the project was also considered to promote positive school–parent relationships, home learning and cultural diversity.

The project was led by the Early Education and Childcare Unit, with additional support from the Ethnic Minority Achievement Service and School Library Service.

At one infant school, which had experienced rapid immigration in a two-year period, the programme benefited a group of Nepalese and English children. It was found to improve: parent–teacher dialogue; teacher–pupil relationships; pupil confidence and friendships; contact between parents from different backgrounds; cultural understanding; joint working; and home learning. The children developed a huge repertoire of songs and rhymes, as well as showing a marked improvement in their ability to maintain a beat, recognise rhythm, identify initial sounds and invent their own verses. In addition, the programme eased the transition to reception, and increased children's readiness to learn, especially among the most vulnerable children and those with social needs.

One of the studies reviewed (McIntosh *et al* 2007) showed that an intervention targeting language and literacy skills can benefit from joint working between early years practitioners and speech and language therapists. Pre-school teachers implemented a programme designed by a speech therapist, who refined the intervention in response to teachers' feedback. The programme had a positive impact on language and phonological awareness among disadvantaged children.

Narrowing the gap in communication, language and literacy development

Leicester City's Early Years Foundation Stage (EYFS) profile results showed a considerable achievement gap, with as many as 70 per cent of children in Leicester scoring below the national average in communication, language and literacy (CLL) development. In order to address this, the authority developed a strategy focusing on the community, the family and the child. Their efforts have contributed to an improvement in CLL scores, especially for the 20 per cent most disadvantaged.

The strategy raised awareness of the importance of interacting with young children to support their communication and language development; ensured that all early years practitioners are trained to the speech and language communications framework universal level and every setting had one person trained to enhanced level, to provide leadership to other staff.

The council aimed to ensure that all families received information during pregnancy and early childhood on how to: promote communication skills; fully engage in their child's learning; access relevant resources; and access help early on if required.

The council set targets for every child to receive communication development assessments at nine and 24 months, with prompt follow-up if needed. Children should also experience positive daily interactions with a caregiver and have access to language-rich environments.

While specific interventions may be beneficial, the quality of pedagogical approaches also plays an important part in enabling children with EAL to access the curriculum. As discussed above, effective approaches entail an interactive pedagogy, teaching which is culturally sensitive and attuned to the needs of individual children (Smyth 2006; Chang *et al* 2007; Flynn 2007). Flynn (2007) identifies the characteristics of effective literacy teaching, including carefully considered interactions and genuine dialogue with children – such as role play and paired talk – to contextualise spoken and written English. Smyth (2006) studied strategies to help children from asylum-seeking families to access the curriculum. Successful strategies included encouraging children to direct their own learning, and inviting them to express their own preferences and issues. Other successful strategies helped children to develop their knowledge through creativity. Staff focused on improving communication with and between children, which encouraged children from asylum-seeking families to develop self-confidence in the class.

Whitely *et al* (2005) studied an initiative involving training US nursery school teachers to assess disadvantaged children for their level of development and risk of school failure. Staff developed appropriate activities for children in response to their individual needs. Almost all of the children who had been a cause for concern at the first screening were no longer considered to be at risk of school failure when assessed again six months later.

Improving assessment of children's early development

Tower Hamlets has introduced a new Early Learning Record, including the voices of children, parents and carers.

The system was designed for use by all practitioners working with children from birth to five. It involved developing assessment procedures for children from birth to five year olds that could be recorded in a data management system to support planning and target-setting. The system includes:

- a learning and development record (including assessment data and observation notes)
- the Learning Diary (including evidence for a child's learning journey, such as photos, drawings, children's and parents' comments)
- a booklet designed to help parents collate information about their child
- a Setting Story, including self-evaluation materials for providers.

Early years practitioners now have a complete system for collecting evidence which they can use to inform their planning. Ofsted has praised the system and the authority is confident that this has contributed to improved outcomes (in 2008/09 there was a 2.5 per cent increase in children achieving the expected levels in CLL and overall in the EYFS profile results).

Interventions can also help to improve children's behaviour. One study evaluated a US programme aimed at kindergarten and first grade children who showed aggressive behaviour. The programme involved intensive activities during the summer holidays, along with mentoring and monitoring by school advocates. At the end of the programme, the children showed less disruptive behaviour, increased social competence and greater adjustment to school (August *et al* 2003).

Children at risk of developing behavioural problems can also be helped through addressing parent behaviour. The Incredible Years basic parenting programme is a preventative strategy delivered by Sure Start staff in highly disadvantaged community settings. Children participating in this programme showed significant improvement compared to non-participating children in a randomised control trial (Hutchings *et al* 2007).

However, a recent review of literature suggests that the most disadvantaged children may be the least likely to benefit from programmes designed to improve behaviour (Springate *et al* 2008). There may also be difficulties in engaging disadvantaged parents in these interventions, leading to poor attendance (August *et al* 2003).

Data from the National Evaluation of Sure Start (NESS) (2008) provides evidence of improvement in both behavioural and social outcomes. Children in Sure Start local programme areas showed better social development than children with similar backgrounds in other areas. Sure Start local programme areas were also found to have positive effects on parenting behaviour. Parents living in Sure Start local programme areas

provided more stimulating home learning environments (HLEs), and engaged in less negative parenting than parents living elsewhere. As mentioned earlier, having a more stimulating home HLE has been identified as the most important factor in determining favourable child social outcomes (Sammons *et al* 2003, 2004). It is therefore likely that the impact of Sure Start local programmes on positive child social behaviour was a result of improved parenting, including a positive HLE (NESS 2008).

Research evidence emphasises the importance of high-quality provision. Centres that implemented Sure Start programmes in accordance with all the good-practice guidelines had better parent and child outcomes (Anning *et al* 2007). These centres empower staff and users, have strong leadership and provide well-targeted services. Certain aspects of programmes were related to specific outcomes for parents and children. Centres that created an empowering environment for staff and users were associated with a more stimulating HLE for children.

Evidence suggests that some groups, such as lone parents and those with limited language or literacy skills, experienced barriers to accessing Sure Start local programmes, so effective strategies for reaching such groups are particularly important. Centres with better strategies for encouraging uptake among hard-to-reach families were associated with higher non-verbal ability among three-year-olds.

8. Conclusions and main messages

This section sets out the main messages emerging from this knowledge review and identifies the implications for practice.

Key messages

Continuing to focus on reducing child poverty in local areas is of primary importance in improving young children's life chances and essential to eradicating child poverty by 2020.

Research evidence supports initiatives aimed at improving the home learning environment for children, especially for children from disadvantaged backgrounds.

Children benefit from early years provision that is sensitive to their needs, helps to introduce different experiences and provides culturally relevant learning opportunities. Culturally sensitive outreach work to minority groups could help to strengthen practitioners' understanding of home environments and improve communication between early years practitioners and families from minority groups.

Early years settings can harness the skills of bilingual members of staff to help young children with English as an additional language (EAL). Early years professionals could benefit from guidance and training on how to work effectively with children with EAL.

Early years settings are effective when they tailor the curriculum to meet individual needs and staff encourage children to initiate their own learning through play activities and get involved in 'sustained shared thinking'.

Children can benefit from specific support with language and literacy that is appropriate for their developmental stage and tailored to meet their individual learning needs.

What matters most for children's outcomes?

The link between children's achievement and poverty is very clear. The gap in achievement for children living in poverty is evident when they start pre-school and they continue to make slower progress throughout the primary school. Children living in poverty also have poorer outcomes in other areas, including health and safety. Moreover, their behaviour can be poor, along with their confidence and social skills, although these only become apparent at primary school. Poverty affects certain groups of children disproportionately with minority ethnic groups being the most likely to live in poverty than the population in general. Almost two thirds of Pakistani and Bangladeshi children and more than half of black non-Caribbean children were living in poverty in 2006/07. After a period of reduction of child poverty up to 2004/05, recent years have seen a slight increase in the number of children living in poverty.

Children's achievement in the early years is negatively affected by not speaking English in the first instance. Some research findings, based on staff ratings of children's attainment and social development, might be influenced by staff attitudes and pre-conceptions about minority ethnic children. But the findings of these studies are consistent with information

from tests and assessments: social deprivation and having EAL are clearly more influential on outcomes than a child's ethnic group. Poverty continues to exert a negative influence throughout the early years, whereas children with EAL make better progress as their grasp of English improves.

The sorts of learning activities children do at home with their families (such as singing, reading stories, drawing and painting) are critical for children's outcomes in the early years. What parents do to help their young children learn can reduce the damaging influence of poverty on children's life chances. Moreover, childcare provision that is of sufficiently high quality has been found to have a positive impact on the cognitive and social development of two-year-olds.

What helps children from different backgrounds to have a good experience in pre-school, and what works in improving outcomes?

Helping children to make a positive transition to pre-school and school gives them a good start in learning and social development. Children from minority backgrounds and children with EAL can experience greater challenges in adapting to a new environment and experiences.

Children using EAL face particular communication challenges. These can lead to withdrawal, frustration and poorer relationships with teachers. Effective interventions help these children to communicate, make progress and develop their English language skills. This has positive implications for attainment, social and behavioural outcomes. Bilingual staff can provide support, but this needs leadership and continuing professional development.

Effective pre-schools emphasise both social and cognitive development and focus on the needs of particular individuals and groups. Children in effective pre-schools spend two thirds of their time in child-initiated activities. Pedagogical approaches that capture children's interest and allow children to take charge of their own learning are linked to good outcomes and effective practice.

Given the fact that children from poor backgrounds and those with EAL have less developed language and literacy skills, the evidence suggests that these children need additional support to access the primary school curriculum.

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Appendix 1: Searching results and search strategy

This appendix contains details of the search results and strategy. The initial searches generated 259 titles. In response to feedback from the Theme Advisory Group (TAG), the main review team undertook searches of three databases of medical and health literature, which yielded a further 188 relevant items. In addition, the TAG made 14 specific recommendations and a further four references were identified by the team from bibliographies contained in the searched items. In all, 465 items were identified and considered for inclusion in this review.

Well over half of the items identified in the searches were research reports. The remainder were policy documents, together with smaller numbers of theory papers, conference reports, opinion pieces and practice descriptions. Very few international comparative documents and literature reviews were identified through the searches. Other types of material included descriptions of ongoing research. The largest number of items identified was from the United Kingdom. A substantial number were from the US, with a smaller number from Canada, Australia and New Zealand. The research studies used a variety of designs including longitudinal, cross-sectional, case study, qualitative and mixed-methods approaches.

Items were prioritised for inclusion in the review on the basis of an initial coding. Items were then further prioritised for inclusion based on type of research design and relevance to the review questions. At this stage, references from the UK were given greater priority, although highly relevant items from other countries were also included. The robustness of the prioritised references was then considered to determine final inclusion. This resulted in a final selection of 35 studies.

