

March 2007



National Evaluation of the Neighbourhood Nurseries Initiative: Integrated Report

SureStart



Evidence
& research

*National Evaluation of the
Neighbourhood Nurseries Initiative:
Integrated Report*

NNI Research Team

*University of Oxford
Department of Social Policy and Social Work
Department of Educational Studies*

Institute for Fiscal Studies

National Centre for Social Research

The views expressed in this report are the authors' and do not necessarily reflect those of the Department for Education and Skills.

© Her Majesty's Printer and Controller of HMSO 2007
ISBN 978 1 84478 911 5

AUTHORS

This NNI Integrated Report has been prepared by the NNI Research Team as a group. The different teams responsible for the different studies brought together in the evaluation are set out below. Each team has prepared a chapter which summarises the report of their study published separately. Teresa Smith has written the introduction and the conclusions with the help of the whole team.

THE NNI RESEARCH TEAM

Implementation Study

Department of Social Policy and Social Work, University of Oxford
Teresa Smith, Kate Coxon, Dr Maria Sigala

Childcare Quality and Children's Behaviour Study

Department of Educational Studies, University of Oxford
Professor Kathy Sylva, Sandra Mathers

Neighbourhood Tracking Study

Department of Social Policy and Social Work, University of Oxford
George Smith, Dr Maria Sigala

Impact Study

National Centre for Social Research
Ivana La Valle, Ruth Smith, Dr Susan Purdon
Institute for Fiscal Studies
Professor Lorraine Dearden, Jonathan Shaw, Luke Sibieta

ACKNOWLEDGEMENTS

We are grateful to our DfES sponsors who commissioned the research – particularly Sam Mason, Richard White, Jane Simmonds, Ganka Mueller, Teresa Downing, Emma Marshall, Laura Sukhnandan, and Rajkiran Sidhu, and the members of our Advisory Committee; to all the research officers named in the separate reports; and finally to the neighbourhood nurseries' managers and staff, regional advisers and local authority advisers, and especially the parents, who provided information and agreed to be interviewed – without their participation there would have been no study.

CONTENTS OF THE REPORT

The Research Team

Acknowledgements

Contents

List of tables and figures

Glossary

- 1. Neighbourhood nurseries – introduction**
Teresa Smith

- 2. Neighbourhood nurseries – the NNI Implementation Study**
Kate Coxon, Maria Sigala and Teresa Smith

- 3. Infants and toddlers in centre-based childcare – does quality matter? The NNI Childcare Quality and Children’s Behaviour Study**
Sandra Mathers and Kathy Sylva

- 4. Neighbourhood dynamics and disadvantaged families with preschool children: the NNI Neighbourhood Tracking Study**
Maria Sigala and George Smith

- 5. The impact of neighbourhood nurseries on families – the NNI Impact Study**
Ivana La Valle, Ruth Smith, Susan Purdon, Lorraine Dearden, Jonathan Shaw and Luke Sibieta

- 6. What difference has NNI made? – conclusions**
Teresa Smith

Bibliography

Annex A

LIST OF TABLES AND FIGURES

- Table 1.1** NNI: the profile of all neighbourhood nurseries by nursery sector: links to school sites, Sure Start Local Programmes and children's centres
- Table 1.2** NNI: number and % of neighbourhood nurseries in the 30% and 20% most deprived Super Output Areas (SOAs) on the Index of Income Deprivation Affecting Children (IDAC), by Government Office Region (GOR)
- Table 1.3** NNI: number and % of neighbourhood nurseries in the 30% and 20% most deprived Super Output Areas (SOAs) on IDAC, selected local authorities
- Table 1.4** NNI: status of deprivation (30% and 20%) for the location of all neighbourhood nurseries, by sector
- Table 1.5** NNI: status of deprivation (30% and 20%) for the location of all neighbourhood nurseries, by link to Sure Start Local Programmes
- Table 1.6** NNI: status of deprivation (30% and 20%) for the location of all neighbourhood nurseries, by children's centre status
- Table 2.1** Implementation Study: neighbourhood nursery profile by nursery sector
- Table 2.2** Implementation Study: examples of services provided by neighbourhood nurseries in addition to core early education and care
- Table 2.3** Implementation Study: additional services mentioned by neighbourhood nurseries
- Table 2.4** Implementation Study: significant differences between private sector and other sector neighbourhood nurseries
- Table 2.5** Implementation Study: highest educational qualifications of staff in neighbourhood nurseries, by occupational category
- Table 2.6** Implementation Study: working hours and highest education qualifications of staff in neighbourhood nurseries, by nursery sector
- Table 2.7** Implementation Study: highest educational qualifications of staff in neighbourhood nurseries, by their children's centre status
- Table 2.8** Implementation Study: neighbourhood nurseries' location in the 30% and 20% most deprived neighbourhoods, by nursery sector
- Table 2.9** Implementation Study: neighbourhood nursery location in 20% most disadvantaged neighbourhoods (30% figures in brackets), and users served: by links with schools, SSLPs and children's centres
- Table 2.10** Implementation Study: number of children in neighbourhood nurseries by area deprivation level of their home location
- Table 2.11** Implementation Study: results of logistic regression identifying factors

associated with a NNI place

- Figure 3.1** Identifying contributors to quality
- Figure 3.2** Overall quality of provision: mean total ITERS-R scores
- Figure 3.3** Mean total ITERS-R scores: proportions in each quality band
- Figure 3.4** Mean ITERS-R subscale scores across all centres
- Table 3.1** Results of multiple regression analysis: contributors to quality of provision
- Table 3.2** Populations of children and families served
- Figure 3.5** Identifying predictors of behaviour
- Table 4.1** Differences in mean scores in NNI rich and NNI poor areas on various domains of the 2004 Indices of Deprivation (2004 ID at SOA level)
- Figure 4.1** Percentage of children aged 0 to 4 living in households of working age claimants of IS/JSA who were lone parents, in England and the 20% most deprived areas, 2001-2005
- Figure 4.2** Percentage of children aged 0 to 4 living in households of working age claimants of IS/JSA who were partnered parents, in England and the 20% most deprived areas, 2001-2005
- Figure 4.3** Percentage change in numbers of lone parents of working age with children aged 0 to 4, since 2001
- Figure 4.4** Percentage change in numbers of all IS/JSA partnered parents of working age with children aged 0 to 4, since 2001
- Figure 4.5** Percentage change in numbers of disabled and other lone parents of working age with children aged 0 to 4, since 2001
- Figure 4.6** Percentage change in numbers of unemployed partnered parents of working age with children less than 5 years old, since 2001
- Figure 4.7** Percentage change in numbers of all lone parents of working age with children aged 0 to 4, in NNI rich and NNI poor areas by London, rural and other areas, 2001-2005
- Table 4.2a** Exit rates by 2003 for all lone parents with children aged 0 to 4 claiming IS/JSA in 2001 (pre-NNI cohort)
- Table 4.2b** Exit rates by 2003 for all partnered parents with children aged 0 to 4 claiming IS/JSA in 2001 (pre-NNI cohort)
- Table 4.3a** Exit rates by 2005 for all lone parents with children aged 0 to 4 claiming IS/JSA in 2003 (NNI cohort)
- Table 4.3b** Exit rates by 2005 for all partnered parents with children aged 0 to 4 claiming IS/JSA in 2003 (NNI cohort)
- Table 4.4a** Exit rates for claimant lone parents with children aged 0 to 4 in the

London NNI rich and poor areas: pre-NNI and NNI cohorts

- Table 4.4b** Exit rates for claimant lone parents with children aged 0 to 4 in other NNI rich and NNI poor areas: pre-NNI and NNI cohorts
- Table 4.5a** Exit rates for claimant partnered parents with children aged 0 to 4 in the London NNI rich and poor areas: pre-NNI and NNI cohorts
- Table 4.5b** Exit rates for claimant partnered parents with children aged 0 to 4 in other NNI rich and NNI poor areas: pre-NNI and NNI cohorts
- Table 4.6a** Benefit exits and entries in NNI poor areas for lone parents on IS: pre-NNI and NNI cohorts
- Table 4.6b** Benefit exits and entries in NNI rich areas for lone parents on IS: pre-NNI and NNI cohorts
- Table 4.7a** Benefit exits and entries in NNI poor areas for unemployed partnered parents: pre-NNI and NNI cohorts
- Table 4.7b** Benefit exits and entries in NNI rich areas for unemployed partnered parents: pre-NNI and NNI cohorts
- Table 4.8** Model for 2003 claimants in the most 20% deprived areas (on IDAC) showing odds ratios for 2005 exits from the IS/JSA benefit system
- Figure 5.1** Measuring the impact of NNI
- Figure 5.2** Proportion of parents in paid work or training before and after starting to use a neighbourhood nursery, by household status
- Figure 5.3** Childcare used alongside the neighbourhood nursery
- Table 5.1** Usual weekly hours of neighbourhood nursery used during the last month
- Figure 5.4** Whether parent paid for neighbourhood nursery provision, by hours of neighbourhood nursery used
- Figure 5.5** Amount paid per week to neighbourhood nursery
- Table 5.2** Amount paid per week to neighbourhood nursery, by parental employment
- Table 5.3** Amount paid per week on average to neighbourhood nursery, by household income
- Table 5.4** Financial help offered by neighbourhood nurseries
- Figure 5.6** Financial help from other sources
- Table 5.5** NNI impact on respondents' working status
- Table 5.6** Parents' views on how the neighbourhood nursery helped them to work, by family structure
- Table 2.9a** Implementation Study: neighbourhood nursery location and users served in 20% and 30% most disadvantaged neighbourhoods: by links with schools, SSLPs and children's centres

GLOSSARY

NNI: Neighbourhood Nurseries Initiative: aimed to create 45,000 new childcare places by 2004 to provide high quality childcare services in disadvantaged areas. This target was reached in August 2004. The programme offered £246 million revenue funding from DfES and £100 million capital funding from the New Opportunities Fund (now the Big Lottery Fund), through local authorities. Places were targeted at reducing unemployment and meeting the needs of parents entering the job market, especially lone parents.

Sure Start Children's Centres: these build on other integrated early years initiatives like Sure Start Local Programmes, Neighbourhood Nurseries and Early Excellence Centres. By December 2006, over 1,000 children's centres were in place offering services to around 838,000 young children in the 30% most disadvantaged areas in the country. By 2008, there will be 2,500 centres. By 2010, there should be 3,500 centres – 'one for every community' – supporting young children and their families. Centres established in the most disadvantaged areas will offer an extended range of services (access to early years provision, that is, integrated early learning and childcare, health services, family support and Jobcentre Plus services and support to childminders) for children under 5 and their families. In less disadvantaged communities, local authorities have flexibility in what they provide to meet local need. All Sure Start children's centres will provide, as a minimum, a range of health support; outreach services to parents/carers and children identified as in need of them; information and advice; and drop in sessions and other activities.

DfES: Department for Education and Skills. Formerly Department for Education and Employment.

Disadvantage: the original NNI funding allocations to local authorities and EYDCPs (see below) were based on disadvantaged wards as defined by the Index of Deprivation 2000 (DETR, 2000). The definition of disadvantage used in this report is based on the Indices of Deprivation 2004 (ID 2004), to identify areas falling into the 20% or 30% most disadvantaged neighbourhoods (SOAs – see below) in England. ID 2004 uses the Index of Income Deprivation Affecting Children (IDAC) to analyse disadvantage affecting children. IDAC is based on the percentage of children under 16 in families receiving Income Support (IS) or Job Seekers' Allowance (JSA/IB) or Working Families Tax Credit (now Working Tax Credit) living below 60% of median income.

DWP: Department for Work and Pensions.

Early Excellence Centres: introduced in December 1997 and funded until March 2006 as 'one stop shops' to develop models of good practice in integrating services for care, child and adult education and family support; these have been largely incorporated into the Children's Centre programme.

‘Early Openers’: the thirty-one nurseries sampled from the 112 nurseries open at the beginning of 2003 and reported in Smith *et al.* (2005).

Early Education Funding (EEF): EEF funding (part of the Dedicated Schools Grant, DSG, from April 2006) is provided to local authorities by the government to support the free early education entitlement for all 3 and 4 year olds. Eligible children have a right to the equivalent of five free sessions of two and a half hours in length each week, for at least eleven weeks a term. The entitlement (in terms of both weeks per year and hours per day) will be extended over the next few years. A wide range of providers in the maintained, private and voluntary sectors are registered to deliver free early education in each area. While some children attend a setting only for the EEF-funded hours, others will attend for longer sessions, or year-round, with parents paying for any non-EEF-funded hours.

Extended Schools: an extended school is one which offers a range of facilities and activities to pupils, their families and the wider community. This could include childcare, study support, adult and family learning, parenting support, and a range of health and social care services. By 2010, all families (with children from 3 up to 14) who need it, will have access to affordable, flexible and high quality childcare that meets their circumstances from 8am to 6pm, and throughout the year. That offer will be built around schools as part of a range of services that they will host, often in partnership with local private and voluntary sector providers. The government wants all schools to be extended schools by 2010, providing a core offer of activities – with at least half of primary schools and a third of secondary schools doing so by 2008.

EYDCPs: Early Years Development and Childcare Partnerships. The 1998 Green paper, *Meeting the Childcare Challenge*, proposed that the National Childcare Strategy should be planned and delivered in each local authority area by expanded local partnerships made up of relevant early years and childcare interests. The statutory basis for these partnerships is contained in the School Standards and Framework Act 1998.

Foundation Stage: the first phase of the National Curriculum, covering children from age 3 to 5. (From 2008, this will be replaced by a new single integrated Early Years Foundation Stage combining the current Birth to Three Matters and Foundation Stage frameworks.)

Fte: full time equivalent.

IS: Income Support.

IDAC: Income Deprivation Affecting Children Index – a subset of the Income Deprivation Domain of the Indices of Deprivation 2004, produced by the Social Disadvantage Research Centre (SDRC) at the University of Oxford on behalf of the Office of the Deputy Prime Minister (ODPM). This is the measure of disadvantage used in this report (see **disadvantage** above).

IFS: Institute for Fiscal Studies.

JSA/IB: Job Seeker's Allowance.

'Later Openers': the 71 nurseries sampled during 2004 and 2005 and included within the 102 nurseries in the Implementation Study.

LSC: the Learning and Skills Council offers subsidies in the form of a Childcare Grant to eligible parents in training with dependent children.

NAO: National Audit Office.

NatCen: National Centre for Social Research.

National Childcare Strategy: the National Childcare Strategy was launched by the government in 1998 with the, then, Department for Education and Employment's Green Paper, *Meeting the Childcare Challenge* (Cm 3959, HMSO). Its aim was to ensure that affordable, accessible, quality childcare for children aged 0 to 14 (16 for those with disabilities or special needs) was available in every neighbourhood.

Neighbourhood Nurseries: nurseries funded (or part-funded) by NNI.

NNI places: neighbourhood nurseries received revenue funding on the basis of a designated number of places in the nursery. Some nurseries chose to use this funding to subsidise a certain number of places, and allocated these according to parents on the basis of residence ('postcode') in a disadvantaged neighbourhood, entry into work or training, and sometimes other eligibility criteria such as lone parents, or family difficulties.

NOF: New Opportunities Fund. Funding generated by the sale of National Lottery tickets with a number of funding streams including childcare and out of school provision. On June 1 2004, NOF merged with the Community Fund to create the Big Lottery Fund.

Nursery sector: Type of sector refers to the sector that is responsible for the day-to-day running and management of the nursery. A private sector nursery is one run by private individuals or private sector companies; a voluntary nursery is managed by a voluntary organization; a maintained nursery is run by the public sector and managed by the education arm of the local authority; and a joint sector nursery is the result of close cooperation between two or more sectors.

Nursery places:

- Full-time place: a childcare place that covers the maximum amount of hours that a nursery is open – for example, five days a week, 7.30am – 6.00pm.
- Part-time place: a place that is not full-time but may vary. For example, a part-time place could mean two and a half days, one full day, or three full days.
- Sessional place: use of this term varies by nursery. Some nurseries divide the day into early, morning, afternoon, and late sessions; others into morning and afternoon

sessions. Parents may use these sessions to cover a particular shift or working pattern. Some nurseries may use this term to mean sessional care covering the core early education place (two and a half hours, five times a week, in term-time only). Other nurseries use it as a 'billing term': for example, a child may be charged per session if use varies week to week.

Ofsted: Office for Standards in Education. In 2001 Ofsted became responsible for the regulation, registration and inspection of early years childcare and education settings, including childminders. From April 2007 Ofsted's remit includes the children's services work of the Commission for Social Care Inspection (CSCI), together with the CAF/CASS inspection remit of HM Inspectorate of Court Administration (HMICA) and the inspection work of the Adult Learning Inspectorate (ALI).

Regional Advisers: experts in the field of early years seconded to support EYDCPs and oversee the strategic development of the NNI, as part of their overall responsibilities for early years programmes such as Sure Start Local Programmes.

SOA: Super Output Area: the smallest geographical units used in the 2004 Indices of Deprivation (Noble *et al.*, 2004), which have replaced wards, used in the 2000 Indices (DETR, 2000) as a more consistently sized unit containing roughly similar sized populations. SOAs contain on average 1,500 people. We have used 'neighbourhood' throughout the text of this report to refer to the geographical unit SOA.

Sure Start: Sure Start was launched in 1998, with the first Sure Start Local Programmes (SSLPs) established in 1999, providing health and family services and support for all children under 4 and their parents, in some of the most disadvantaged areas and with specific aims to reduce various aspects of social exclusion. 524 SSLPs were in place by December 2004, offering services to over 400,000 children. The majority of these are now part of the new programme of Sure Start Children's Centres being rolled out across the country – see Sure Start Children's Centres.

WPLS: Work and Pensions Longitudinal Study.

Working Tax Credit (WTC): for people who are employed or self-employed, working 16 or more hours a week aged 16 or over and responsible for at least one child, or aged 16 or over and disabled, or aged 25 or over and working for at least 30 hours a week. A person receiving WTC may qualify for help with childcare. The childcare element of WTC is paid direct to the person who is mainly responsible for caring for the child or children. The childcare element allows people to claim up to 70% of eligible childcare costs and there are limits on the weekly eligible costs claimed (at the time of this study £175 for one child and £300 for two or more children). WTC replaced the earlier Working Families Tax Credit (WFTC).

Wraparound Care: care provided 'wrapped around' other provision, for example, early education sessions, or care provided before or after the normal school day.

1

NEIGHBOURHOOD NURSERIES: INTRODUCTION

Teresa Smith

*Department of Social Policy and Social Work
University of Oxford*

The Neighbourhood Nurseries Initiative (NNI) – policy and research background

The Neighbourhood Nurseries Initiative (NNI), announced in 2000 and launched in 2001, was one of a number of programmes established to expand early years services following the announcement of the National Childcare Strategy in 1998¹ with the Green Paper *Meeting the childcare challenge*. The Labour government's commitment to a national childcare strategy was a key plank in its election in 1997 – addressing child poverty through high quality childcare particularly in disadvantaged areas. With the specific aim of increasing the supply of childcare for working parents in poor neighbourhoods, NNI's original target was to create 45,000 new childcare places for 0-4 year old children living in the most disadvantaged areas of England, with neighbourhood nurseries offering full daycare for children from birth to school age, ideally alongside early education and other forms of family support such as family learning or health services.

Other early years initiatives at the time included *Sure Start*, launched in 1998 as the largest government early years programme then in operation², run by local partnerships for children under four years old in targeted areas of deprivation, designed to coordinate and streamline health, education and welfare services and to reduce social exclusion. By the end of the national programme, some 524 Sure Start Local Programmes (SSLPs) were reaching up to 400,000 children, including a third of children under four living in poverty³. There were also the *Early Excellence Centres*, with over a hundred designated since 1997, combining early education and daycare services, adult education and training, parenting support, health and other community services as 'one-stop shops'⁴. *Wraparound Integrated Provision*, a DfES pilot programme set up in five areas in 2000, aimed to provide extended provision 'wrapped around' a core of early education for three and four year old children to enable their parents to return to work or education – a model now widely followed across the country⁵. All these have now been rolled up

¹ DEE, 1998

² Launched as Sure Start, renamed later Sure Start Local Programmes.

³ See the national Sure Start website www.surestart.gov.uk

⁴ Bertram *et al.*, 2004

⁵ Smith *et al.*, 2004

into the *Children's Centres* programme, first proposed in the Inter-Departmental Childcare Review published in December 2002⁶, as 'joined-up' or integrated provision for young children and their families. Sure Start Children's Centres build largely on existing provision such as SSLPs, neighbourhood nurseries and Early Excellence Centres. According to DfES figures, by December 2006 over 1,000 children's centres were in place offering services to around 838,000 young children in the 30% most disadvantaged neighbourhoods in the country. By 2008, there will be 2,500 children's centres. By 2010 there should be 3,500 centres, 'one for every community', supporting young children and their families. The rapidly growing *Extended Schools* programme is intended to take up where children's centres leave off, providing a base for a wide mix of community services for older children and their families⁷.

Since 1997, the most significant policy milestones for young children and their families have been the 2004 *Ten year strategy for childcare: choice for parents, the best start for children*⁸, followed by the 2006 *Action plan for the ten year strategy: Sure Start Children's Centres, extended schools and childcare – choice for parents, the best start for children: making it happen*⁹; and the 2006 *Childcare Act* which for the first time required local authorities to secure (although not necessarily provide) sufficient childcare for working parents. Local authorities have been allocated a *Transformation Fund* of £125m. a year from April 2006 in order to expand provision and improve training. The ten year strategy set out the following three principles:

- 'the importance of ensuring that every child has the best possible start in life;
- the need to respond to changing patterns of employment and ensure that parents, particularly mothers, can work and progress their careers; and
- the legitimate expectations of families that they should be in control of the choices they make in balancing work and family life.'

Together with the 2003 *Every Child Matters: Change for Children*¹⁰ agenda and the 2004 *Children Act*, these measures are not only intended to expand childcare for working parents and to improve its quality for children, particularly the most disadvantaged. They also aim at improving outcomes by transforming education, health and welfare services for young children through a combination of changes to service organisation, governance and management, training, service content, planning and delivery, and regulation and inspection. Neighbourhood nurseries are now one element of children's centres in the development of this wider agenda.

When NNI was established in 2000, its focus was on tackling child poverty through the creation of high quality childcare in order to allow poor parents to return to the labour market. The key to tackling child poverty was seen to be employment, enabling the poorest and most disadvantaged families to improve their own opportunities and income. The problem for families in the most disadvantaged areas, and for some of the most disadvantaged groups, was defined as lack of childcare – and NNI was designed to tackle this problem. In policy terms this strategy focuses on labour market *demand* rather than *supply*: it was assumed that with a certain amount of pump-

⁶ Strategy Unit (2002). Children's centres were mentioned in the context of the 2002 Spending Review (p.37). See also Holterman, 2001.

⁷ Cummings *et al*, 2004 and 2005; Churchill Associates, 2003; DfES, 2005

⁸ HMT *et al*, 2004

⁹ DfES, 2006(a)

¹⁰ HMG (2003)

priming from public funds (for instance, through the three year NNI revenue grant), childcare would be stimulated by demand for high quality care and supported by tax credits available to boost wages for parents in low-paid jobs.

According to DfES guidance, neighbourhood nurseries were to be located in disadvantaged neighbourhoods as defined by the Index of Multiple Deprivation¹¹. Early Years Development and Childcare Partnerships (EYDCPs) and local authorities eligible for NNI funding could also make a case for the location of nurseries in their areas outside such wards if it could be demonstrated that there were equivalent levels of deprivation, or in ‘pockets’ of deprivation serving disadvantaged families living in more affluent areas. Local authorities were also advised to locate neighbourhood nurseries near major roads, on a ‘travel to work’ basis, with the intention of attracting higher income parents who would take up non NN-funded places in these nurseries, for both social mix and sustainability.

Neighbourhood nursery places would be provided as either entirely *new neighbourhood nurseries*, *additional places* at existing nurseries or groups, or *neighbourhood places* available in existing nurseries and offering short-term assistance at low cost to parents from disadvantaged areas. Neighbourhood nurseries were to be created by local providers – by the private or voluntary sectors, or by maintained sector primary or nursery schools – with funding and support originally routed through the Early Years Development and Childcare Partnerships (EYDCPs) established in every local authority, and later routed through local authorities themselves. NNI revenue funding was allocated for each place that qualified for grant. This start-up grant was intended to help develop the nursery, and was paid from the date of opening on a sliding scale to take account of the expected build-up of occupancy. NNI provided support for nursery running costs in the first three years, with up to 50% of total costs available in the first year, 30% of running costs in the second year, and 10% of running costs in the third year – equivalent to £150,000 for the first year, and £90,000 and £30,000 in years two and three, for a 50 place nursery; the maximum unit cost per place was £5,400 over three years.