Search process

The first stage in the review process was for the Theme Lead to set the key review questions and search parameters for the initial scoping study and agree them with the National Foundation for Educational Research (NFER) team. The list of databases and sources to be searched was also agreed with the Theme Lead. Sets of keywords were selected from the British Education Index (BEI) and were supplemented with free text phrases. The sets comprised an early years set covering a range of concepts equating to the early years 'stage' and two sets of terms relating to diversity (such as race, religion, social class, culture and language). A set of terms relating to disability was built in order to exclude items relating to this from some searches because disability was the subject of a separate theme. Individual ethnic groups and religions were not searched for.

The keywords were adhered to as far as possible for all bibliographic databases, with closest alternatives selected where necessary. Web-based databases were searched using a more limited number of terms, enabling a simultaneous search across the three priority areas within the early years theme. A list of websites considered relevant to the search was compiled by the NFER team and supplemented by key organisations identified in the National Children's Bureau (NCB) organisations database, the British Education

Internet Resource Catalogue (BEIRC) and by others identified in the course of the bibliographic database searches. Current research was specifically searched for in the CERUKPlus (education and children's services research) database, in the Research Register for Social Care and on the websites of key organisations. Members of the TAG were invited to suggest relevant documents, networks and websites.

The next stage in the process was to carry out searching across the specified databases. The database and web searches were conducted by information specialists. Initial screening was done at this stage to ensure the results conformed to the search parameters. The records selected from the searches were then loaded into a Reference Manager database and the data 'cleaned'. This included removing duplicates, checking citations and sourcing missing abstracts. The data was then transferred to an Excel spreadsheet.

At main review stage the existing searches were supplemented by the addition of three health and psychological databases, on the recommendation of the TAG. The new databases were Cumulative Index to Nursing and Allied Health Literature (CINAHL Plus), MEDLINE and PsycINFO. The existing scoping study searches were replicated as far as possible, using similar keywords to those identified in BEI, using the MeSH Thesaurus for MEDLINE. Searches were limited to items published in the English language between 2000 and 2008.

Records selected from the searches were loaded into Eppl-Reviewer, which replaced the earlier Reference Manager and Excel software. All existing records for the scoping study were transferred into the new software.

Search strategy

The following section provides information on the keywords and search strategy for each database and web source searched. All scoping study searches were conducted by information specialists at NFER, with the exception of ChildData, which was searched by an information specialist at the NCB. The additional searches for the main review were conducted by information specialists at the Social Care Institute for Excellence (SCIE) and NFER. The keywords used in the searches, together with a brief description of each of the databases searched, are outlined below. Keywords were not exploded due to time limitations, although narrower terms were used wherever possible and have been listed in the search strategy. This is denoted as (+NT). The following conventions have also been used: (ft) denotes that free-text search terms were used and mp=title, original title, abstract, name of substance word, or subject heading word. Author searches and reference harvesting (following up references cited in text) were also undertaken.

Applied Social Sciences Index and Abstracts (ASSIA)

(searched via CSA 18/07/08)

ASSIA is an index of articles from over 500 international English-language social science journals.

Early years set

- #1 early childhood education
- #2 early years (ft)
- #3 under fives (ft)
- #4 young children
- #5 preschools
- #6 nursery schools
- #7 nursery classes
- #8 kindergartens
- #9 childcare
- #10 childcare centres
- #11 day care
- #12 primary schools
- #13 #1 or #2 or #3 or #4 or #5 or #6 or #7 or #8 or #9 or #10 or #11 or #12

Race, culture, language set

- #14 race
- #15 ethnic groups
- #16 ethnic differences
- #17 social integration
- #18 multicultural education
- #19 cultural differences
- #20 ethnicity
- #21 racial differences
- #22 English as a second language
- #23 bilingualism
- #24 multilingualism
- #25 religious groups
- #26 religions
- #27 #14 or #15 or #16 or #17 or #18 or #19 or #20 or #21 or #22 or #23 or #24 or #25 or #26
- #28 #13 and #27

Outcomes, social class set

- #29 academic achievement
- #30 narrowing the gap (ft)
- #31 what works
- #32 free school meals (ft)
- #33 poverty

#34	child poverty
#35	isolation
#36	social deprivation (ft)
#37	social exclusion (ft)
#38	socioeconomic status
#39	social background
#40	social integration
#41	#29 or #30 or #31 or #32 or #33 or #34 or #35 or #36 or #37 or #38 or #39 or #40
#42	#13 and #41

Australian Education Index (AEI)

(searched via Dialog 09/07/08)

AEI is Australia's largest source of education information. It covers reports, books, journal articles, online resources, conference papers and book chapters.

Early years set

#1	under fives (ft)
#2	early childhood education
#3	young children
#4	preschool centres or preschool children or preschool education or preschool curriculum or preschool units
#5	kindergarten or kindergarten children
#6	nursery schools
#7	playgroups
#8	childcare
#9	day care services
#10	childrens centres (ft)
#11	#1 or #2 or #3 or #4 or #5 or #6 or #7 or #8 or #9 or #10

Race, culture, language set

#12	race
#13	ethnic groups
#14	social-integration
#15	multicultural education
#16	cultural background
#17	cultural differences
#18	ethnicity
#19	racial differences
#20	ethnic differences
#21	English-second-language
#22	bilingualism
#23	multilingualism
#24	limited-English-speaking
#25	non-English speaking background

#26	religious-cultural groups
#27	religious differences
#28	religion
#29	#12 or #13 or #14 or #15 or #16 or #17 or #18 or #19 or #20 or #21 or #22 or #23 or #24 or #25 or #26 or #27 or #28
#30	#11 and #29

Outcomes/social class set

#31	outcomes of education
#32	educational attainment
#33	narrowing the gap (ft)
#34	what works (ft)
#35	economically disadvantaged or educationally disadvantaged or disadvantaged
#36	low income groups
#37	poverty
#38	child poverty (ft)
#39	social isolation
#40	social deprivation (ft) or social exclusion (ft)
#41	socioeconomic status or socioeconomic background
#42	social differences
#43	social background
#44	social integration
#45	#31 or #32 or #33 or #34 or #35 or #36 or #37 or #38 or #39 or #40 or #41 or #42 or #43 or #44
#46	#11 and #45

Note: A number of the AEI 'hits' were blank records with the message 'information withdrawn by the provider'.

British Education Index (BEI)

(searched via Dialog 08/07/08)

BEI provides information on research, policy and practice in education and training in the UK. Sources include over 300 journals, mostly published in the UK, plus other material including reports, series and conference papers.

Early years set

#1	early childhood education
#2	early years (ft)
#3	under fives (ft)
#4	young children
#5	preschool education
#6	preschool children
#7	preschool playgroups
#8	nurseries

#9	nursery schools
#10	nursery school curriculum
#11	nursery school education
#12	nursery classes
#13	kindergarten
#14	kindergarten children
#15	childcare
#16	playgroups
#17	day nurseries
#18	childrens centres
#19	foundation stage (ft)
#20	primary schools
#21	primary education
#22	#1 or #2 or #3 or #4 or #5 or #6 or #7 or #8 or #9 or #10 or #11 or #12 or #13 or #14 or # 15 or #16 or #17 or #18 or #19 or #20 or #21

Race, culture, language set

#23	race
#24	ethnic groups (note: individual groups not searched)
#25	social-integration
#26	multicultural education
#27	cultural background
#28	cultural differences
#29	ethnicity
#30	racial differences
#31	English-second-language
#32	bilingualism
#33	multilingualism
#34	limited English-speaking
#35	religious-cultural groups
#36	religious differences
#37	religion (note: individual religions not searched)
#38	#23 or #24 or #25 or #26 or #27 or #28 or #29 or 30# or #31 or #32 or #33 or #34 or #35 or #36 or #37

Disabilities/special educational needs (SEN) set (created in order to exclude these from results)

#39	disabilities
#40	disability
#41	special educational needs
#42	special needs
#43	learning difficulties
#44	#39 or #40 or #41 or #42 or #43
#45	(#22 and #38) not #44

Outcomes/social class set

#46	outcomes of education
#47	educational attainment
#48	narrowing the gap (ft)
#49	what works (ft)
#50	economically disadvantaged
#51	free school meals (ft)
#52	low income groups
#53	poverty
#54	child poverty (ft)
#55	social isolation
#56	disadvantaged
#57	social deprivation (ft)
#58	social exclusion (ft)
#59	socioeconomic status
#60	educationally disadvantaged
#61	social differences
#62	social background
#63	#46 or #47 or #48 or #49 or #50 or #51 or #52 or #53 or #54 or #55 or #56 or #57 or #58 or #59 or #60 or #61 or #62
#64	(#63 and #22) not #44

British Education Internet Resource Catalogue (BEIRC)

(searched 09/07/08)

BEIRC is a freely accessible database of information about professionally evaluated and described internet sites that support educational research, policy and practice.

#1 early childhood education or preschool education or daycare centres or kindergarten or nursery schools or nursery school curriculum or play groups or primary education or young children

CERUKPlus

(searched 22/07/08)

The CERUKPlus database provides access to information about current and recently completed research, PhD level work and practitioner research in the field of education and children's services.

#1 early childhood education or early childhood education and care or preschool education or preschool children

ChildData

(search completed 30/07/08)

ChildData is the NCB database, containing details of around 35,000 books, reports and journal articles about children and young people.

- #1 preschool children
- #2 preschool education
- #3 day care
- #4 early childhood care and education
- #5 early childhood services
- #6 early primary school age
- #7 children's centres
- #8 nursery schools
- #9 nursery classes
- #10 educare (ft)
- #11 #1 or #2 or #3 or #4 or #5 or #6 or #7 or #8 or #9 or #10
- #12 #11 and multicultural (ft)
- #13 #11 and multiethnic
- #14 #11 and culture
- #15 #11 and equality (ft)
- #16 #11 and diversity
- #17 #11 and religions
- #18 #11 and poverty
- #19 #11 and social exclusion

Cumulative Index to Nursing and Allied Health Literature (CINAHL Plus)

(searched via EBSCO Host 14/10/08)

CINAHL Plus is the most comprehensive resource for nursing and allied health literature.

Early years set

- #1 early years (ft)
- #2 under fives (ft)
- #3 child, preschool
- #4 schools, nursery
- #5 schools, elementary or kindergarten (ft)
- #6 Students, elementary
- #7 playschool (ft)
- #8 child day care
- #9 #1 or #2 or #3 or #4 or #5 or #6 or #7 or #8

Race, culture, language set

- #10 cultural diversity or cultural sensitivity or cultural values
- #11 cultural competence
- #12 ethnic groups (+NT)
- #13 multilingualism
- #14 communication barriers
- #15 race relations (+NT)
- #16 English as a second language
- #17 #10 or #11 or #12 or #13 or #14 or #15 or #16

Outcomes, social class set

- #18 academic performance (+NT)
- #19 educational status
- #20 socioeconomic factors (+NT)
- #21 #18 or #19 or #20

Disabilities/SEN set (created in order to exclude these from results)

- #22 child, disabled
- #23 mental retardation (+NT)
- #24 child development disorders (+NT) or child development disorders, pervasive (+NT)
- #25 #22 or #23 or #24
- #26 (#9 and #17) not #25
- #27 (#9 and #21) not #25

Education Resources Information Center (ERIC)

(searched via Dialog 10/07/08)

ERIC is sponsored by the United States Department of Education and is the largest education database in the world. Coverage includes research documents, journal articles, technical reports, programme descriptions and evaluations and curricula material.