In financial terms, NNI represented an allocation of almost £128 million in capital funding from the Big Lottery Fund, formerly the New Opportunities Fund (NOF), and the DfES together¹² and almost £240 million in revenue grants. EYDCPs and local authorities encouraged partnerships with other providers and other sources of funding to support neighbourhood nurseries – for example, from SSLPs, New Deal for Communities, and NHS initiatives. Sustainability was a key aim from the start, with NNI ‘pump priming’ funding aimed to ‘kick-start’ local effort so that neighbourhood nurseries could become sustainable in their local communities¹³.

¹¹ For the purposes of the original NNI financial allocations, ‘disadvantage’ was defined on the basis of the 20% most disadvantaged wards according to ID 2000 (DETR, 2000). In ID 2004 (Noble *et al.*, 2004), ‘Super Output Areas’ (SOAs), with a population of about 1,500 people, have replaced wards as the smallest geographical unit for which administrative data is routinely available. This report uses ‘neighbourhoods’ to refer to SOAs. ID 2000 and ID 2004 are highly correlated (see pp.116-117 of the ID 2004 report): ‘20% of the most disadvantaged wards’ in ID 2000 has been taken as equivalent (in terms of numbers of preschool children) to ‘30% of the most disadvantaged SOAs’ in ID 2004. See Glossary for definitions of ‘disadvantage’ and ‘SOAs’.

¹² Total revenue £238,367,636. Total capital £127,225,990 (NOF £99,496,135; DfES £27,729,455). Source DfES

¹³ Corlyon and Meadows, 2004; Harries *et al.*, 2004; Dickens *et al.*, 2005

NNI operated in a context of rapidly changing policy initiatives, with new legislation and changing funding requirements and policy targets. The impetus for the programme came from two sources. First, there was the well-known link between child poverty and long-term disadvantage, demonstrated, for example, by children's poorer life chances when growing up in poverty in disadvantaged neighbourhoods, and the substantial body of research on intervention programmes which can improve poor children's life chances in general and educational attainment in particular. Much is now known about socio-spatial concentrations of poverty and low income in disadvantaged neighbourhoods, the persistence of these patterns over time, and the links to educational under-achievement¹⁴.

Second, there has been rapidly growing policy interest in the interface of family, work and childcare¹⁵, service expansion and inequity. On service expansion, estimates suggest that by 2003 there was one childcare place for every five children under the age of eight, compared with one childcare place for every nine children in 1997¹⁶. The number of registered childcare places (this includes early education places) almost doubled between 1997 and 2005¹⁷; and the percentage of three and four year olds using some free early education places increased from 85% in 2002 to 98% in 2006¹⁸.

Despite expansion, there is still much regional and local variation in the amount of provision. According to the analysis by the National Audit Office (NAO) of figures from Ofsted and Early Years Development and Childcare Implementation Plans for 2003-04, the number of childcare places for young children varied by local authority between 11 and 58 per 100 preschool children, and by region from 22 places per 100 preschool children in Inner London to 44 per 100 in the South East region¹⁹. The most disadvantaged neighbourhoods continue to show a 'childcare gap'. In 2001, in the 20% most disadvantaged wards there were just over half the number of places for 0-14 year olds compared to the number of places across all wards, and about 8 childcare places per 100 0-4 year olds compared with about 13 places in other neighbourhoods²⁰. However, the NAO's surveys showed great variation between local authorities, with some authorities showing up to 14 *more* places per 100 children and others as many as 28 places *fewer* in deprived wards²¹.

On take-up, the latest survey of early education and childcare carried out by the National Centre for Social Research (NatCen) in 2004 shows a considerable increase in use of childcare between 2001 and 2004 (up by 8% overall). Increased use holds for both formal and informal care, and the increase is more marked in formal care (up by 10% from 31% in 2001 to 41% in 2004) compared to informal (up by 6% from 36% to 42%). Use of childcare (including formal) has increased amongst the lowest income groups and in the

¹⁴ Eg. Alakeson, 2005; Brooks-Gunn *et al.*, 1997(a, b); Feinstein, 2004; Melhuish, 2004a; Schweinhart *et al.*, 2005; Sylva *et al.*, 2004; Waldfogel, 2004, 2006

¹⁵ Eg. Dex, 2003; Buchanan *et al.*, 2004, Chapter 5; National Audit Office, 2004; Bryson *et al.*, 2006

¹⁶ Daycare Trust, 2003

¹⁷ DFES, 2006(a), Chart 1.4

¹⁸ DFES, 2006(b), Tables 1 and 5

¹⁹ NAO, 2004: Figure 4

²⁰ Strategy Unit, 2002

²¹ NAO, 2004: para.2.34

most disadvantaged areas, which points to the success of the targeted government programmes such as NNI and Sure Start since 1997, at least in terms of increased access in the most disadvantaged neighbourhoods²².

However, use has increased even more amongst high income families (up 12% by the highest income families) and couple families (up 10%), and in the least disadvantaged neighbourhoods (up 10%). And although between 2001 and 2004 low-income families increased their use of formal childcare (up by 7%) more than informal (up by 5%), they continued to be more likely than higher income families to use informal rather than formal childcare. In 2001, 33% of families in the lowest income quintile used informal childcare while only 24% used formal childcare; in 2004, the figures were 38% and 31% respectively. For families in the highest income quintile, in 2001 the figures were 35% for informal care and 41% for formal; in 2004, the figures were 45% and 52% respectively. So both low income and high income families are increasingly using childcare; but the gap between the two is widening²³. Higher income families (and the least disadvantaged neighbourhoods) are also more likely than low-income families (and the most disadvantaged neighbourhoods) to use childcare, whether for educational or economic reasons²⁴. Cost of places is acknowledged to be a barrier for low income families in particular to making use of childcare.

Take-up of formal childcare, and rates of employment by women with young children, although high amongst Black Caribbean families, continue to be lower amongst ethnic minority groups such as Pakistani and Bangladeshi families²⁵. Given high levels of poverty in some of these groups – 90% of Pakistani and Bangladeshi children live in households in the bottom 40% of the income distribution²⁶ – this continuing low take-up of employment and child care is of concern. Families working atypical hours have difficulty finding childcare places²⁷. The main groups not using childcare but wanting access include lone parents, workless households, low-income families and families living in the most disadvantaged areas: childcare-related reasons for not working, as reported by lone parents under the eligibility cut-off point for Working Tax Credit of sixteen hours, included affordability, suitability of hours, and availability²⁸. In the 2004 NatCen survey, increased use of formal childcare is most likely explained by take-up of the free early education places (EEF) in school-based provision for younger children, and by take-up of wraparound care by school-aged children (both up by 6% between 2001 and 2004) – again a success for current government policies aiming to increase formal childcare.

This inequity in childcare provision and use is crucial background to NNI when we consider the evidence on child poverty, low income and worklessness. The 2004 Index of Multiple Deprivation includes a new index of Income Deprivation Affecting Children

²² Bryson *et al.*, 2006

²³ Bryson *et al.*, 2006: Tables 2.28, 2.30, 2.31 and 2.33

²⁴ Bryson *et al.*, 2006: Tables 3.6, 3.10, 3.17 and 3.21

²⁵ Bryson *et al.*, 2006: Table 2.19; Bell *et al.*, 2005; Dale *et al.*, 2005; Hall *et al.*, 2004

²⁶ Quoted in Harker, 2006; see <http://www.dwp.gov.uk/asd/hbai/hbai2005/contents.asp>

²⁷ Statham and Mooney, 2003; La Valle *et al.*, 2002

²⁸ Strategy Unit, 2002; Woodland, Millar and Tipping, 2002

(IDAC)²⁹, which shows that in the 10% most deprived areas of the country there was a range from 45.6% to 99.3% of under 16 year olds living in extreme poverty in households dependent on benefits or low wages, compared to an average of only 2.3% in the 10% least deprived areas. London had the highest percentage of children living in income deprived households, followed by the North East and North West regions; the South East, East, South West and East Midlands had the lowest percentages³⁰. This suggests there is a good deal of overlap between areas with the highest rates of child poverty, areas with low rates of childcare provision, and areas with high rates of families wanting to use childcare but not able to do so; however, in some areas there may be special factors at work – in London, for example, the high cost of childcare and the low rates of take-up of child-related benefits.

This brief overview has set out the background to NNI – the link between child poverty and disadvantage, and inequitable access to childcare and trends in provision, distribution and take-up of childcare. It shows the rationale for the government’s strategy in targeting disadvantaged neighbourhoods and in focusing on high quality childcare to provide the link between raising parental employment and income and improving children’s life chances.

The development of NNI – the national profile³¹

NNI was launched in 2001 as part of the National Childcare Strategy, aimed at tackling child poverty and reducing unemployment by providing high quality affordable childcare in deprived areas. The programme has now come to an end, with approximately half of all neighbourhood nurseries aiming to become children’s centres³². The original target (achieved by August 2004) was for 45,000 new childcare places for 0-4 year olds offering full daycare. Neighbourhood nurseries were created by local providers in the private or voluntary sectors and by maintained sector primary or nursery schools. The New Opportunities Fund (NOF), now the Big Lottery Fund, provided NNI capital investment; NNI revenue funding provided running costs for three years on a tapering basis. Nurseries could choose how to make use of the revenue funding, subject to local authority guidance.

The concept of a ‘NNI place’ is complex and has already been discussed extensively elsewhere³³. The issues can be summarised as follows. First, for neighbourhood nursery staff, the phrase ‘NNI places’ may refer to the funding already received from the DFES on the basis

²⁹ Disadvantage is defined in this report with reference to the 2004 Index of Multiple Deprivation for England (Noble, *et al.*, 2004). IDAC is based on the percentage of children under 16 in families receiving Income Support (IS) or Job Seekers’ Allowance (JSA/IB) or Working Families Tax Credit (now Working Tax Credit), living below 60% of median income. The 2004 IMD is based on Super Output Areas (SOAs) rather than wards. (See footnote 11 for the definition of disadvantage used in the original NNI funding allocations based on ID 2000.)

³⁰ See Noble *et al.*, 2004, Charts 5.5-5.8

³¹ This section is based on analysis carried out by the Implementation Study research team of the DfES data collected on neighbourhood nurseries (the last data collection point was in March 2005).

³² This is based on DfES figures for March 2005; later figures may be much higher.

³³ See Smith, Coxon and Sigala, 2007, Chapter 1; also Smith *et al.*, 2005.

of an agreed number of ‘designated places’, or to the nurseries’ own allocation of places to families on the basis of agreed eligibility priority criteria. For families and children, however, a NNI place may mean a place subsidised by NNI funding rather than another funding source. Second, some nurseries used funding to subsidise a proportion of places allocated by disadvantaged postcode, others used funding to reduce fees across the board. ‘NNI places’ can therefore be seen as an administrative definition, referring to how nurseries used NNI funding and defined eligibility.

The picture of NNI at the completion of the programme is summarised in the tables in this chapter, drawing on DfES data for March 2005. Key differences by sector³⁴ can be summarised as follows:

- only one quarter of the private sector neighbourhood nurseries created new buildings, while 42% undertook refurbishments; 55% of the joint sector nurseries, and 41% of maintained sector nurseries created new buildings; the voluntary sector had almost equal proportions of ‘new builds’ (37%) and refurbishments (36%);
- two-thirds (66%) of maintained sector neighbourhood nurseries and 44% of joint sector nurseries were located on school sites; this was the case for only 14% of private nurseries and 28% of voluntary sector nurseries;
- seven out of ten joint sector neighbourhood nurseries and six out of ten maintained nurseries were linked with Sure Start Local Programmes; this was the case for half of voluntary sector nurseries but only one in five (22%) private nurseries;
- just over half of all maintained sector nurseries and just under half of joint sector nurseries were designated as a main children’s centre (thus already playing a full part in the children’s centre programme), while a very small percentage of these sectors had no links at all – only 8% of the former and 10% of the latter. By contrast, the private sector was playing a very small part in the programme: only 9% were designated as main children’s centres while 38% stated they had no links at all. It is worth noting here that in the private sector 16% of nurseries were still undecided about their relationship with the children’s centre programme and 20% did not report any data.

The transition to children’s centres was much more rapid in some sectors than others. By 2005, 27% of neighbourhood nurseries overall were designated as main children’s centres, 22% were linked to a children’s centre, 28% were undecided or failed to report their children’s centre status and 22% had no links to a children’s centre. It should be noted that the children’s centres programme was in the early stages of development at the time of the NNI study. More neighbourhood nurseries are expected to become or be linked to a children’s centre by 2010.

NNI has resulted in a large expansion of childcare places. Before funding, 74% of the existing nurseries linked to NNI had fewer than 21 places. After funding, only 6% had fewer than 21 and 65% had more than forty places. NNI expansion particularly benefited the private sector: before NNI, only 19% of the private nurseries linked to the programme had more than 40 places; with NNI funding this increased to 77%.

³⁴ For definition of nursery sector, see the Glossary at the beginning of this report.

Table 1.1: NNI: the profile of all neighbourhood nurseries by nursery sector: links to school sites, Sure Start Local Programmes and children’s centres

	<i>Voluntary</i>	<i>Maintained</i>	<i>Private</i>	<i>Joint</i>	<i>Total</i>
<i>At school site</i>	87	174	76	99	436
(Col %)	(28%)	(66%)	(14%)	(44%)	(33%)
<i>Not at school site</i>	222	89	454	127	892
(Col %)	(72%)	(34%)	(86%)	(56%)	(67%)
<i>SSLP link</i>	136	131	92	135	494
(Col %)	(50%)	(59%)	(22%)	(70%)	(45%)
<i>No SSLP link</i>	138	92	322	57	609
(Col %)	(50%)	(41%)	(78%)	(30%)	(55%)
<i>Children’s centre: main</i>	76	136	45	107	364
(Col %)	(25%)	(52%)	(9%)	(47%)	(27%)
<i>Ch’s centre: contributing</i>	87	51	96	58	292
(Col %)	(28%)	(19%)	(18%)	(26%)	(22%)
<i>Ch’s centre: no link</i>	51	20	200	23	294
(Col %)	(17%)	(8%)	(38%)	(10%)	(22%)
<i>Undecided</i>	68	27	83	10	188
(Col %)	(22%)	(10%)	(16%)	(4%)	(14%)
<i>Missing</i>	27	29	107	28	191
(Col %)	(9%)	(11%)	(20%)	(12%)	(14%)
<i>Total</i>	309	263	531	226	1329
(Col %)	(23%)	(20%)	(40%)	(17%)	(100%)

Source: DfES NNI data, March 2005; 1329 of the 1359 neighbourhood nurseries with no missing information on type of sector

NNI development varied across the regions and varied by sector. There were fewer neighbourhood nurseries in the south of England, with the exception of London. In the East Midlands and North West, half or more of the nurseries were run by the private sector; one in three neighbourhood nurseries in Eastern England, London and West Midlands were in the voluntary sector; in London one in every three of the nurseries was in the maintained sector, while in the North East a quarter of neighbourhood nurseries was in the maintained sector; the joint sector was more prevalent in the South East (38%) followed by the South West (one in four).

Neighbourhood nurseries: location, sector and disadvantage

NNI was intended to develop new childcare provision in the most disadvantaged neighbourhoods of the country. How successful has the programme been in reaching the most disadvantaged areas? Overall, we can say there was a fair degree of success. By 2005, almost 60% of neighbourhood nurseries were located in the 20% most disadvantaged neighbourhoods in the country, and almost 75% if the definition of

disadvantage is widened to the 30% most disadvantaged neighbourhoods³⁵. Overall only 6% of neighbourhood nurseries were located in the 30% least disadvantaged neighbourhoods³⁶. Throughout the rest of the chapter, it will be made clear when the text refers to 20% (a more stringent definition of disadvantage) and when 30% (a wider definition of disadvantage).

Table 1.2 shows the geographical distribution of the neighbourhood nurseries by the end of the programme in 2005 by region. London, the North East and the North West stand out both for levels of disadvantage and for successful targeting. London, the area with the highest concentration (50%) of 30% most disadvantaged neighbourhoods, had also the largest proportion (88%) of neighbourhood nurseries located in the 30% most deprived areas. The North West region had only 37% of its neighbourhoods in this category but 74% of its neighbourhood nurseries were located in these neighbourhoods. The North East region, with higher levels of deprivation (45% of its neighbourhoods were in the 30% most deprived category) was slightly less successful at targeting its nurseries (70% of the neighbourhood nurseries were located in these areas), while Birmingham and the West Midlands, with lower levels of deprivation, was slightly more successful at targeting its neighbourhood nurseries into such areas. It is worth noting that while London had 77% of its neighbourhood nurseries targeted in the 20% most disadvantaged neighbourhoods, outside London this fell to 55%.

Table 1.2: NNI: number and % of neighbourhood nurseries in the 30% (20% in parentheses) most deprived Super Output Areas (SOAs) on the Index of Income Deprivation Affecting Children (IDAC), by Government Office Region (GOR)

	NNs (no.) in most deprived SOAs	No. of all NNs	NNs (%) in most deprived SOAs	No. of most deprived SOAs	No. of SOAs	% of most deprived SOAs
London	204 (178)	232	88 (77)	2406 (1744)	4765	50 (37)
East of England	47 (32)	61	77 (52)	616 (310)	3550	17(9)
North West	186 (153)	250	74 (61)	1638 (1177)	4459	37 (26)
West Midlands	124 (97)	167	74 (58)	1163 (801)	3482	33 (23)
East Midlands	62 (42)	85	73 (49)	683 (429)	2732	25(16)
Yorkshire & the Humber	144 (114)	207	70 (55)	1100 (767)	3293	33 (23)
North East	110 (90)	157	70 (57)	749 (550)	1656	45 (33)
South East	57 (45)	90	63 (50)	827 (427)	5319	16 (8)
South West	57 (39)	94	61 (41)	563 (291)	3226	17 (9)

Sources: DfES NNI data March 2005, and ID 2004

³⁵ In the original funding allocations based on ID 2000 (DETR, 2000), 78% of neighbourhood nurseries were located in the 20% most disadvantaged wards. In ID 2004, Super Output Areas (SOAs) replaced wards as the smallest geographical unit for which administrative data is routinely available.

'Neighbourhood' throughout this report refers to the geographical unit SOA. 'Disadvantage' refers to the most disadvantaged neighbourhoods defined according to the Index of Income Deprivation Affecting Children (IDAC) developed for ID 2004 (Noble *et al*, 2004). See footnotes 11 and 29 and the Glossary.

³⁶ Note this refers to *location of the nursery*; a more robust measure of successful targeting would be *actual catchment area of the nursery*, that is, where its users live (see Chapter 2).

Table 1.3 gives more detailed examples by local authority. Local authorities in London such as Hackney, Newham, Southwark, and Lambeth have high levels of disadvantage and also large numbers of neighbourhood nurseries, the majority (in some cases, all) of which are located in the 30% most disadvantaged neighbourhoods. There is considerable variation amongst local authorities in levels of disadvantage and their success rate in targeting NNI. For example, Hackney and Bristol are two very different local authorities in terms of levels of deprivation. Hackney has 96% of its neighbourhoods falling into the 30% most disadvantaged category, whilst Bristol has only 39% in this category. Both authorities, however, show similarly high rates of success in locating neighbourhood nurseries in the most disadvantaged neighbourhoods – in both Hackney and Bristol, this was the case for all the neighbourhood nurseries³⁷.

Table 1.3: NNI: number and % of neighbourhood nurseries in the 30% (20% in parentheses) most deprived Super Output Areas (SOAs) on IDAC, selected local authorities

LA name	GOR	NNs (no) in most deprived SOAs	No. of all NNs	NNs (%) in most deprived SOAs	% of most deprived SOAs
Newham	London	22 (20)	22	100 (91)	99 (81)
Hackney	London	20 (19)	20	100 (95)	96 (86)
Coventry	West Midlands	15 (11)	15	100 (73)	40 (27)
Southwark	London	20 (19)	21	95 (90)	84 (70)
Lambeth	London	14 (12)	15	93 (80)	81 (60)
Liverpool	North West	14 (14)	15	93 (93)	71 (63)
Manchester	North West	17 (15)	19	89 (79)	73 (64)
Bristol, City of	South West	15 (15)	17	88 (88)	39 (28)
Leeds	Yorkshire & The Humber	21 (20)	24	88 (83)	33 (23)
Blackburn with Darwen	North West	14 (10)	16	88 (63)	53 (29)
Newcastle upon Tyne	North East	18 (17)	21	86 (81)	55 (42)
Lewisham	London	14 (10)	17	82 (59)	70 (49)
Nottingham	East Midlands	13 (11)	16	81 (69)	70 (59)
Sheffield	Yorkshire & The Humber	16 (15)	20	80 (75)	41 (30)
Birmingham	West Midlands	27 (24)	34	79 (71)	59 (49)
South Tyneside	North East	11 (11)	15	73 (73)	62 (50)
Bradford	Yorkshire & The Humber	22 (21)	31	71 (68)	44 (35)
Sunderland	North East	12 (11)	17	71 (65)	51 (36)
Knowsley	North West	11 (10)	16	69 (63)	63 (58)
Telford and Wrekin	West Midlands	10 (9)	15	67 (60)	40 (26)
Kingston upon Hull, City of	Yorkshire and The Humber	9 (8)	16	56 (50)	59 (55)
Barnsley	Yorkshire and The Humber	12 (8)	22	55 (36)	43 (30)
Tameside	North West	8 (7)	15	53 (47)	41 (23)

Sources: DfES NNI data March 2005, and ID 2004. Note this table only includes local authorities with fifteen or more neighbourhood nurseries

³⁷ Note these data are for 2005; by 2008, many of these nurseries will have become or be linked to children's centres.

Table 1.4: NNI: status of deprivation (30% and 20%) for the location of all neighbourhood nurseries, by sector

	Located in the 30% most deprived neighbourhoods?	Located in the 20% most deprived neighbourhoods?
Voluntary	258 (85%)	214 (70%)
Maintained	208 (80%)	170 (66%)
Private	332 (63%)	245 (47%)
Joint	171 (77%)	141 (63%)
Total	969 (74%)	770 (59%)

Source: DfES NNI data, March 2005; 1314 out of 1359 neighbourhood nurseries with no missing information on area deprivation and type of sector

Table 1.5: NNI: status of deprivation (30% and 20%) for the location of all neighbourhood nurseries, by link to Sure Start Local Programmes

	Located in the 30% most deprived neighbourhoods?	Located in the 20% most deprived neighbourhoods?
Sure Start Local Programmes link	396 (80%)	336 (68%)
No Sure Start Local Programmes link	429 (71%)	329 (55%)
Total	825 (75%)	665 (61%)

Source: DfES NNI data, March 2005; 1096 out of 1359 neighbourhood nurseries with no missing information on area deprivation and Sure Start Local Programmes link

Table 1.6: NNI: status of deprivation (30% and 20%) for the location of all neighbourhood nurseries, by children's centre status

	Located in the 30% most deprived neighbourhoods?	Located in the 20% most deprived neighbourhoods?
No links to children's centres	188 (65%)	137 (47%)
Main children's centre site	294 (82%)	241 (67%)
Contributing to children's centre	222 (76%)	179 (61%)
Total	704 (75%)	557 (59%)

Source: DfES NNI data, March 2005; 942 out of 1359 neighbourhood nurseries with no missing information on area deprivation and children's centre status

Disadvantaged location also varied by sector, as did links with SSLPs and with children's centres (see Tables 1.4, 1.5 and 1.6). While between 60% and 70% of the maintained, joint and voluntary sector neighbourhood nurseries were located in the 20% most disadvantaged areas, this was the case for only 47% of the private sector nurseries. When we expand the definition of disadvantage to the 30% most disadvantaged areas, the proportion of maintained, joint and voluntary neighbourhood nurseries so located varied between 77% and 85%, while private sector nurseries had only risen to 63%. As might be expected, there were significantly more neighbourhood nurseries linked with SSLPs located in the most deprived neighbourhoods and also more nurseries that were main children's centre sites or contributing partners in children's centres located in such deprived neighbourhoods. 68% of the neighbourhood nurseries linked to SSLPs were located in the 20% most deprived neighbourhoods; this figure rose to 80% in the 30% most disadvantaged neighbourhoods. Two-thirds of the neighbourhood nurseries designated as main children's centre sites (67%) were located in the 20% and 82% in the 30% most deprived neighbourhoods³⁸. There were no significant differences in the deprivation of the location between neighbourhood nurseries located on school sites and those that were not.