Early years set

- #1 early childhood education
- #2 early years (ft)
- #3 under fives (ft)
- #4 young children
- #5 preschool education
- #6 preschool children
- #7 preschool playgroups (ft)
- #8 nursery schools
- #9 kindergarten
- #10 child-care
- #11 child-care-centers

- #12 primary schools
- #13 #1 or #2 or #3 or #4 or #5 or #6 or #7 or #8 or #9 or #10 or #11 or #12

Race, culture, language set

- #14 race
- #15 ethnic groups
- #16 social integration
- #17 multicultural education
- #18 cultural background
- #19 cultural differences
- #20 ethnicity
- #21 racial differences
- #22 English-second-language
- #23 bilingualism
- #24 multilingualism
- #25 limited-English-speaking
- #26 religious-cultural groups
- #27 religion
- #28 #14 or #15 or #16 or #17 or #18 or #19 or #20 or #21 or #22 or #23 or #24 or #25 or #26 or #27

Outcomes, social class set

- #29 outcomes of education
- #30 educational attainment
- #31 narrowing the gap (ft)
- #32 what works (ft)
- #33 economically disadvantaged
- #34 free school meals (ft)
- #35 low income groups
- #36 poverty
- #37 child poverty (ft)
- #38 social isolation
- #39 disadvantaged
- #40 social deprivation (ft)
- #41 social exclusion (ft)
- #42 socioeconomic status
- #43 educationally disadvantaged
- #44 social differences
- #45 socioeconomic background
- #46 social integration
- #47 #29 or #30 or #31 or #32 or #33 or #34 or #35 or #36 or #37 or #38 or #39 or #40 or #41 or #42 or #43 or #44 or #45 or #46

Disabilities, SEN set

- #48 disabilities
- #49 special needs
- #50 learning disabilities
- #51 learning problems
- #52 #48 or #49 or #50 or #51
- #53 #28 or #47
- #54 (#53 and #13) not #52

Educational Evidence Portal (EEP)

(searched 13/07/08)

EEP enables users to search for educational evidence from a range of reputable sources via a single search.

- #1 early years

Making Research Count

(browsed 13/07/08)

Making Research Count is a collaborative national research dissemination network based regionally in the social work departments of nine UK universities. *Research news*, a newsletter which highlights recent or current research undertaken within the Making Research Count network, was browsed.

MEDLINE

(searched via Ovid SP 29/09/08)

MEDLINE is the primary source of international literature on biomedicine and healthcare.

- #1 early years
- #2 under fives
- #3 schools (+NT) or nursery
- #4 kindergarten mp.
- #5 playschool mp.
- #6 Child Day Care Centers (+NT)
- #7 cultural diversity (+NT)
- #8 ethnic* mp.
- #9 cultural characteristics (+NT)
- #10 multilingualism (+NT)
- #11 communication barriers (+NT)
- #12 race relations (+NT)
- #13 English as a second language mp.
- #14 esl mp.
- #15 #13 or #14

#16	achievement (+NT)
#17	educational status (+NT)
#18	socioeconomic factors (+NT)
#19	poverty (+NT)
#20	narrowing the gap mp.
#21	education, special (+NT)
#22	learning difficulties mp.
#23	developmental disabilities (+NT)
#24	mental retardation (+NT)
#25	#22 or #23 or #24
#26	disabled children (+NT)
#27	special needs mp.
#28	#1 or #2 or #3 or #4 or #5 or #6
#29	#7 or #8 or #9 or #10 or #11 or #12 or #15
#30	#16 or #17 or #18 or #19 or #20
#31	#21 or #25 or #26 or #27
#32	(#28 and #29) not #31
#33	(#28 and #30) not #31

PsycINFO

(searched via Silverplatter 24/09/08)

PsycINFO contains references to the psychological literature including articles from over 1,300 journals in psychology and related fields, chapters and books, dissertations and technical reports.

Early childhood set

#1	child-care
#2	child-day-care
#3	kindergarten-students
#4	nursery-school students
#5	nursery-schools
#6	preschool-students
#7	preschool-education
#8	play group or playgroup (ft)
#9	young children (ft)
#10	childrens cent* (ft)
#11	foundation stage (ft)
#12	early years (ft)
#13	early childhood education (ft)
#14	under fives (ft)
#15	elementary-schools
#16	primary-school-students
#17	#1 or #2 or #3 or #4 or #5 or #6 or #7 or #8 or #9 or #10 or #11 or #12 or #13 or #14 or #15 or #16

Race, culture, language set

#18	language-proficiency
#19	bilingualism
#20	multilingualism
#21	English-as-second-language
#22	cross-cultural-differences
#23	multicultural-education
#24	racial-and-ethnic-differences
#25	religion
#26	religious-groups
#27	#18 or #19 or #20 or #21 or #22 or #23 or #24 or #25 or #26
#28	#17 and #27

Outcomes, social class set

#29	poverty
#30	lower-income-level
#31	disadvantaged
#32	academic-achievement
#33	social differences
#34	social background
#35	free school meals (ft)
#36	child poverty (ft)
#37	disadvantaged (ft)
#38	outcomes of education (ft)
#39	narrowing the gap (ft)
#40	what works (ft)
#41	social-integration
#42	socioeconomic-status
#43	social-deprivation
#44	social-isolation
#45	#29 or #30 or #31 or #32 or #33 or #34 or #35 or #36 or #37 or #38 or #39 or #40 or #41 or #42 or #43 or #44
#46	#17 and #45

Research in Practice

(browsed 13/07/08)

Research in Practice is the largest children and families research implementation project in England and Wales. It is a department of the Dartington Hall Trust and is run in collaboration with the Association of Directors of Children's Services, the University of Sheffield and a network of over 100 participating agencies in the UK. The EvidenceBank and publications sections were browsed.

Research Register for Social Care (RRSC)

(searched 13/07/08)

The RRSC provides access to information about ongoing and completed social care research that has been subject to independent ethical and scientific review.

- #1 pre-school children or early years (ft)
- #2 childcare (ft)
- #3 integrated services

Note: student research excluded.

Social Care Online

(searched 13/07/08)

Social Care Online is the SCIE database, covering an extensive range of information and research on all aspects of social care. Content is drawn from a range of sources including journal articles, websites, research reviews, legislation and government documents and service user knowledge.

- #1 pre-school children
- #2 integrated services and early years (ft)
- #3 early years (ft) and health

Social Policy and Practice

(searched via Silverplatter 21/07/08)

Social Policy and Practice is a bibliographic database with abstracts covering evidence-based social policy, public health, social services, and mental and community health. Content is mainly from the UK, with some material from the USA and Europe.

- #1 early years or preschool education or primary education
- #2 under fives or early childhood education or kindergarten
- #3 nursery or foundation stage or childcare
- #4 #1 or #2 or #3
- #5 race or ethnic groups or social integration
- #6 multicultural education or cultural background or cultural differences
- #7 ethnicity or racial differences or English second language
- #8 bilingualism or multilingualism or religion
- #9 religious groups
- #10 #5 or #6 or #7 or #8 or #9
- #11 #4 and #10
- #12 outcomes of education or educational attainment or narrowing the gap
- #13 what works or economically disadvantaged or free school meals
- #14 low income groups or poverty or child poverty
- #15 social isolation or disadvantaged or social deprivation
- #16 social exclusion or socioeconomic status or educationally disadvantaged
- #17 social differences or social background or social integration

- #18 #12 or #13 or #14 or #15 or #16 or #17
- #19 #4 and #18

Appendix 2: Search parameters

This appendix contains the parameters for the scoping study, set by the Theme Advisory Group.

Brief description of priority

Rationale: early years settings across the maintained and public, voluntary and independent sectors, in both urban and rural locations, are now working with children and families from a wide range of backgrounds, including differences in culture, class, lifestyle, language, religion and nationality. This raises a range of issues for practitioners such as the development of knowledge and understanding about the children they will be working with, the ability to deal positively with difference and how to make settings more accessible for families both physically and emotionally. Successes with inclusion initiatives will ultimately contribute to narrowing the gap for children from these often excluded families as practice is related more closely to their needs and as families are initially welcomed and then retained within the settings. It can also contribute to the community cohesion agenda, as young children develop positive views of difference and practitioners are enabled to work with parents on such issues. Work on improved systems of data collection will be particularly central to this work as will be the availability of resources and training for local authorities to support practitioners in creating settings in which all young children feel they belong. Strands of current policy and practice development which relate to this priority include the development of support for children with English as an additional language, support for outreach skills and the quality improvement programme.

Definition: 'early years settings'

In this case, early years settings are defined as all of the forms of group provision available for the care and education of children aged 0 to seven years outside of their own homes.

Definition: 'inclusion'

Inclusion is a process of identifying, understanding and breaking down the barriers to participation and belonging.

Main (research) questions to be answered and issues to be covered

1. What evidence is there of poorer experiences and outcomes for children from different backgrounds in terms of: ethnicity, culture, language, religion, social class, poverty/deprivation and other relevant factors? (Other relevant factors could include family structure and family mobility but not disability, as this is the focus of a separate theme.)
2. Is there evidence to support specific strategies that help children from all backgrounds and with diverse characteristics to access the curriculum?

Are there any cross-cutting issues to be included?

Child poverty

Equality and diversity

What is the likely geographical scope of the searches?

- | | |
|---|--|
| ☒ England | ☒ Wales |
| ☒ Scotland | ☒ N Ireland |
| ☒ Republic of Ireland | ☒ Australia/New Zealand |
| ☒ USA/Canada | ☐ Other countries (<i>please specify</i>) |

Any comments: Main focus to be on studies carried out/including UK, especially England.

Age range

Birth to seven years.

Literature search dates

Start year: 2000.

What type of literature do you wish us to include?

- ☒ **Published research studies (books and journal articles)**
- ☒ **Conference reports; committee papers; unpublished reports**
(‘grey literature’)
- ☒ **Policy documents**
- ☐ **Practice descriptions and guides**
- ☒ **Other types of literature -**

please name Information on current research

Which key words should be used for searching the literature?

Early childhood set: Early childhood education; Early years; Under fives; Young children; Preschool education; Preschool children; Preschool playgroups; Nurseries; Nursery schools; Nursery school curriculum; Nursery school education; Nursery classes;

Kindergarten; Kindergarten children; Young children; Childcare; Playgroups; Day nurseries; Childrens Centres; Foundation stage; Primary schools; Primary education.

Inclusive practice (narrowing the gap); Race; Ethnic groups (note: individual groups not searched); Social-integration; Multicultural education; Cultural background; Cultural differences; Ethnicity; Racial differences; English-second-language; Bilingualism; Multilingualism; Limited-English-speaking; Religious-cultural groups; Religious differences; Religion (note: individual religions not searched).

Outcomes of education: Educational attainment; Narrowing the gap (ft); What works (ft); Economically disadvantaged; Free school meals (ft); Low income groups; Poverty; Child poverty (ft); Social isolation; Disadvantaged; Social deprivation (ft); Social exclusion (ft); Socioeconomic status; Educationally disadvantaged; Social differences; Social background; Social integration.

NOT Disabilities; Disability; Special educational needs; Special needs; Learning difficulties

Websites, databases and networks to be searched or included as key sources

(None suggested.)

Key texts/books suggested by the Theme Advisory Group

The Equalities Review (2007) *Fairness and freedom: the final report of the Equalities Review*, London: The Equalities Review (available at http://archive.cabinetoffice.gov.uk/equalitiesreview/upload/assets/www.theequalitiesreview.org.uk/equality_review.pdf, accessed 15 July 2008).

Page, J., Whitting, G. and McLean, C. (2007) *Engaging effectively with black and minority ethnic parents in children's and parental services* (DCSF research report 013), London: DCSF (available at www.dcsf.gov.uk/research/data/uploadfiles/DCSF-RR013.pdf, accessed 15 July 2008).

Sammons, P., Sylva, K., Melhuish, E., Siraj-Blatchford, I., Taggart, B., Barreau, S. and Grabbe, Y. (2008) *The influence of school and teaching quality on childrens progress in primary school* (DCSF research report 028), London: DfES (available at www.dfes.gov.uk/research/data/uploadfiles/DCSF-RR028.pdf, accessed 15 July).

Seaman, P., Turner, K., Hill, M., Stafford, A. and Walker, M. (2006) *Parenting and children's resilience in disadvantaged communities*, London: National Children's Bureau.

Siraj-Blatchford, I., Sylva, K., Muttock, S., Gilden, R. and Bell, D. (2002) *Researching effective pedagogy in the early years* (DfES research report 356), London: DfES (available at www.dfes.gov.uk/research/data/uploadfiles/RR356.pdf, accessed 15 July 2008).

Siraj-Blatchford, I. (2004) 'Educational disadvantage in the early years: how do we overcome it? Some lessons from research', *European early childhood education research journal*, vol 12, no 2, pp 5–20.

Sylva, K., Melhuish, E., Sammons, P., Siraj-Blatchford, I. and Taggart, B. (2004) The Effective Provision of Pre-School Education (EPPE) Project: final report. A longitudinal study funded by the DfES 1997–2004, London: DfES (available at www.dfes.gov.uk/research/data/uploadfiles/SSU_FR_2004_01.pdf, accessed 15 July 2008).

Tunstall, J., Meadows, P., Allnock, D., Akhurst, S. and Garbers, C. (2005) *Implementing Sure Start Local Programmes: an integrated overview of the first four years* (NESS summary SF010), London: DfES (available at www.surestart.gov.uk/doc/P0001865.pdf, accessed 17 September 2008).

Appendix 3: Validated local practice criteria

What is validated local practice?

Validated local practice examples describe how local authorities and their partners have successfully tackled key challenges and improved outcomes for children and young people. Their success in achieving improved outcomes has been assessed as being sufficiently well evidenced to merit inclusion within the review.

Collection methods

The Centre for Excellence and Outcomes in Children and Young People's Services (C4EO) collected practice examples by sending invitations to local authorities and trusts to submit promising or proven practice examples to C4EO relevant to each theme after the knowledge workshops. A call for practice examples was also placed on the C4EO website and publicised through various publications. Members of the Thematic Advisory Groups were also asked to use their own contacts and networks to publicise the call for practice examples. Respondents submitted examples in hard copy or via email.

Validation process

Local authorities and their partners were asked to submit their practice examples in a form that was designed to encourage them to fully describe their practice and to provide evidence of how it had improved outcomes. The forms were then assessed by a validation panel made up of a small group of sector specialists, professionals drawn from across the children's sector who have an expertise and a track record of achievement in the Early Years theme. Two sector specialists assessed each example against the following validation criteria:

Adequacy of the information supplied. Is there enough to apply the validation process? If not, and if the practice has potential, the National Foundation for Educational Research (NFER) will request more information; we will try to do this at screening stage.

Strength of the rationale. Was the intervention/practice fit for purpose and based upon a clear and sound rationale? Was it based on prior and good-quality evidence of need and what works in similar contexts?

Sufficiency of impact and outcome evidence. Is there sufficient external and/or internal evaluation evidence that the practice/intervention has made a difference and led to improved outcomes? Are there good practitioner, service user and other stakeholder views? Do others implementing the same or similar practice or strategy changes or interventions report similar findings?

Evidence of what has/has not worked and why. Is there some good guidance here that will be useful to others? What are the golden threads for what works? What barriers and ways of overcoming these have been documented?

Actual or potential for replication or transfer to other contexts and settings. What evidence is there that the practice has already been successfully transferred to different settings, or has the potential for replication? Which elements are especially transferable? What elements are non-negotiable, and which are open to adaptation to suit other contexts? What do people need to put in place to transfer the practice, without substantial loss of effect?

Where two sector specialists assessed an example as being strongly supported by practice experience and evidence or describing promising practice along with a good rationale for the intervention and some evidence of success and potential to be replicated, the Theme Lead was asked to review the assessment. Only examples which were endorsed by the Theme Lead were validated.

This knowledge review has only drawn on validated practice examples.

Appendix 4: National indicators and key data sources

Relevant national indicators and data sources for the Early Years theme – Narrowing the gap in outcomes

ECM outcome	National indicator (NI)	NI detail	Data source (published information)	Scale (published information)	Links to data source
Be Healthy	NI50	Emotional health of children	Millennium Cohort Study	National (UK and country level)	www.cls.ioe.ac.uk/studies.asp?section=0001000200010011
		Percentage of five- to 16-year-olds with mental health problem	Mental Health of Children and Young People in Great Britain, 2004, ONS	National data only – five years plus, age groups are amalgamated and not presented separately.	www.statistics.gov.uk/downloads/theme_health/GB2004.pdf
	NI51	Effectiveness of child and adolescent mental health services	Nothing identified for early years as yet		
	NI53	Prevalence of breast-feeding at 6 to 8 weeks from birth	National Evaluation of Sure Start (using data collected from the Infant Feeding Survey, 2005)	Comparison of 310 Sure Start local programme areas with data for England	www.dcsf.gov.uk/everychildmatters/publications/0/1908/
			Infant Feeding Survey, 2005	Sample survey of 9,416 mothers	www.ic.nhs.uk/statistics-and-data-collections/health-and-lifestyles-related-surveys/infant-feeding-survey/infant-feeding-survey-2005

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	N154	Services for disabled children	NFER/RNIB survey of local authority VI services	National (100 English local authorities and/or consortia)	www.rnib.org.uk/aboutus/Research/reports/edemp/Pages/edemp.aspx
	NI55	Obesity among primary school age children in reception year	Health Profile of England	National and regional	www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsStatistics/DH_093465
				National and local authority	www.apho.org.uk/default.aspx?QN=P_HEALTH_PROFILES
	NI57	Children and young people's participation in high-quality PE and sport	Health Profile of England	National and regional	www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsStatistics/DH_093465
			Statistics on obesity, physical activity and diet: England	National and regional	www.ic.nhs.uk/statistics-and-data-collections/health-and-lifestyles/obesity/statistics-on-obesity-physical-activity-and-diet:-england-february-2009
			PE and Sport Survey 2008/09	National and local authority	www.teachernet.gov.uk/doc/14380/DCSF-RR168.pdf
	NI58	Emotional and behavioural health of children in care	DCSF: Children looked after in England (including adoption and care leavers) year ending 31 March 2009	National, regional and local authority	www.dcsf.gov.uk/rsgateway/DB/SFR/s000878/index.shtml
	Additional indicators	Children's tooth decay	Health Profile of England	National and regional	www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsStatistics/DH_093465
				Local authority	www.apho.org.uk/default.aspx?QN=P_HEALTH_PROFILES

		Infant mortality	Health Profile of England	National and regional	www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsStatistics/DH_093465
			Office for National Statistics	National and regional	www.statistics.gov.uk/pdfdir/ipm0909.pdf
			Gestation-specific infant mortality by social and biological factors 2006, Office for National Statistics	National	www.statistics.gov.uk/pdfdir/hsqsb0509.pdf
		Social inequalities – birthweight	The Health of Children and Young People	England and Wales, plus most deprived/least deprived areas	www.statistics.gov.uk/children/downloads/inequalities.pdf
			National Evaluation of Sure Start	Comparison of 310 Sure Start local programme areas with data for England	www.dcsf.gov.uk/everychildmatters/publications/0/1908/
			Office for National Statistics	England and Wales, regional	www.statistics.gov.uk/downloads/theme_population/FM1-37/FM1-37.pdf
Stay safe	NI64	Child protection plans lasting two years or more	National Evaluation of Sure Start	Comparison of 310 Sure Start local programme areas with data for England	www.dcsf.gov.uk/everychildmatters/publications/0/1908/
	NI65	Children becoming the subject of a child protection plan for a second or subsequent time	Nothing identified yet for early years		

Narrowing the gap in outcomes for young children through effective practices in the early years

	NI69	Children who experience bullying	Nothing identified yet for early years		
	NI70	Hospital admissions caused by unintentional and deliberate injuries to children and young people	National Evaluation of Sure Start	Comparison of 310 Sure Start local programme areas with data for England	www.dcsf.gov.uk/everychildmatters/publications/0/1908/
	NI71	Children who have run away from home/care overnight	Nothing identified yet for early years		
	Additional indicators	Child homicides	Home Office Statistics Bulletin: homicides, firearm offences and intimate violence	National	www.homeoffice.gov.uk/rds/pdfs09/hosb0209.pdf
Enjoy and achieve	NI72	Achievement of at least 72 points across the Early Years Foundation Stage with at least six in each of the scales in personal, social and emotional development and communications, language and literacy	DCSF: Foundation Stage Profile	National, regional and local authority level	www.dcsf.gov.uk/rsgateway/DB/SFR/s000879/index.shtml
	NI92	Narrowing the gap between the lowest achieving 20 per cent in the Early Years Foundation Stage Profile and the rest	DCSF: Foundation Stage Profile	National, regional and local authority level	www.dcsf.gov.uk/rsgateway/DB/SFR/s000879/index.shtml
	NI103	Special educational needs – statements issued within 26 weeks	Nothing identified yet for early years		

Economic well-being	NI116	Proportion of children in poverty	English House Condition Survey (EHCS)	National	www.communities.gov.uk/housing/housingresearch/housingsurveys/englishhousecondition/ehcsdatasupporting/ehcsstandardtables/disadvantagedliving/
	NI188	Take-up of formal childcare by low-income working families	National Evaluation of Sure Start	Comparison of 310 Sure Start local programme areas with data for England	www.dcsf.gov.uk/everychildmatters/publications/0/1908/
	Additional indicators	Early years provision	Childcare and early years providers survey	Sample survey: 109,700 childcare providers. National and regional.	www.dcsf.gov.uk/research/data/uploadfiles/DCSF-RR164(R).pdf
			Childcare and early years survey of parents	Sample survey: just under 7,100 parents. National and regional.	www.natcen.ac.uk/pzMedia/uploads/Downloadable/d96d563b-c083-428d-93ed-402fa4c44bdb.pdf
			Millennium Cohort Study	Sample survey. National (UK and country level)	www.cls.ioe.ac.uk/studies.asp?section=0001000200010011
			DCSF: Provision for children under five years of Age in England: First Statistical Release	National, regional and local authority level	www.dcsf.gov.uk/rsgateway/DB/SFR/s000848/index.shtml

Appendix 5: Technical details of the Foundation Stage Profile analysis

Glossary of terms

Variance

A measure of the spread of values between different objects in the same dataset. It is based on the squares of the differences between individual values and the overall mean, and is always greater than or equal to 'zero'. A variance of zero implies that all values are identical. Multi-level models allow us to estimate variances at different levels. For example, the pupil-level variance is a measure of the variability in outcomes between different pupils, and the school-level variance measures the variability between the average outcomes for different schools. These variances are generally reduced by the addition of background variables for the model, which tend to 'explain' some of the variability.