The national evaluation of NNI

The national evaluation of NNI has sought to answer four questions.

- First, how successful has the programme been in establishing nurseries or increasing childcare places in the most disadvantaged areas, and how sustainable is the new provision likely to prove?
- Second, is the new provision of the quality that is needed to improve children's life chances?
- Third, how successful has the programme been at attracting parents from the most disadvantaged areas by providing the sort of childcare (the right type, location, price, hours, etc) they want for their children?
- And finally, has the programme helped parents to get (back) into work?

The first and second questions have been addressed by the *Implementation Study* summarised in Chapter 2 and the *Childcare Quality and Children's Behaviour Study* summarised in Chapter 3, the third and fourth questions by the *Impact Study* summarised in Chapter 5. The *Neighbourhood Tracking Study* reported in Chapter 4 provides the context for all the studies by analysing the changes to the working-age claimant population with preschool children in the neighbourhoods served by NNI when compared to the country as a whole. The four studies are reported in separate publications³⁹, which should be read for more in depth discussion of findings and methodology alongside this integrated report.

³⁸ As already noted (see footnote 11 and related text), neighbourhood nurseries could be located outside the 20% most disadvantaged wards in the original funding if they were nevertheless serving disadvantaged groups or 'pockets' of deprivation, and some of these nurseries were later designated as children's centres.

³⁹ See separate reports: Smith, Coxon and Sigala, 2007; Mathers and Sylva, 2007; Sigala and Smith, 2007; La Valle *et al.*, 2007. Two reports on the early implementation and impact of the NNI programme were published in January 2005: Smith *et al.*, 2005; and Bell and La Valle, 2005.

The NNI national evaluation has combined four different strands of evaluation to study the following:

- the *implementation* of the NNI programme (the Implementation Study), based on in-depth study of 102 nurseries sampled in two waves, in 2003 and 2004/05 (including visits, interviews with nursery managers, local authority personnel and regional advisors, and the collection of staffing data and monitoring data on provision and users from the nurseries themselves) – this provides information on the location of the 102 nurseries (for both the total national programme and the in-depth sample) and their catchment areas, the services provided, their staffing, and their users;
- the *quality* of the education and care for children under three provided in neighbourhood nurseries, based on observations in 103 nurseries (96 of these were part of the implementation sample) using the Infant and Toddler Environment Rating Scale (ITERS) and the Caregiver Interaction Scale (CIS); this strand also studied the *impact of neighbourhood nursery provision on children’s social and behavioural development*, based on information collected for 810 children under three, and their families, in 100 of the 103 nurseries in the quality study sample, using the Adaptive Social Behaviour Inventory (ASBI) and a family profile questionnaire (the Childcare Quality and Children’s Behaviour Study);
- NNI’s *impact on parents* (the Impact Study) – the Impact Study used surveys of *actual users* (face-to-face interviews with 512 parents drawn from 34 nurseries in the implementation study sample) and *potential users* (that is, ‘work-ready’ parents living in either ‘NNI-rich’ areas or ‘NNI-poor’ areas – a telephone survey of 2,647 parents drawn from the 20% most deprived areas) to study employment, use of formal childcare, and take-up of benefits and tax credits among families from different groups, and the impact on accessibility, particularly for disadvantaged groups such as lone parents, low income families and ethnic minority groups. Analysis of administrative data from the Work and Pensions Longitudinal Study (WPLS) compared employment outcomes for the whole population of parents with preschool children in ‘NNI-rich’ and ‘NNI-poor’ areas. The Impact Study also included a *cost-benefit analysis* of the programme, based on estimates drawn from the Family Resources Survey (FRS);
- the *neighbourhood context* for the NNI programme, and *change over time* in the neighbourhoods served by neighbourhood nurseries, drawing on the Index of Deprivation Affecting Children (IDAC) 2004 and the out-of-work benefits (IS/JSA) to give a picture of changes in the claimant population with preschool children in these neighbourhoods compared with the national picture (the Neighbourhood Tracking Study).

These studies of different aspects of the NNI programme illuminate each other, as set out in the separate chapters of this report and in the conclusions. More detail of the overall methodology can be found in the methodological appendices in the separate reports.

2

102 NEIGHBOURHOOD NURSERIES ON THE GROUND:

THE NNI IMPLEMENTATION STUDY

*Kate Coxon, Maria Sigala and Teresa Smith
Department of Social Policy and Social Work
University of Oxford*

Introduction

The Implementation Study set out to answer the following questions – how successful has NNI been in establishing nurseries and increasing childcare places in the most disadvantaged areas of the country, and how sustainable is this new provision likely to prove?

This chapter gives details of the following:

- evaluation strategy and methods
- neighbourhood nurseries – a profile
- neighbourhood nurseries and the services they provide
- neighbourhood nurseries and their staff
- disadvantage and nursery location
- who uses neighbourhood nurseries? – disadvantage and user take-up
- fees, sustainability and the transition to children’s centres

Evaluation strategy and methods

The Implementation Study set out to evaluate the different types of neighbourhood nurseries that implemented NNI on the ground, their success in meeting NNI targets and their likely sustainability after the end of the three year funding. The study drew from

- secondary quantitative data held by the DfES for administrative purposes (March 2005);
- quantitative data in the form of brief questionnaires to local authority advisers (2005), and monitoring forms to nurseries about their settings, children, staff and fees, both administered by the NNI Research Team;
- qualitative data from semi-structured interviews with nursery managers and regional advisers carried out by the NNI Research Team (2003/04)⁴⁰.

⁴⁰ For more detail, see the methodological appendices in Smith, Coxon and Sigala, 2007.

The main advantage of the secondary quantitative data held by the DfES was that this covered all 1,359 neighbourhood nurseries up and running in the programme at its completion. However, as this was initially collected for administrative purposes it did not contain the depth of information needed for an evaluation of the initiative. It was, therefore, necessary for the present study to collect its own quantitative and qualitative data from nurseries as well as from local authority and regional advisers involved in the implementation of NNI. Time and budget constraints meant, however, that such rich information could not be collected from all 1,359 nurseries, so a representative sample of 102 nurseries was selected from which primary data was collected.

This chapter presents a profile of the 102 neighbourhood nurseries sampled in detail for the Implementation Study. Thirty-one of these neighbourhood nurseries were the ‘early openers’ reviewed in 2003⁴¹. The remaining 71 neighbourhood nurseries were the ‘later openers’ visited in 2004 and 2005. This chapter describes the implementation sample nurseries and their users as a whole, but some data is reported for the later openers only⁴².

102 neighbourhood nurseries: a profile

We start off with a brief ‘profile’ table to show the main characteristics of the implementation sample of 102 nurseries at the close of the programme in 2005 – whether the nurseries were ‘new builds’, or extensions or refurbishments of existing buildings, whether they were located on a school site, linked to Sure Start Local Programmes (SSLPs) or part of the children’s centre programme, and how these factors varied by nursery sector⁴³. It is important to remember throughout this report that the picture presented is of an early stage of the children’s centre programme.

As Table 2.1 makes clear, the private sector dominated the implementation sample as a whole with 39% of the neighbourhood nurseries⁴⁴. This was less than the 48% recorded for the ‘early openers’, which suggests that the private sector was ‘quicker off the mark’ in responding to NNI, while the maintained and joint sectors took longer to get their neighbourhood nurseries up and running. Reasons for this might include building new premises with joint funding and delays getting packages together; links to other initiatives with different timescales; and the long planning cycles within local authorities and challenges of partnership working. Table 2.1 reports data for the implementation sample of 102 nurseries; the righthand column provides comparable data for the population of neighbourhood nurseries overall reported in Chapter 1.

⁴¹ See Smith *et al*, 2005

⁴² Each table includes information on data sources, the number of nurseries sampled, and whether these were ‘early openers’ or ‘later openers’.

⁴³ See Glossary for definition of nursery sector.

⁴⁴ This is in line with national survey data suggesting that the private for-profit sector had an estimated worth of £2.8bn in 2004 – 88% of the estimated worth of the entire daycare market (Laing and Buisson, 2005). For the total population of neighbourhood nurseries reported in Chapter 1 the figure is almost identical at 40%.

Table 2.1: Implementation Study: neighbourhood nursery profile by nursery sector

	<i>Voluntary</i>	<i>Maintained</i>	<i>Private</i>	<i>Joint</i>	<i>Total</i>	<i>All Neighbourhood Nurseries</i>
<i>Extension</i>	5 (17%)	4 (27%)	4 (10%)	2 (11%)	15 (15%)	254 (19%)
<i>New build</i>	10 (35%)	5 (33%)	9 (23%)	10 (56%)	34 (33%)	473 (36%)
<i>Refurbished</i>	13 (45%)	5 (33%)	21 (53%)	6 (33%)	45 (44%)	457 (34%)
<i>Other</i>	1 (3%)	1 (7%)	6 (15%)	0 (0%)	8 (8%)	145 (11%)
Location						
<i>At school site</i>	12 (43%)	7 (47%)	8 (20%)	6 (35%)	33 (33%)	436 (33%)
<i>Not at school site</i>	16 (57%)	8 (53%)	32 (80%)	11 (65%)	67 (67%)	892 (67%)
Local Programmes link						
<i>Sure Start Local Programmes link</i>	11 (46%)	8 (73%)	8 (24%)	11 (69%)	38 (45%)	494 (45%)
<i>No Sure Start Local Programmes link</i>	13 (54%)	3 (27%)	25 (76%)	5 (31%)	46 (55%)	609 (55%)
Children's centres						
<i>Main children's centre site</i>	8 (28%)	6 (40%)	10 (25%)	7 (39%)	31 (30%)	364 (27%)
<i>Contributing to children's centre</i>	10 (35%)	3 (20%)	6 (15%)	4 (22%)	23 (23%)	292 (22%)
<i>No links to children's centres</i>	5 (17%)	0 (0%)	10 (25%)	4 (22%)	19 (19%)	294 (22%)
<i>Undecided</i>	4 (14%)	0 (0%)	8 (20%)	1 (6%)	13 (13%)	188 (14%)
<i>Missing</i>	2 (7%)	6 (40%)	6 (15%)	2 (11%)	16 (16%)	191 (14%)
Total						
<i>Total</i>	29 (28%)	15 (15%)	40 (39%)	18 (18%)	102 (100%)	1329 (100%)

Source: Implementation sample, monitoring data, 2003-2005; 102 neighbourhood nurseries. DfES NNI data, March 2005; 1,329 Neighbourhood Nurseries with no missing information on type of sector

102 neighbourhood nurseries and the services they provide

The Implementation Study asked neighbourhood nurseries for details of the services they provided. When the ‘early openers’ were surveyed in 2003, the nurseries were focusing largely on NNI’s original aims – integrated childcare and early education⁴⁵. At that time, almost all were registered for the daily two and a half hours of free education for three and four year old children; few were providing any additional services (family support, benefit advice, health clinics, for example), though some did so through their links with other programmes such as SSLPs. By 2004 and 2005, when the ‘later openers’ were surveyed, the NNI aims had expanded to take on a range of ‘additional services’ listed under the children’s centre programme, which included the following:

- Good quality early education integrated with full daycare provision for children (minimum ten hours a day, five days a week, forty-eight weeks a year)
- Good quality teacher input to lead the development of children’s learning within the centre
- Parental outreach to encourage take-up
- Family support services
- A base for a childminder network
- Child and family health services, including ante-natal services
- Support for children with special needs and their parents
- Links to support training and employment, for example with Jobcentre Plus, local training services and further and higher education institutions

This list was used in interviews with nursery managers and in the monitoring data provided by the neighbourhood nurseries, to analyse the ‘core’ and ‘additional’ services provided by the implementation sample. This section gives two examples of integrated provision, and analyses differences in services by sector.