Multi-level modelling

Multi-level modelling is a development of **multiple regression techniques**. Multiple regression techniques study the relationships that are identified between variables in terms of the dependency of a single variable (the dependent or outcome variable) on a set of other explanatory or background variables. In multi-level modelling, the assumption is made that the data is collected from a hierarchical system, with, for example, some data relating to individual children and some relating to schools. Random variations can occur at any of these levels (see notes on standard error and residuals below), and can be fitted in the model. The model can therefore study the relationships between outcome variables and background variables, taking into account any random variations that might occur at child or school level.

Outcome variable

A numerical measure of some desired educational outcome, computed for each individual being modelled. It is assumed to be single-valued and continuous. Thus children's outcomes, such as the development in different learning areas that is observed in the Foundation Stage Profile (FSP), must be converted to a single-valued score for use in the model.

Background variable

This is a numerical measure of some educational or social factor that is believed to be influencing the outcome variable, either positively or negatively. A number of background variables may be included in the model, and may relate to children, schools or other levels. Background variables may either be continuous or dichotomous. An example of the latter is an 'indicator' variable that has the variable 'one' if the individual or unit belongs to a particular group (children in receipt of free school meals) and 'zero' otherwise (children not in receipt of free school meals). Most of the background variables for this study were dichotomous indicator variables.

Coefficient

One of the results of the modelling process is a coefficient, estimated for each background variable, which measures the strength of its influence on the outcome variable. It should be regarded as the rate at which the outcome variable increases per unit increase in the background variable. Indicator variables have coefficients that measure the average difference between being in the given group versus belonging to the reference (control) group. Therefore a coefficient of 0.668 (see Table 1) for sex indicates the average difference between boys and girls for the selected outcome variable (in this case, that boys have only two thirds the probability of girls of achieving 78 or more points at Foundation Stage).

Standard error

Each coefficient or variance computed by the modelling process is an estimate of its corresponding 'true' value based on the data available, and is therefore liable to be in error. The model also computes a standard error for each estimated parameter that measures the amount by which it might be in error. Generally, coefficients less than twice their standard error in absolute value are not regarded as significantly different from zero.

Residual

The residual or error term in the model for an object at any level (for example, pupil or school) is the amount of the outcome variable that is not predicted by the overall mean or the background variables. In other words, it is what is 'left over' after the model has been fitted. Residuals sum to zero for objects at a given level, and tend to become smaller as more background variables are fitted.

Odds ratio multiplier

Logistic regression gives an **odds ratio** that compares the odds of an event (achieving a certain threshold, for example) associated with one group of pupils, with the odds for another group. An odds ratio close to one shows there is little difference between two groups, whereas an odds ratio significantly greater or less than one indicates differences between the groups.

Effect size

An effect size is a way of displaying the effect of a number of variables that may have different scales. The effect size is the percentage change in the standard deviation of the outcome, for one standard deviation change in the independent variable.

The multi-level modelling process

The National Foundation for Educational Research (NFER) constructed a multi-level model to take account of the fact that some variables are inter-related and clustered together. Characteristics in the model included: the child's age, sex, special educational needs (SEN) status, being in receipt of free school meals and whether they lived in an area of high deprivation. It also included school-level variables, such as school type and size.

Three different sets of analyses were undertaken at this stage:

1. Basic frequency analysis to provide a profile of the children in the FSP for 2007 and 2008 (Figures 7 and 8).
2. Analysis of variance for the 2007 data to assess the difference in development scores between different groups of young people (on individual learning area scores and on total FSP score). This analysis was not undertaken with the 2008 data, since it was felt that the multi-level analysis provided more robust findings.
3. Multi-level logistic regression to identify the probability of any child achieving 78 or more points, including six points in each of the personal, social and emotional (PSE) development, and communications, language and literacy (CLL) measures (DCSF NI 72), controlling for background characteristics at pupil level (age, sex, ethnicity, receipt of free school meals, SEN status) and at school level (school size and type, for example).

The data to which the research team had access is hierarchical (variables can be identified at distinct levels – including the school and the student). This means that a multi-level modelling approach, which recognises differences at each level, can be used for the data analysis. In multi-level modelling, the process is begun by identifying an outcome variable (for example, pupil development in a particular learning area) then, for each level of the data, the background variables that might be thought to influence that outcome are defined. Regardless of the outcome variables that are selected, it is expected that there will be differences of outcome at each level:

- individuals will be different from each other
- individuals within one school will be collectively different from those in other schools
- individuals within schools in a region will be collectively different from those in schools in a different region.

These differences can be measured in terms of the extent to which each outcome variable is 'conditioned' by the background variables at each level. For example, the effect that having an identified special need is having on any pupil can be assessed by comparing the mean observed difference in a pupil's development with the expected mean for all children in the cohort, taking into account the relevant background variables at school and pupil level (including sex, ethnicity and receipt of free school meals).

By analysing the data in this way, it is possible to see the overall effects of each of the variables and identify the variables that have a significant impact. However, it should be remembered that:

- No multi-level model is likely to include every possible variable. The background variables included in the models are those available on the FSP dataset and on the Annual Schools Census and are those that are known from past and current research to be relevant to pupil outcomes.
- The model does not identify causality in a definitive way, but simply indicates significant factors which appear to bear some relationship to the outcomes. For instance, the analysis of the data indicated that young people in receipt of free school meals had lower levels of attainment than young people not in receipt of free school meals. This does not mean that being in receipt of free school meals (a proxy for socio-economic disadvantage) caused lower levels of attainment, but simply indicates that the attainment among such young people was lower than would have been expected by comparison with young people with the same background characteristics.
- A multi-level model is only as good as our understanding of the educational processes at work in influencing children's development.

The outcome variable

This was defined as the probability of any child achieving 78 or more points, including six points in each of the PSE and CLL measures and is based on national indicator 72. As the variable is dichotomous (a child either did or did not achieve the score), the model chosen was a logistic one.

The background variables

Table 1 lists the range of background variables used in the models and gives the scale of the dataset in which the variable appeared (note, for example, that although FSP data was available for 1,058,681 children, data on free school meals, on sex and on ethnicity was only available for 1,036,122 children); and the range (mostly zero to one), mean and standard deviation for each variable. Some children for whom only incomplete or questionable data was available had to be removed from the model. For example, one child (see below) was recorded as having an age that was 33.5 months below the average age of 53.5 months. This would have made the child only 20 months old – too young to be included in the FSP. One was recorded as aged 162 months (making the child 13 and a half years old. While these were probably the result of previous transcription errors, it meant the children with ages that were apparently outside the bounds of an early years cohort (0.1 per cent of the cohort) could not be included in the dataset for analysis.

Table 1. List of variables

Label	N	Min	Max	Mean	Std. dev.
LEA number	1036122	201.000	938.00	662.95	272.788
School ID	1036122	1000.000	595050.00	2717.26	3702.98
Pupil ID	1036122	1.000	175.000	13.335	16.982
Pupil-level background variables					
Eligibility for free school meals	1036122	0.000	1.000	0.154	0.361
Female	1036122	0.000	1.000	0.487	0.500
SEN – no statement	1036122	0.000	1.000	0.084	0.277
SEN – with statement	1036122	0.000	1.000	0.010	0.104
African	1036122	0.000	1.000	0.028	0.164
Other Asian background	1036122	0.000	1.000	0.012	0.110
Other black background	1036122	0.000	1.000	0.006	0.076
Other	1036122	0.000	1.000	0.013	0.112
Other white background	1036122	0.000	1.000	0.039	0.193
Other mixed background	1036122	0.000	1.000	0.015	0.121
Bangladeshi	1036122	0.000	1.000	0.014	0.118
Black Caribbean	1036122	0.000	1.000	0.013	0.113
Chinese	1036122	0.000	1.000	0.003	0.055
Gypsy/Roma	1036122	0.000	1.000	0.001	0.037
Indian	1036122	0.000	1.000	0.024	0.153
Not obtained	1036122	0.000	1.000	0.004	0.063

Irish	1036122	0.000	1.000	0.003	0.056
Pakistani	1036122	0.000	1.000	0.038	0.191
Refused	1036122	0.000	1.000	0.005	0.075
Traveller of Irish heritage	1036122	0.000	1.000	0.001	0.027
White and Asian	1036122	0.000	1.000	0.009	0.095
White and black African	1036122	0.000	1.000	0.005	0.069
White and black Caribbean	1036122	0.000	1.000	0.012	0.108
White	1036122	0.000	1.000	0.704	0.461
Age in months	1036122	48.00	59.000	53.491	3.513
Age in months (centred)	1036122	-5.475	5.525	0.000	3.484
Constant term	1036122	1.000	1.000	1.000	0.000
IDACI (centred)	1036122	-23.585	76.740	0.068	18.779
School-level background variables					
School type – Infant/First	1036122	0.000	1.000	0.233	0.429
School type – Primary/Combined	1036122	0.000	1.000	0.754	0.441
School type – Special school	1036122	0.000	1.000	0.004	0.064
Missing school type	1036122	0.000	1.000	0.005	0.109
School type – other	1036122	0.000	1.000	0.004	0.071
School size – small	1036122	0.000	1.000	0.333	0.472
School size – middle	1036122	0.000	1.000	0.327	0.469
School size – large	1036122	0.000	1.000	0.329	0.469
Missing school size	1036122	0.000	1.000	0.011	0.111

The model

The sample comprised 1,036,122 children who had both a summary profile on the FSP and matched data on the Annual Schools Census for other background characteristics.¹⁰ The logistic model of pupil outcomes presented here included data obtained from a number of sources:

- Data on young people's sex, eligibility for free school meals, SEN and ethnicity, obtained from the FSP.
- Background data obtained from the NFER's Register of Schools (ROS). This included data on location, size, age range, management type and school type (infant, primary, special).
- Data on young people's home neighbourhood using the Income Deprivation Affecting Children Index (IDACI). This is provided directly by the Department for Children, Schools and Families (DCSF) and already matched to the National Pupil Database. It is a measure of deprivation and shows the percentage of children living in each super output area (SOA) that live in families that are income-deprived (those in receipt of Income Support, Income-based Jobseeker's Allowance, or Working Families' Tax Credit or Disabled Person's Tax Credit below a given threshold).

The analysis focused on the development outcomes for children at the end of the Foundation Stage. It should be noted that these assessments are made by teacher observation and are, therefore, somewhat subjective, even though clear guidelines for assessment are given.

The construction of the models was an iterative, stepwise process. To begin with, each model was constructed at two levels, with simple residuals at school and pupil levels. In order to identify all significant variables, a procedure was adopted whereby the models were first set up without the background variables, in order to establish the amount of variance at school and pupil level for each of the outcome variables. Subsequently, sets of the pupil-level variables were included and those that were not significant were removed. School-level variables were then fitted and all non-significant variables were removed in order to get the most 'parsimonious' overall model (that is, the model that would explain the greatest amount of variance with the removal of all non-significant variables).

During this process, a number of further strategies were introduced at each stage in order to make sure that the various derived variables and background data were not overly weighted in the models. As in all such modelling, background variables were checked to examine their interaction with other variables and, where necessary, specific interaction variables were derived for inclusion in the analysis.

¹⁰ An additional 5,410 (1 per cent of the sample) had no pupil reference number on the Annual Schools Census, although the FSP records their gender. The reason for the omission of some children from the Census records is not recorded, but is likely to include children who entered Foundation Stage education after the completion of the Census in January 2007.

The model outcome

Figure 4 provides the equation for the final logistic regression model. The model did not explain all of the variation in outcomes at pupil or school level, suggesting that other variables not available to the analysis (such as whether the language spoken at home was a language other than English) may have had a significant impact on children's observed outcomes.

Table 2 provides estimates of the fixed coefficients for the model, including data on the standard error and the upper and lower limits of the estimates. Table 3 provides the mean odds ratio and the comparative effect size for each coefficient.

Figure 4. Final logistic model for national indicator 72 from data in the Foundation Stage Profile for 2007 and 2008

$$\begin{aligned}
 \text{GoodOV}_{ijkl} &\sim \text{Binomial}(\text{decons}_{ijkl}, \pi_{ijkl}) \\
 \text{logit}(\pi_{ijkl}) &= \beta_{0kl} \text{cons} + 0.668(0.006) \text{gend} + -0.012(0.000) \text{idaci_c}_{ijkl} + -0.594(0.009) \text{fsm}_{ijkl} + -1.582(0.010) \text{senmost}_{ijkl} + -0.407(0.021) \text{bang}_{ijkl} + \\
 &\quad -0.092(0.038) \text{ch}_{ijkl} + -0.445(0.018) \text{pak}_{ijkl} + -0.117(0.015) \text{af}_{ijkl} + -0.178(0.020) \text{others}_{ijkl} + -0.366(0.020) \text{other}_{ijkl} + -0.206(0.028) \text{carab}_{ijkl} + \\
 &\quad 0.038(0.013) \text{fsm08}_{ijkl} + 0.049(0.009) \text{gender08}_{ijkl} + 0.092(0.023) \text{pak08}_{ijkl} + 0.128(0.006) \text{year2008}_{ijkl} + -2.886(0.051) \text{senstat}_{ijkl} + \\
 &\quad 0.095(0.039) \text{carab08}_{ijkl} + -1.679(0.079) \text{gypsy}_{ijkl} + -1.427(0.104) \text{irishtrav}_{ijkl} + -0.213(0.030) \text{othbl}_{ijkl} + -3.453(0.319) \text{Special}_{ijkl} + \\
 &\quad -0.283(0.056) \text{OtherSch2}_{ijkl} + 0.138(0.001) \text{ageinmonthc}_{ijkl} \\
 \beta_{0kl} &= -0.262(0.025) + f_{0l} + v_{0kl} \\
 [f_{0l}] &\sim N(0, \Omega_f) : \Omega_f = [0.081(0.010)] \\
 [v_{0kl}] &\sim N(0, \Omega_v) : \Omega_v = [0.451(0.006)] \\
 \text{var}(\text{GoodOV}_{ijkl} | \pi_{ijkl}) &= \pi_{ijkl}(1 - \pi_{ijkl}) / \text{decons}_{ijkl}
 \end{aligned}$$

Table 2. Coefficients for logistic model: 78 + points in the Foundation Stage Profile 2007 and 2008

Label	Estimate	Standard error	Sig.	Min.	Max.
Baseline	-0.262	0.025	*	-0.311	-0.213
Year (2008)	0.128	0.006	*	0.116	0.140
Female	0.668	0.006	*	0.656	0.680
Female (2008)	0.049	0.009	*	0.031	0.067
IDACI (centred)	-0.012	0.0001	*	-0.012	-0.012
Age in months (centred)	0.138	0.001	*	0.136	0.140
Eligibility for free school meals	-0.594	0.009	*	-0.612	-0.576
Eligibility for free school meals (2008)	0.038	0.013	*	0.013	0.063
SEN no statement	-1.582	0.01	*	-1.602	-1.562
SEN with statement	-2.886	0.05	*	-2.984	-2.788
Other black background	-0.213	0.03	*	-0.272	-0.154
Bangladeshi	-0.407	0.021	*	-0.448	-0.366
Chinese	-0.092	0.038	*	-0.166	-0.018
Gypsy/Roma	-1.679	0.079	*	-1.834	-1.524
Pakistani	-0.445	0.018	*	-0.480	-0.410
Pakistani (2008)	0.092	0.023	*	0.047	0.137
Traveller of Irish heritage	-1.427	0.104	*	-1.631	-1.223
School type – Special school	-3.453	0.318	*	-4.076	-2.830
African	-0.117	0.015	*	-0.146	-0.088
Other Asian background	-0.178	0.02	*	-0.217	-0.139
Other	-0.366	0.02	*	-0.405	-0.327
Black Caribbean	-0.206	0.028	*	-0.261	-0.151
Black Caribbean (2008)	0.095	0.039	*	0.019	0.171
School type – other	-0.283	0.056	*	-0.393	-0.173

Table 3. Odds ratios (multipliers) and comparative effect sizes for logistic model: 78 + points in the Foundation Stage Profile 2007 and 2008

Label	Odds multiplier			SD	Comparative effect sizes		
	Lower	Mean	Upper		Lower	Mean	Upper
Baseline	1.123	1.137	1.150	0.500	0.058	0.064	0.070
Year 2008	1.928	1.950	1.973	0.500	0.328	0.334	0.340
Female	1.032	1.050	1.069	0.430	0.013	0.021	0.029
Female (2008)	0.988	0.988	0.988	18.779	-0.229	-0.225	-0.222
IDACI (centred)	1.146	1.148	1.150	3.484	0.474	0.481	0.488
Age in months (centred)	0.542	0.552	0.562	0.361	-0.221	-0.214	-0.208
Eligibility for free school meals	1.013	1.039	1.066	0.264	0.003	0.010	0.017
Eligibility for free school meals (2008)	0.202	0.206	0.210	0.277	-0.444	-0.438	-0.433
SEN – no statement	0.051	0.056	0.062	0.104	-0.311	-0.301	-0.290
SEN – with statement	0.762	0.808	0.857	0.076	-0.021	-0.016	-0.012
Other black background	0.639	0.666	0.694	0.118	-0.053	-0.048	-0.043
Bangladeshi	0.847	0.912	0.983	0.055	-0.009	-0.005	-0.001
Chinese	0.160	0.187	0.218	0.037	-0.068	-0.062	-0.056
Gypsy/Romany	0.619	0.641	0.664	0.191	-0.092	-0.085	-0.078
Pakistani	1.048	1.096	1.147	0.130	0.006	0.012	0.018
Pakistani (2008)	0.196	0.240	0.294	0.027	-0.044	-0.038	-0.033
Traveller of Irish Heritage							

School type – Special school	0.017	0.032	0.059	0.064	-0.262	-0.222	-0.182
African	0.864	0.890	0.916	0.164	-0.024	-0.019	-0.014
Other Asian background	0.805	0.837	0.870	0.110	-0.024	-0.020	-0.015
Other	0.667	0.694	0.721	0.112	-0.045	-0.041	-0.037
Black Caribbean	0.770	0.814	0.860	0.113	-0.029	-0.023	-0.017
Black Caribbean (2008)	1.019	1.100	1.187	0.080	0.001	0.008	0.014
Other Black	0.762	0.808	0.857	0.076	-0.021	-0.016	-0.012
School type – other	0.675	0.754	0.841	0.059	-0.023	-0.017	-0.010
	0.017	0.032	0.059	0.064	-0.262	-0.222	-0.182

Figure 5. Effect size of different variables on the probability of achieving a score of 78 or more points on the Foundation Stage Profile with at least six points in each PSE and CLL area

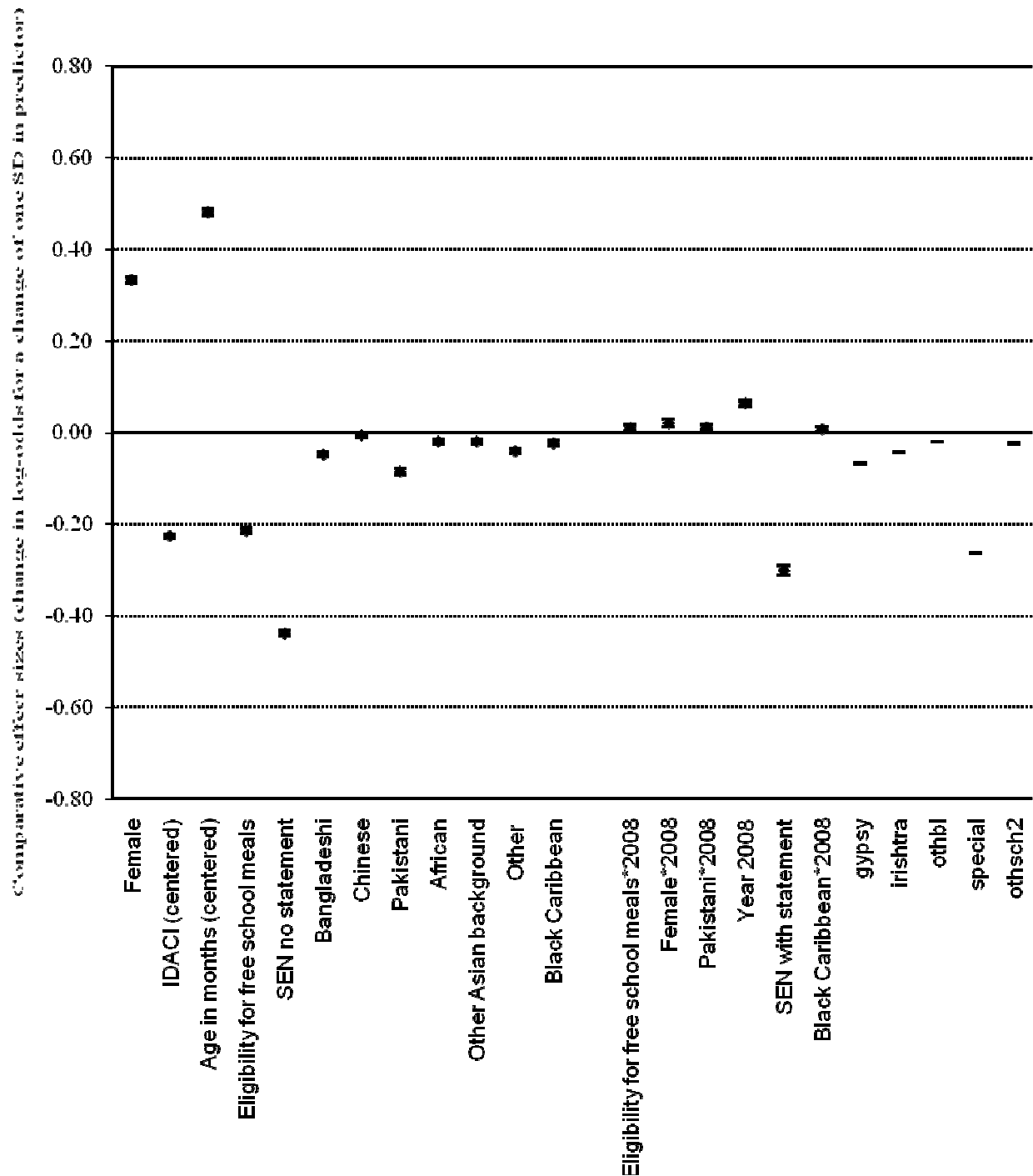


Figure 6. Odds ratios for achieving a score of 78 or more points on the Foundation Stage Profile, with at least six points in each PSE and CLL area