Tables 2.2 and 2.3 set out data on the services provided by the 71 ‘later opener’ neighbourhood nurseries in addition to the ‘core’ of early education and care. The numbers may seem low, but again it is important to note that the children’s centre programme with a wider list of required services was still in its early stages, and not all neighbourhood nurseries had yet made the transition to the new children’s centre programme or had decided whether to do so. Here we summarise some key points:

- only seven of the 71 nurseries employed a 0.5 fte (full-time equivalent) teacher, although 19 nurseries (26.8%) said they received support from a trained teacher
- forty-five (63.4%) said that they had additional services for children with special educational needs (SEN)
- just two of the nurseries had their own on-site jobcentre, but 25 of the nurseries (35.2%) provided employment advice, and 20 (28.2%) offered leaflets
- half the nurseries provided additional health services
- one-third provided additional family support

⁴⁵ See Smith *et al*, 2005

- only 13 provided adult education, and only four provided parent training.

Table 2.2: Implementation Study: examples of services provided by neighbourhood nurseries in addition to core early education and care

ADDITIONAL SERVICES PROVIDED	EXAMPLES
Parental outreach	Postnatal contact; information on childcare available
Childminder support	A base for a childminder network
Specific support for children with special needs	Support for children with special needs; Portage; hearing and speech therapy
Family support services	Toy library; equipment loan; family support and counselling; social worker surgeries
Job/ training related	Links with Jobcentre Plus; childcare or other training; information about employment; jobs broker service; jobs advisory clinic; careers service surgeries; information about tax credits and welfare benefits; financial advice
Child and family health services	Baby clinics; health clinics; speech therapy; antenatal classes; health visitors for family advice; dentist surgeries
Adult education	Internet café; adult education courses and activities; English language classes; basic skills classes; links with local training providers, HE and FE
Specialist services	Police surgery; legal surgery advice; sessions for refugees and asylum-seekers
Practical support	Community meeting places; laundry facilities; community cafeterias

Source: Implementation sample, later openers only, interviews with nursery managers, 2004-2005; 71 neighbourhood nurseries

Table 2.3: Implementation Study: additional services mentioned by neighbourhood nurseries

SERVICE	Number of nurseries mentioning service	% of nurseries mentioning service
Advice/support for benefits and employment		
Advice	25	35
Leaflets	20	28
On-site jobcentre	2	3
None mentioned	24	34
Educational services and support		
.5 full-time equivalent (FTE) qualified teacher	7	10
Support from trained teacher	19	27
None mentioned	45	63
Additional health services		
Yes	36	51
None mentioned	35	49
Adult education services		
Adult education	13	18
Parent education	4	6
Both	4	6
None mentioned	50	70
Additional services for special educational needs (SEN)		
Yes	45	63
None mentioned	26	37
Additional family support services		
Yes	23	32
None mentioned	48	68
Base for childminders		
Yes	9	13
None mentioned	62	87

Source: Implementation sample, later openers only, interviews with nursery managers, 2004-2005; 71 neighbourhood nurseries

To illustrate the services provided, and some of the issues raised in moving to more integrated or collaborative provision, as well as the complexities of the resulting arrangements, we give examples of integrated early education and childcare in the two boxes below. The first illustrates issues to do with Early Education Funded places (EEF); the second illustrates daycare ('wraparound care') to supplement the early education session or to provide care outside the normal school day⁴⁶.

Integrated daycare and early education I – Early Education Funded places (EEF)

To what extent were the neighbourhood nurseries meeting the goal of integrated care and early education for young children of parents moving into work or training? According to the monitoring data provided by the seventy-one 'later openers', sixty-five were registered to provide early education on-site. One more was in the process of registering with Ofsted to provide EEF places. For the remaining five, which did not provide early education on-site themselves, arrangements were often complex, and the reasons and the resulting organisational complexities provide a striking example of the issues in moving to more collaborative or integrated services. In these five nurseries, children were taken to neighbouring schools for the 'early education' slot. Some managers stated this was done in order to avoid direct competition with the schools for the EEF places; and one said this had been a condition set by her local authority when the nursery received NNI funding. There were also several examples of nurseries which were registered to provide early education, but had arrangements with local schools for the delivery and collection of children receiving early education in a school setting.

By 2004/5, many parents were choosing to take up their EEF places in another setting, almost always a school. There may have been a number of reasons for this but one theme which emerged in interviews was that parents were concerned about securing school places for the future. Nursery managers commented that parents thought they would lose their entitlement to a school place later on if they declined a place in the school nursery for their child at age three, particularly if the school was over-subscribed.

Clearly, 'drop-off and pick-up' arrangements with local schools and flexible mixes of education and care had developed in response to local demand. Managers made it clear in interview that schools were keen for the EEF places, and that it was important to avoid direct competition with the schools. In the survey of local authority advisers carried out in spring 2005, 48% of the Business Support Officers said that competition for children between neighbourhood nurseries and other centres was adversely affecting nurseries in their area.

⁴⁶ Many of the points made in these two boxes are illustrated by the case studies of neighbourhood nurseries in Chapter 5 of the main Implementation Study report (Smith, Coxon and Sigala, 2007).

Integrated daycare and early education II – Wraparound Care

Wraparound care is another example of integrated provision – that is, care provided ‘wrapped around’ other provision such as early education sessions, or provided before or after the normal school day. According to the monitoring data provided by the neighbourhood nurseries, 39 of the 71 ‘later openers’ provided wraparound and 32 did not. The number offering wraparound is lower than might be expected. However, this may have been due to some degree of confusion over the term ‘wraparound’. There is some evidence that private day nurseries (which made up a relatively high proportion of neighbourhood nurseries) offering year-round education and care from 8.30am to 6.30pm did not view their provision as incorporating wraparound: these hours constituted the ‘normal day nursery day’. They would only define themselves as providing wraparound if, for example, the nursery had an arrangement with a local school for the collection and delivery of children for EEF places, or if it provided after-school care for older children. There were also examples of private nurseries with high numbers of children attending for the EEF place only, when there was also an option for parents to purchase additional time at an hourly rate if they wished; this would then be classified as wraparound.

Some nurseries providing early education offered wraparound care at either end of an EEF session; others used the term to describe care beyond the normal school day – before and after-school care and holiday care. Nurseries operating ‘drop-off and pick-up’ arrangements for EEF places with local schools were more likely to describe themselves as providing wraparound care, and this was the most common form. Very often, ‘wraparound care’ meant collecting the child from a local school, or from a pre-school room within the centre, and offering lunch and another daycare session to supplement the two and a half hours early education daily place.

Finally, we summarise in Table 2.4 some of the variations between sectors in the services provided by the 71 ‘later opener’ neighbourhood nurseries. Here the important difference is between the private sector on the one hand, and nurseries in the voluntary, maintained and ‘joint project’ sectors on the other. It is clear there were differences in children’s centre status, additional health and family support services provided, and parental involvement (that is, formal structures in place for parents to affect decision making in the nurseries). Significantly more nurseries in the voluntary, maintained and joint sectors, compared with private sector nurseries, had links with children’s centres or were already designated as a main centre. Significantly fewer private sector nurseries provided additional health services. There were marginally significant differences in parental involvement, and in additional family support services, with nurseries in the voluntary, maintained and ‘joint project’ sectors providing more than private sector nurseries. But again it should be noted that the children’s centre programme was still in its early stages at the time of this final data collection on NNI.

Table 2.4: Implementation Study: significant differences between private sector and other sector neighbourhood nurseries

		Voluntary, maintained and joint nurseries	Private nurseries
<i>Children's centre</i>	Main centre or link	30 (77%)	9 (23%)
	No link	15 (47%)	17 (53%)
<hr/>			
<i>Additional health services</i>	Yes	28 (78%)	8 (22%)
	No	17 (49%)	18 (51%)
<hr/>			
<i>Formal structures for parents to take part in decision making</i>	Yes	16 (80%)	4 (20%)
	No	29 (57%)	22 (43%)
<hr/>			
<i>Additional family services support</i>	Yes	18 (78%)	5 (22%)
	No	27 (56%)	21 (44%)
<hr/>			
Total		45 (63%)	26 (37%)

Source: Implementation sample, later openers only, Interviews with nursery managers, 2004-2005; 71 neighbourhood nurseries

102 neighbourhood nurseries and their staff

Issues of staff training, and the availability of an adequate early years workforce, have become more urgent since NNI was announced, with the reorganisation of early years services and training and the announcement of the *Ten year strategy for childcare* in 2004 followed by the *Action plan for the ten year strategy* in 2006, as set out in Chapter 1. The later stages of the Implementation Study offered the opportunity to collect staff data from the 'later openers' surveyed in 2004. In total data was collected on 833 staff working with children, in sixty-nine of the seventy-one 'later opener' nurseries which completed and returned forms about staffing. Here we focus on working hours (as a proxy for working conditions) and educational qualifications as an indicator of quality, and analyse these by occupation, nursery sector and children's centre status, to check whether some sectors attract staff with higher qualifications. We also ask how these findings from the Implementation Study relate to the findings on the quality of the

nursery environment, staff qualifications and child outcomes reported by Mathers and Sylva⁴⁷.

When working hours are analysed it is clear that, on average, neighbourhood nursery staff worked for thirty-four hours a week, and 30% of the staff were part-time workers (working no more than thirty hours a week). Working hours were broken down by the three main occupational categories found in neighbourhood nurseries: managers, owners and team leaders; teachers; and all other nursery workers including nursery nurses and assistants ('childcare workers'). The first important point is that the number of teachers employed in neighbourhood nurseries is very small indeed – although nineteen of the nurseries reported some other form of teacher support. Their working hours varied greatly, with two teachers working fewer than fifteen hours a week and three working more than forty hours. Second, the more senior staff in these nurseries (managers, team leaders, supervisors) worked longer hours with 90% working more than thirty five hours per week. And third, almost one in every three of the childcare staff worked part-time.

Table 2.5 presents educational qualifications broken down by occupational category. Almost nine out of ten neighbourhood *nursery managers, leaders and supervisors* (89%) held qualifications at A levels or above; only 11% held qualifications below this level. By contrast, while 58% of the *childcare staff* were qualified at A level, GCSE, GNVQ, BTEC first certificate or NVQ level 3, 40% held qualifications below this level⁴⁸.

Table 2.5: Implementation Study: highest educational qualifications of staff in neighbourhood nurseries, by occupational category

	Managers/Owners /Team Leaders	Teachers	Childcare Workers	Total
GCSE grade D-G, foundation GVNQ, NVQ1	0 (0%)	0 (0%)	2 (0%)	2 (0%)
GCSE A-C, Intermediate GNVQ, BTEC first certificate, NVQ 2	19 (11%)	0 (0%)	193 (40%)	212 (32%)
A level, Advanced GNVQ, Btec 3, NVQ 3	134 (75%)	1 (11%)	281 (58%)	416 (62%)
Degree, Btec higher, HNC, NVQ 4	24 (13%)	7 (78%)	7 (1%)	38 (6%)
Higher degree, NVQ 4, PGCE	1 (1%)	1 (11%)	0 (0%)	2 (0%)
Total Valid	178	9	483	668
Missing	8	3	139	150

Source: Implementation sample, later openers only, monitoring data, 2004-2005; 69 neighbourhood nurseries that returned completed staffing forms

⁴⁷ See Mathers and Sylva (2007). Note that data on staff qualifications collected for the *Implementation Study* refer mainly to educational qualifications, while data collected for the *Childcare Quality and Children's Behaviour Study* refer also to childcare qualifications.

⁴⁸ Note that the neighbourhood nurseries in the implementation sample did not report on qualifications for 18% of their childcare staff (see Table 2.6); for private sector nurseries the missing figure was 26% - more than one quarter of the staff.

The occupational differences in qualifications become even sharper when we consider the characteristics of the childcare workforce separately for the private, maintained, voluntary and joint sectors, as shown in Table 2.6 on working hours and educational qualifications. The private sector stands out with a workforce working very long hours (56% working 35.5 to 40 hours, and 17% more than 40 hours a week – other sectors had virtually no staff working such overtime hours) but with low qualifications (30% below NVQ3 or equivalent, compared with 16% in the maintained sector, and only 44% NVQ3 or above compared with 80% in the maintained sector).