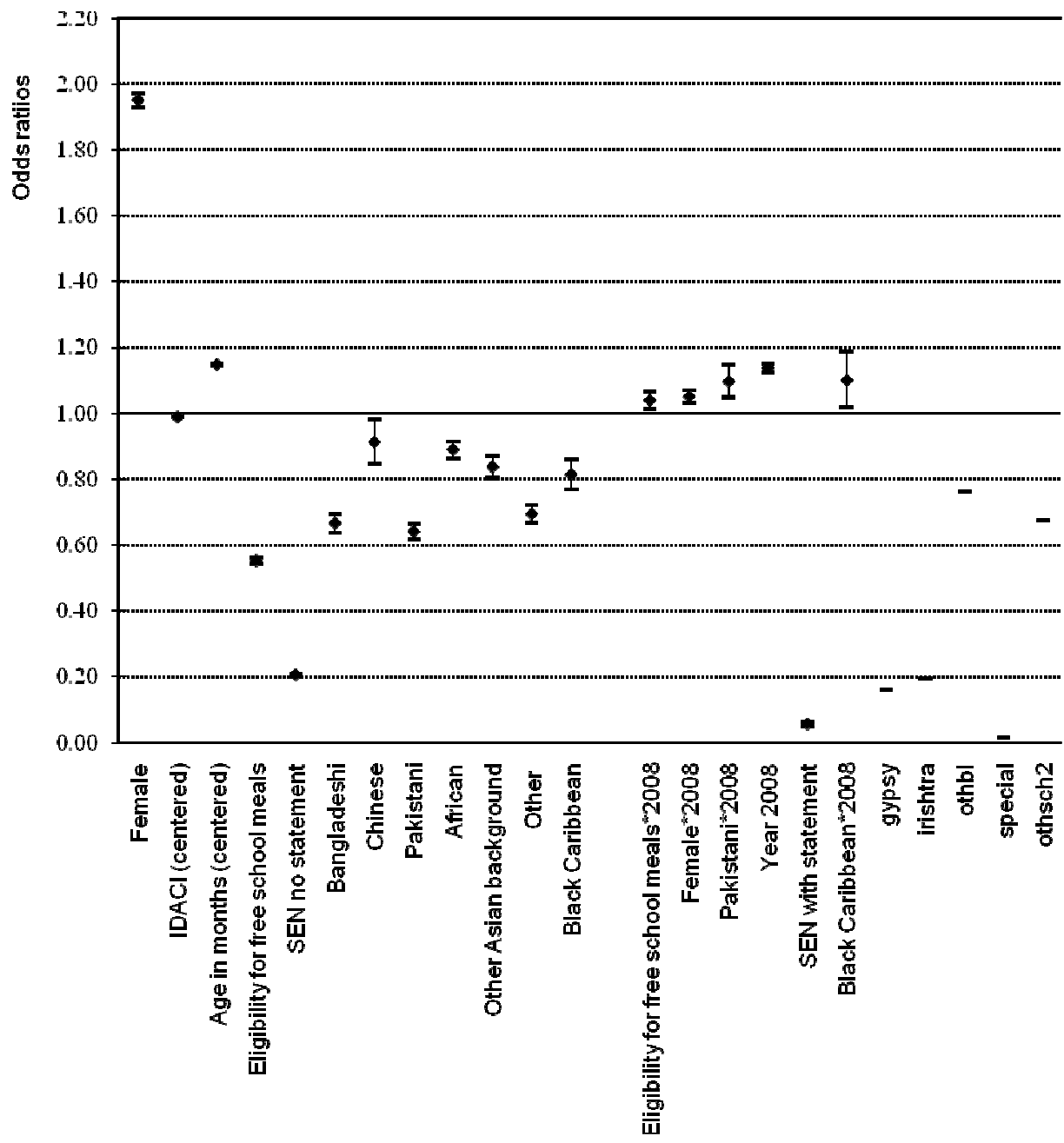


Figure 7. Probability of making good overall progress: changes between 2007 and 2008