Table 2.6: Implementation Study: working hours and highest education qualifications of staff in neighbourhood nurseries, by nursery sector

	<i>Voluntary</i>	<i>Maintained</i>	<i>Private</i>	<i>Joint</i>	<i>Total</i>
<i>Less than 15 hrs p/w</i>	11 (7%)	7 (4%)	8 (2%)	2 (2%)	28 (4%)
<i>15-20 hrs p/w</i>	16 (10%)	32 (19%)	27 (8%)	12 (10%)	87 (11%)
<i>20.5-30 hrs p/w</i>	38 (25%)	17 (10%)	51 (14%)	16 (14%)	122 (15%)
<i>30.5-35 hrs p/w</i>	7 (5%)	13 (8%)	9 (3%)	5 (4%)	34 (4%)
<i>35.5-40 hrs p/w</i>	81 (52%)	100 (59%)	203 (56%)	80 (70%)	464 (58%)
<i>More than 40 hrs p/w</i>	2 (1%)	0 (0%)	62 (17%)	0 (0%)	64 (8%)
<i>Below NVQ 3 or equivalent</i>	46 (28%)	28 (16%)	115 (30%)	27 (23%)	216 (26%)
<i>NVQ 3 or equivalent</i>	65 (40%)	130 (74%)	157 (41%)	71 (61%)	423 (51%)
<i>Above NVQ 3 or equivalent</i>	13 (8%)	10 (6%)	10 (3%)	8 (7%)	41 (5%)
<i>Missing</i>	38 (23%)	8 (5%)	97 (26%)	10 (9%)	153 (18%)
<i>Total</i>	162 (19%)	176 (21%)	379 (46%)	116 (14%)	833 (100%)

Source: Implementation sample, later openers only, monitoring data, 2004-2005; 69 neighbourhood nurseries that returned completed staffing forms

Table 2.7 analyses staff’s educational qualifications by children’s centre status and again shows a significant relationship. Neighbourhood nurseries designated as a children’s centre main site had 68% of their staff with the highest qualifications, compared with 60% in nurseries linked to a children’s centre and only 54% in nurseries with no links to a children’s centre. There were significantly more staff with the lowest educational

qualifications (42%) in nurseries with no links with a children’s centre, compared to the nurseries that were a main site for children’s centres (26%).

Table 2.7: Implementation Study: highest educational qualifications of staff in neighbourhood nurseries, by their children’s centre status

	Main children’s centre	Children’s centre link	Not part of a children’s centre	Total
<i>Below NVQ 3 or equivalent</i>	59 (26%)	41 (34%)	41 (42%)	141 (31%)
<i>At NVQ 3 or equivalent</i>	157 (68%)	71 (60%)	53 (54%)	281 (63%)
<i>Above NVQ 3 or equivalent</i>	15 (6%)	7 (6%)	4 (4%)	26 (6%)
Total	231	119	98	448

Source: Implementation sample, later openers only, monitoring data, 2004-2005; 47 neighbourhood nurseries that returned completed staffing forms and for which there was no missing information about children’s centre status

Links to a school made little difference to level of educational qualification. Similarly, location in disadvantaged areas seemed to make little difference. However, there were significant differences between nurseries linked to SSLPs (staff had significantly higher educational qualifications) and those that did not have such links. In neighbourhood nurseries linked to SSLPs, 65% of their staff held A level or NVQ 3 qualifications or above, while the figure for nurseries not linked to SSLPs was only 53%. Neighbourhood nurseries providing additional services as well as the ‘core’ early education and childcare were also more likely to have staff with higher educational qualifications. Nurseries with additional health services had 64% of their staff qualified at this higher level compared to 52% in nurseries not providing such services; for nurseries providing additional family support services the figure was 71%, compared to 53% in nurseries not providing this additional service.

The most striking difference in terms of the educational qualifications of staff was found between maintained nurseries and others. The maintained sector had by far the most educationally qualified staff. Maintained nurseries overall had 80% of their staff qualified with A levels or NVQ 3 or higher. For joint sector nurseries this fell to 70%, while for voluntary and private sector nurseries this fell to 51% and 46% respectively⁴⁹.

⁴⁹ When the data were analysed for childcare workers only, that is, excluding managers/ owners/ team leaders and teachers, virtually identical results were produced.

The Implementation Study findings thus reveal a strong pattern related to sector. This plays out in location of the nursery, links with other services such as schools, SSLPs and children's centres, and in staffing qualifications and therefore quality. Neighbourhood nurseries in the maintained sector were more likely to have more highly qualified staff; they were more likely to be located on a school site, and to be linked to SSLPs and to children's centres; maintained and joint sector nurseries were more likely to be located in disadvantaged areas. Private sector neighbourhood nurseries were less likely to be located in disadvantaged areas, or to have links with schools, SSLPs or children's centres; they were less likely to provide additional services such as family support; and their staff were less highly qualified and more likely to work overtime. These findings underpin the picture painted by Mathers and Sylva in the *Childcare Quality and Children's Behaviour Study*. Mathers and Sylva also report strong patterns related to sector: the maintained sector nurseries had the highest quality rating scores on the ITERS, employed staff with the highest level of qualifications, and showed the strongest significant positive relationship overall with quality of site. Their analysis revealed that having a qualified teacher on the staff was particularly crucial in relation to children's behaviour, again underlining the importance of highly trained staff.

In the implementation sample nurseries, interviews with nursery managers provided further anecdotal evidence to flesh out the data collected in both studies. Managers of other sector nurseries, as well as the maintained sector nurseries themselves, acknowledged that maintained nurseries could offer better rates of pay and staff benefits and as a result had better recruitment and retention rates than the private sector. Rates of pay play a significant role in recruiting, training and retaining a better qualified staff. The interviews provide evidence that maintained and joint sector nurseries could attract and afford more highly paid staff and thus more qualified staff⁵⁰.

Other staffing issues were also mentioned. Managing staff on different types of contract could be problematic (for example, some staff might be employed by a local education authority while other childcare staff in the same setting might be employed by the local authority with different working hours and conditions). Recruiting staff for holiday provision was a further issue for many nurseries, but it was especially problematic for neighbourhood nurseries on a school site where staff were more likely to be employed by the local education authority and to be working to a school year. Some nurseries were addressing the issue of supply cover collaboratively, for example by setting up a staff-sharing scheme locally and sharing facilities for training. These staffing difficulties highlight some of the issues that surfaced in the shift to more integrated services.

The analysis of staffing qualifications, as well as services provided, also illustrates some of the difficulties faced by local authorities and the sectors themselves in transforming nurseries to children's centres, which are intended to provide equitable access to high quality provision, particularly in disadvantaged neighbourhoods. Future planning for the children's centre programme will have to take these problems on board.

⁵⁰ This anecdotal information on salaries comes from interviews with the nursery managers of the 'later openers'. It was not possible to collect systematic information about the salaries paid to staff.

102 neighbourhood nurseries: disadvantage, location and sector

NNI aimed to expand childcare in the most disadvantaged areas of the country. Here we assess the extent to which the programme met this aim – by examining first, the *location of the nurseries*, and second, the *location of their users*, that is, the nurseries’ catchment areas.

Chapter 1 showed that just under 60% of the national programme nurseries were located in the 20% most disadvantaged neighbourhoods⁵¹, and just under 75% in the 30% most disadvantaged neighbourhoods. Table 2.8 shows that the percentage is almost the same for the implementation sample: just under 60% in the 20%, and 74% in the 30% most disadvantaged neighbourhoods. However, there is considerable variation by nursery sector, with the private sector the least successful proportionally at meeting the programme’s aims (although numerically this is the largest sector).

Table 2.8: Implementation Study: neighbourhood nurseries’ location in the 30% and 20% most deprived neighbourhoods, by nursery sector

	<i>Voluntary</i>	<i>Maintained</i>	<i>Private</i>	<i>Joint</i>	<i>Total</i>
In the 30% most deprived areas	21 (72%)	11 (73%)	26 (65%)	16 (89%)	74 (73%)
In the 20% most deprived areas	17 (59%)	8 (53%)	20 (50%)	14 (78%)	59 (58%)

Source: Implementation sample, monitoring data, 2003-2005; 102 neighbourhood nurseries

As Table 2.9 shows, there is also variation by context, that is, links with SSLPs, schools and children’s centres, which is important for quality and for future sustainability.

⁵¹ We have used ‘neighbourhood’ throughout the text of this report to refer to the geographical unit SOA.

Table 2.9: Implementation Study: neighbourhood nursery location in 20% most disadvantaged neighbourhoods (30% figures in brackets), and users served: by links with schools, Sure Start Local Programmes (SSLPs) and children’s centres

Neighbourhood nurseries	Located in 20% most deprived area (30% most deprived)	Not located in 20% most deprived area (30% most deprived)	Total Number
On school site	55% (70%) <i>[on average 64% users from most deprived areas]⁵²</i>	46% (30%) <i>[on average 24% users from most deprived areas]</i>	33
Not on school site	60% (75%) <i>[on average 61% users from most deprived areas]</i>	40% (25%) <i>[on average 23% users from most deprived areas]</i>	67
With SSLP link	74% (84%) <i>[on average 67% users from most deprived areas]</i>	26% (16%) <i>[on average 39% users from most deprived areas]</i>	38
No SSLP link	46% (65%) <i>[on average 58% users from most deprived areas]</i>	54% (35%) <i>[on average 17% users from most deprived areas]</i>	46
Main children’s centres	65% (84%) <i>[on average 63% users from most deprived areas]</i>	36% (16%) <i>[on average 23% users from most deprived areas]</i>	31
Linked to a children’s centre	52% (65%) <i>[on average 74% users from most deprived areas]</i>	48% (35%) <i>[on average 21% users from most deprived areas]</i>	23
Not linked to a children’s centre	53% (63%) <i>[on average 62% users from most deprived areas]</i>	47% (37%) <i>[on average 18% users from most deprived areas]</i>	19
Children’s centre status missing/ undecided	59% (72%) <i>[on average 53% users from most deprived areas]</i>	41% (28%) <i>[on average 27% users from most deprived areas]</i>	29

Source: Implementation sample, monitoring data, 2003-2005; 102 neighbourhood nurseries

⁵² In brackets and italics, percentages of users from the 20% most deprived areas are shown. The relationships observed in this table are not affected when focusing on users from 30% most deprived areas. For reasons of clarity and simplicity, in this table we present only the proportions of users from the 20% most deprived areas. We have added the figures for users living in the 30% most deprived neighbourhoods in Table 2.9a in Annex A.

Who uses neighbourhood nurseries? – disadvantage and take-up

This section provides information on⁵³:

- disadvantage and characteristics of neighbourhood nursery users
- patterns of use
- eligibility criteria for NNI places
- factors associated with a NNI place
- factors associated with living in a disadvantaged area

Disadvantage and neighbourhood nursery users

In total, there were 4,976 children using the 102 implementation sample nurseries. 40% lived in one of the 20% most deprived neighbourhoods; 53% lived in one of the 30% more deprived neighbourhoods. 63% of the 4,976 children occupied a NNI place; 5% had special needs and 8% had English as a second language; one in four came from a lone parent family and 15% from a family with no parent in paid work. 71% of the children were new to the nursery.

As Table 2.9 showed, neighbourhood nurseries located in a 20% most disadvantaged neighbourhood drew more of their children from the 20% most disadvantaged areas in every category – location on a school site, and links with SSLPs or children’s centres; for nurseries located in these 20% most disadvantaged neighbourhoods this was the case for approximately three-quarters of their children. Thus it is clearly the neighbourhood nurseries located in the most disadvantaged neighbourhoods that were most successful at attracting children living in the most disadvantaged neighbourhoods.

Though nurseries located in the 30% *least* disadvantaged neighbourhoods had some children who lived in the 30% *most* disadvantaged neighbourhoods (approximately one in five children in these nurseries), they were heavily outnumbered by children from much less disadvantaged areas. This is a more robust measure of the successful targeting of NNI than simply the location of the nurseries. Overall, for the neighbourhood nurseries located in the 30% most disadvantaged neighbourhoods, 63% of their users also lived in the 30% most disadvantaged areas.

Table 2.10 gives the overall frequency of children in the 102 neighbourhood nurseries in terms of their home location on the IDAC measures.

⁵³ Note that the data on users in the *Implementation Study* is drawn from the monitoring data collected by the neighbourhood nurseries; the data on users reported in the *Impact Study* is drawn from the users survey. See also the main reports on the *Implementation Study* (Smith, Coxon and Sigala, 2007) and the *Impact Study* (La Valle *et al.*, 2007).