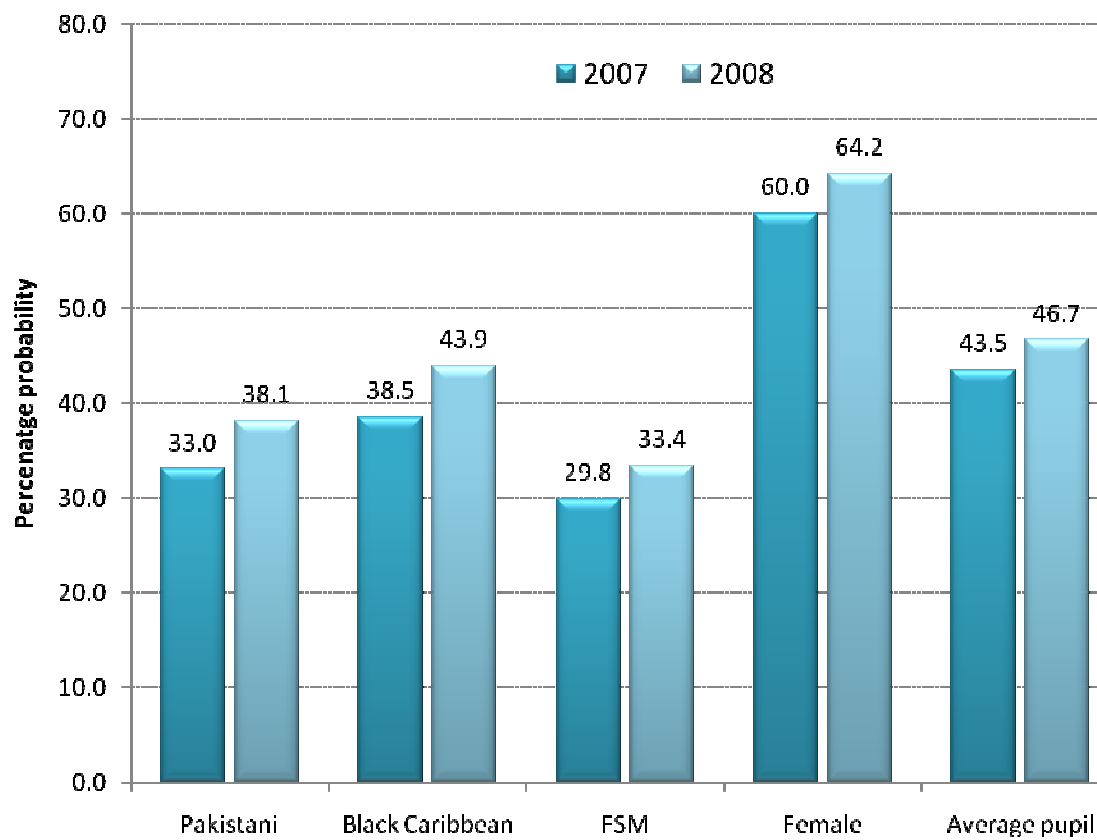


Figure 8. Probability of making good progress: changes between 2007 and 2008

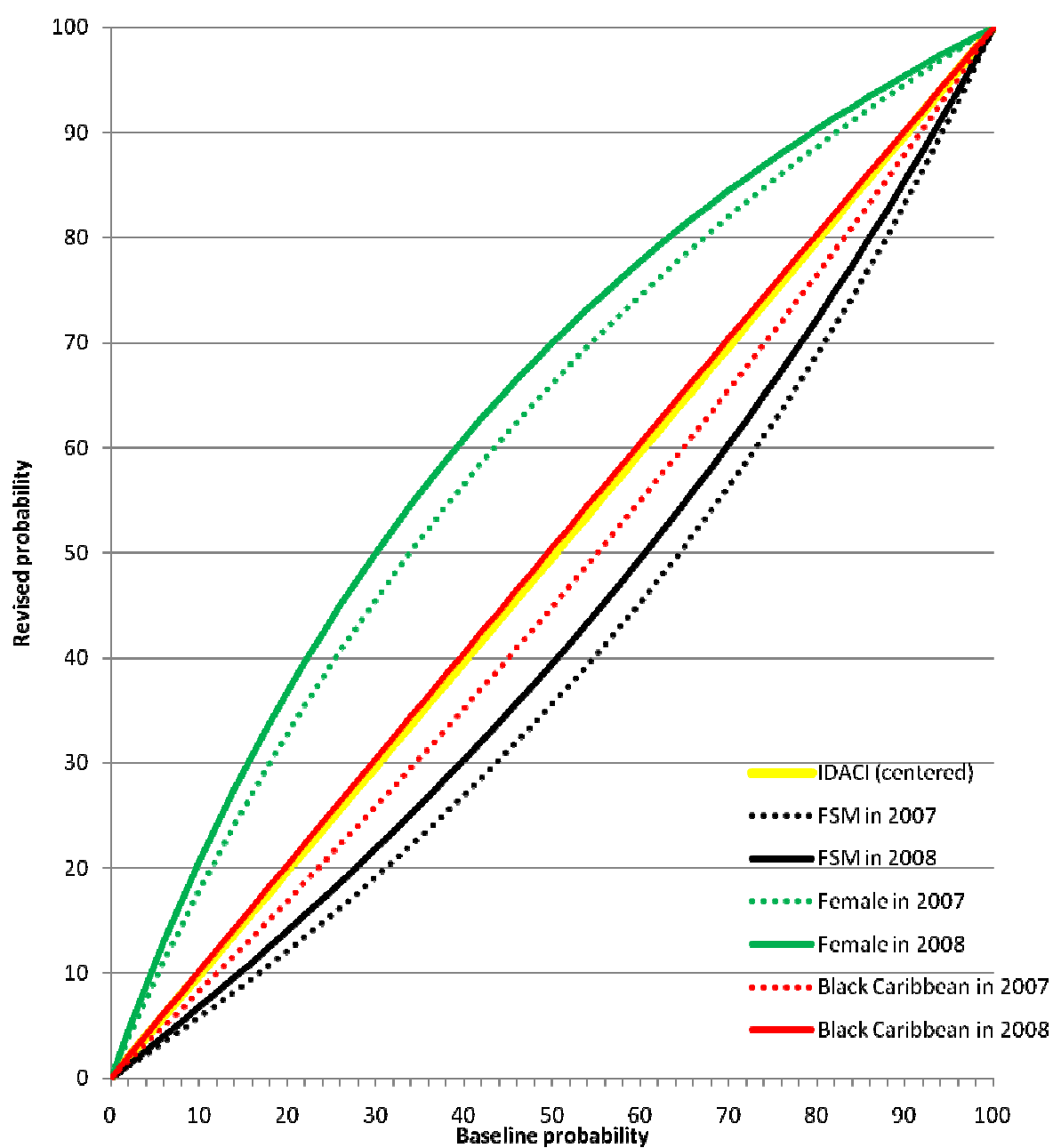


Figure 9. Profile of Foundation Stage cohort 2006/07 and 2007/2008

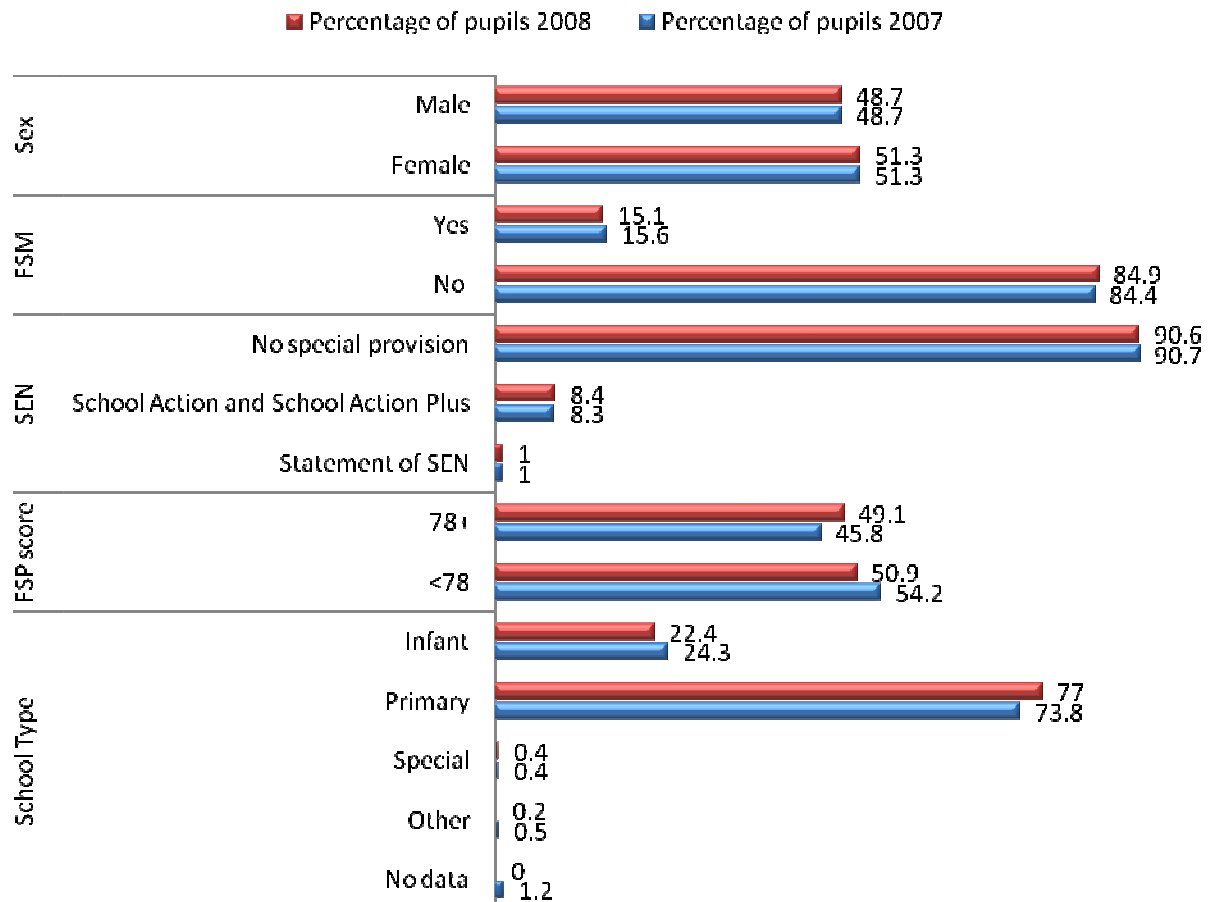


Figure 10. Profile of Foundation Stage cohort 2006/07 and 2007/08: ethnicity (all)

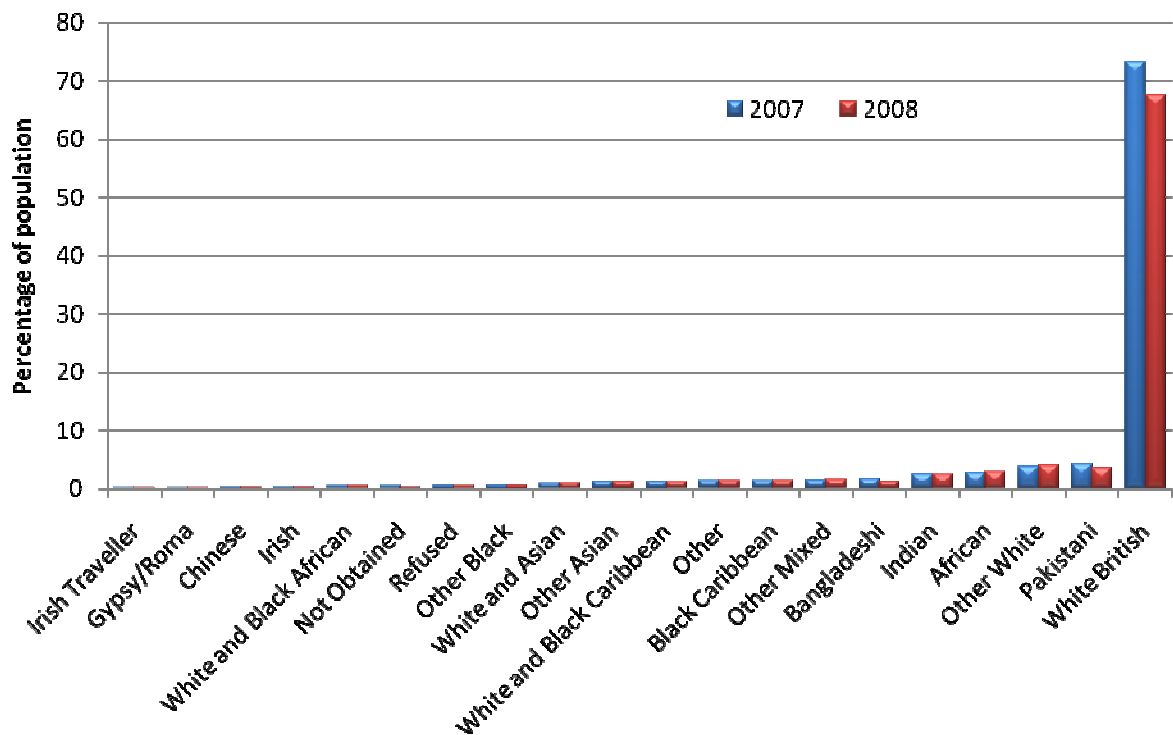
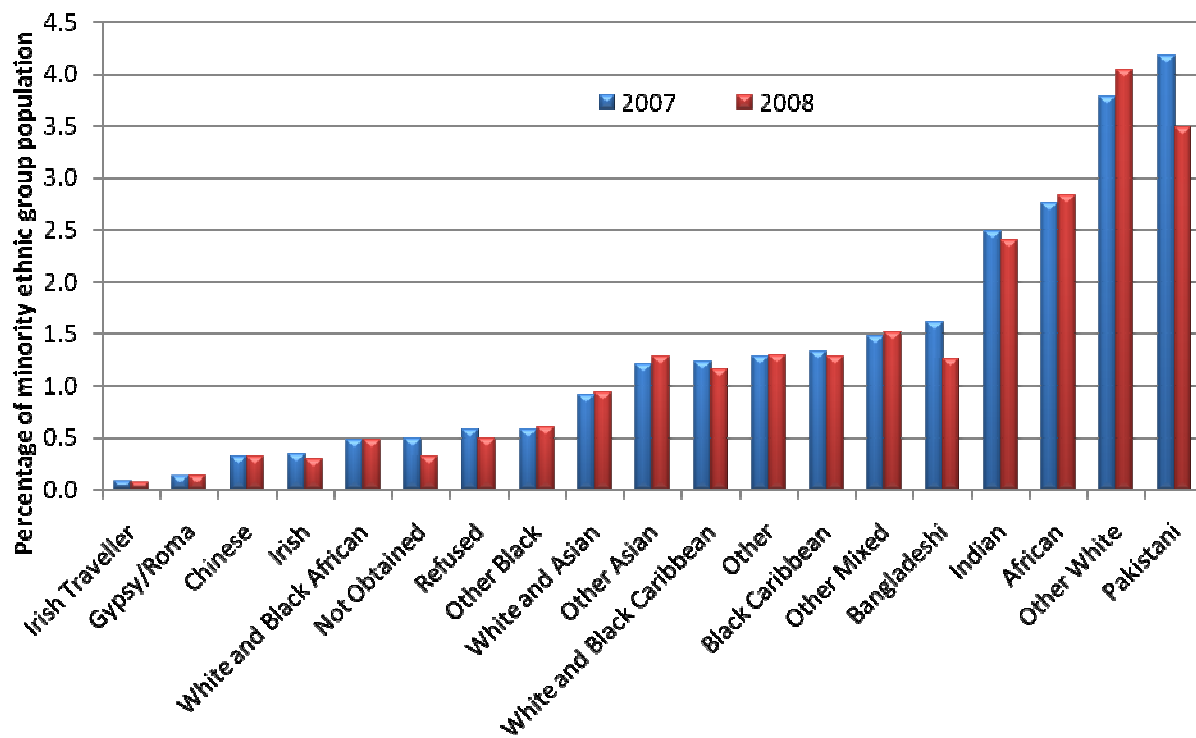


Figure 11. Profile of Foundation Stage cohort 2006/07 and 2007/08 (percentage of minority ethnic groups only)



MARCH 2010

Narrowing the gap in outcomes for young children through effective practices in the early years

This knowledge review presents findings from a rapid review of research and national data on the impact of background characteristics on outcomes for children in the early years. It seeks to identify the approaches that are most effective in reducing educational disadvantage and promoting positive outcomes.

**Centre for Excellence and Outcomes in Children and Young People's
Services (C4EO)
8 Wakley Street
London
EC1V 7QE
Tel 020 7843 6358
www.c4eo.org.uk**