Table 2.10: Implementation Study: number of children in neighbourhood nurseries by area deprivation level of their home location

Children’s home location area deprivation level	Number of children in neighbourhood nurseries	%
High Area Deprivation (1)	971	24
2	611	15
3	533	13
4	422	11
5	327	8
6	290	7
7	233	6
8	240	6
9	240	6
Low Area Deprivation (10)	143	4
Total	4010	100.00

*Source: Implementation Study sample, monitoring data from 90 nurseries with relevant data.
Note data was missing on 966 children from the 4,976 children in the sample*

As low income is another signal of disadvantage, we also asked nurseries for information on use of tax credits. There was little data available on low income families returning to work and making use of tax credits – few nurseries held this information, as parents were no longer required to have their applications for the Working Tax Credit (WTC) childcare element signed off by the nursery⁵⁴. Nurseries reported 3,918 children with at least one parent in paid work. But for 51% of these children (n=2,015) we had no information on Working Tax Credit, and for 62% (n=2,414) of children with at least one parent in paid work we had no information on the childcare element of the Working Tax Credit. We thus had information about Working Tax Credit for 1,903 children with at least one parent in paid work. We also had information about the childcare element of WTC for 1,504 children with at least one parent in paid work. If we take all children with at least one parent in paid work and exclude those for whom the data on WTC was missing, we have 1,903 children with valid WTC information, of whom 1,444 (76%) received WTC and 459 (24%) did not. Again, if we take all children with at least one parent in paid work and exclude those for whom data on the childcare element was

⁵⁴ Ninety-one of the 102 nurseries in the implementation sample returned the child monitoring forms; eighty-four reported at least one child from a family receiving Working Tax Credit.

missing, then we have 1,504 children with at least one working parent, 1,215 of whom (81%) received the childcare element of the WTC and 289 of whom (19%) did not.

There were proportionally more children aged 0-4 from ethnic minority backgrounds in the catchment areas of the Implementation Study as compared with all districts in England, probably as a result of the NNI focus on deprived areas with larger populations of minority ethnic groups. But this varied by ethnic group. While Black children made up 3% of all 0-4 year olds in England and 5% of 0-4 year olds in the neighbourhood nursery catchment areas, according to the 2001 Census, 8% of neighbourhood nursery users were Black. On the other hand, although neighbourhood nursery catchment areas had 9% Asian 0-4 year olds in the 2001 Census, the nurseries served only 5% of Asian 0-4 year olds. These findings confirm other research on economic activity among ethnic minority mothers with young children. Comparison of users in NNI and non-NNI places showed more Black and mixed children in NNI places, and more white and Asian children in non-NNI places. Children with special needs were more likely to be in a NNI place than a non-NNI place, as were children living in one of the 20% most deprived areas.

Patterns of use

Children used the neighbourhood nurseries for an average of twenty-three hours a week over three days, although one in three attended five days a week. 17% used the nursery for fewer than ten hours a week, but at the other end of the scale, 20% attended for thirty six hours or more each week. The majority of children were attending part-time. Children in NNI places were slightly more likely to be using fewer hours than children in non-NNI places. For the 71 'later opener' nurseries only, approximately half the children attended nursery before 9am or after 5pm but weekend care was only used in a minority of cases.

Eligibility criteria for NNI places

Many nurseries applied a priority system for eligibility for NNI places, but this was seldom called into operation because the nursery was not full. (Occupancy rates were of considerable importance in the context of sustainability.) Nursery managers were often uncertain about the definition of a NNI place. In 44% of the 71 'later openers', a disadvantaged postcode was the main priority criterion for allocating a NNI place; a third of the nurseries gave priority to children from a lone parent family, and one in five nurseries prioritised children with parents in training or education; but around 10% of all nurseries said they had no eligibility criteria at all for allocating NNI places. There was some evidence that managers unofficially gave priority to full-time over part-time children. Twenty-seven of the 71 nurseries had no waiting lists. Many nurseries reported fluctuations in demand over the year, with a sharp fall over the summer holidays.

There were very few links with employers. Managers observed higher take-up of places for training than employment. New housing development and local employment opportunities were seen as external factors stimulating demand for childcare. Proximity to employment and being able to drop children off *en route* to work were important for

parents. In some areas, close-knit communities with high usage of informal childcare were viewed as barriers to occupancy as families were less likely to use formal childcare.

Factors associated with a NNI place

What do the findings of the Implementation Study show about the likelihood of a child using a neighbourhood nursery being allocated a NNI-funded place? First, we consider individual child characteristics associated with a NNI place, as set out in Table 2.11⁵⁵.

Table 2.11: Implementation Study: results of logistic regression identifying factors associated with a NNI place

	Odds ratio	p-value	95% CI
Intercept	0.08	0.00	
<i>Ethnic Group (reference= White)</i>		0.34	
Mixed	1.52	0.09	0.93-2.49
Asian	1.02	0.93	0.65-1.59
Black	0.67	0.07	0.44-1.04
Chinese	2.50	0.32	0.41-15.26
Other	0.82	0.69	0.31-2.18
<i>Child has special needs</i>	0.92	0.73	0.59-1.45
<i>Child is new to nursery since NNI</i>	2.63	0.00	2.04-3.38
<i>Amount of hours/week in nursery</i>	1.00	0.32	1.00-1.01
<i>From a lone parent family</i>	1.68	0.00	1.28-2.22
<i>Neither parent in paid work</i>	1.25	0.22	0.88-1.77
<i>Child lives in a 20% most deprived neighbourhood</i>	2.84	0.00	2.24-3.59
<i>Nursery sector (reference= Private)</i>		0.00	
Voluntary	5.90	0.00	4.43-7.85
Maintained	1.34	0.06	0.99-1.81
Joint Project	45.29	0.00	24.82-82.65
<i>Children's Centre (reference= Not part of CC)</i>		0.00	
Main Children's Centre	4.36	0.00	3.21-5.91
Contributing to Children's Centre	3.29	0.00	2.49-4.34

Source: Implementation sample, monitoring data, 2003-2005; 90 neighbourhood nurseries that provided no missing information about characteristics of settings and users

⁵⁵ Note this shows the likelihood of being allocated a NNI place rather than a non-NNI place. Logistic regression modelling describes the relationship between a response variable and one or more explanatory variables where the response variable follows a binomial distribution (e.g., 'yes' or 'no'). Logistic regression is used to model the probability p of occurrence of a binary or dichotomous outcome.

This modelling exercise shows that children who were new nursery users since the introduction of NNI were 2.63 times more likely to be in a NNI place whilst those who came from a lone parent family were 1.68 times more likely to be in a NNI place. If they lived in an area that was classified as one of the 20% most deprived neighbourhoods in England, then they were almost three times more likely to be in a NNI place. All these are significant findings.

Secondly, regardless of children's individual characteristics, we consider whether the *type of nursery* attended was also associated with whether or not children were allocated a NNI place⁵⁶. So, regardless of whether or not children lived in a highly deprived area, came from a lone parent family, came from a family with neither parent in paid work, attended nursery for long hours, had special needs or were new entrants, if they attended a voluntary sector nursery then they were almost six times more likely to be in a NNI place compared with a child with the same characteristics but in a private sector nursery. If they attended a joint sector nursery then they were 45 times more likely to be in a NNI place compared to a similar child in a private nursery.

Children's centre status also had considerable impact on children's chances of having a NNI place. Children attending nurseries designated as main children's centres were almost four times more likely, and children in nurseries that were contributing partners to children's centres three times more likely, to be allocated NNI places compared with children attending nurseries that reported not being part of children's centres.

Factors associated with living in a disadvantaged area

A second modelling exercise identifying the characteristics of children living in a deprived area showed that, after controlling for various child- and setting-related characteristics, children attending a neighbourhood nursery were more likely to be living in one of the 20% most deprived areas if they were of mixed ethnicity (two and a half times more likely), if they were Black (four times), and if they had special needs (one and a half times). They were also more likely to be living in a 20% disadvantaged neighbourhood if they had a NNI place (twice as likely), and received some form of subsidy (one and a half times). It was also more likely if they attended the nursery for shorter hours spread over more days. Perhaps not surprisingly, the most significant factor was the deprivation of the area where the nursery was located: a child with a place in nursery was five and a half times more likely to be living in a 20% most deprived area if the nursery itself was also situated in an equally deprived location. Nursery sector type and status as children's centres did not seem to be factors. It is worth noting that children with at least one parent in paid work were 40% *less* likely to be living in one of the 20% most deprived areas – perhaps underlining the difficulty of finding and maintaining employment in the most disadvantaged neighbourhoods.

These findings offer strong support for the importance of the *location* of the nursery, over and above the sector of the nursery or children's centre status, in attracting children from

⁵⁶ Note this refers to the likelihood of being allocated a NNI funded rather than a non-NNI funded place, compared to a child from a private sector nursery.

deprived areas. They also confirm the more disadvantaged status of these children (ethnicity, special needs) and that of their families (worklessness, more fragmented use of childcare). It is important to note that nursery managers thought some groups were not using childcare – ethnic minority families, teenage parents, isolated/lone mothers, refugee and asylum-seeking families, travellers, families using grandparent care and families from local refuges and hostels. Nurseries associated with SSLPs and children’s centres were more likely to perceive this lack of contact as a problem and to have strategies to reach these groups.

Fees, sustainability and the transition to children’s centres

In 2004 and 2005 a place in a typical neighbourhood nursery cost less than a place in an average nursery in England for children both under and over two. There was considerable variation in guidance on fee policy and eligibility from local authorities. When the NNI research team surveyed local authority advisors in 2005, half of the advisors responding said that they issued guidance on fee levels to nurseries, and some reported ‘capping’ fees at a rate linked to the maximum amount that could be claimed for the childcare element of WTC (£135 at the time). Half reported guidance that NNI revenue funding was not to be used to reduce the cost to parents of a place at neighbourhood nurseries (that is, to subsidise fees); of the rest who reported that funding had been used in this way, 62% said that nurseries used it to reduce costs to ‘eligible parents’, while 7% said that nurseries used it to reduce fees for all the places in the nursery.

There was considerable diversity in flexibility of fee structures and rates. The majority of the ‘later openers’ did not appear to have a different fee structure for users of NNI and non-NNI places (a different structure was in place in only 14% of nurseries). Different fee structures for different age groups (babies, toddlers, pre-school children) were in place in 47% of the ‘later openers’; the remaining 53% had the same fee structure. Only 18% of the nurseries offered a sessional rate (for example, a different rate for a half-day session) while 41% offered an hourly rate (which allowed parents greater flexibility). Discounts for staff and siblings were available in 55% of the nurseries. Just over half required no deposit or registration fee, 24% charged this but on a refundable basis and 23% charged a non-refundable deposit/registration fee.

On average, higher fees were found (in order) in East England, London, the South West, South East, Yorkshire and the Humber; and there was variation within regions. Weekly and daily fees for babies were significantly lower in nurseries located in the 20% most deprived areas. By sector, daily fees for toddlers and pre-school children were higher in the private sector compared to all other sectors, although private sector nurseries were more likely to offer sibling and staff discounts.

The majority of nursery managers cited occupancy rates of 70-80% as necessary for the nursery to survive and many were concerned about the time-limited nature of the NNI funding. Some envisaged sharp increases in fees when the ‘subsidy’ ended (that is, the three-year tapering revenue funding from government), others were more aware of the need for gradual increases.

In the 2005 local authority survey, advisers stated that private neighbourhood nurseries and those serving ‘a mixture of postcodes’ (that is, both most disadvantaged and less disadvantaged areas) were judged most financially sustainable. Private sector nurseries were seen to have business expertise to guarantee their sustainability. However, advisers were most divided in their opinions of the maintained sector: 56% believed this to be the most sustainable, 44% argued the opposite. None of the local authority advisers believed that nurseries serving only ‘NNI postcodes’ (that is, most disadvantaged neighbourhoods) were sustainable in the long-term financial sense. In the 2003/04 interviews conducted with regional advisers, concerns had already been raised about sustainability. Staffing costs were higher in the maintained sector and these nurseries were thought to be more affected by low occupancy levels. Some regional advisers thought that neighbourhood nurseries located close to better-off areas could draw in a mixture of parents and operate a banding system for fees, and thus have a better chance of sustainability.

Transition to children’s centres was well under way. Eighty per cent of the local authority advisers surveyed in 2005 said that neighbourhood nurseries in their area had already developed as children’s centres. Those in the maintained sector or linked to SSLPs were most likely to become a main children’s centre, followed by voluntary sector neighbourhood nurseries. But this was very variable. 51% of local authority advisers reported that all or nearly all of the neighbourhood nurseries had expanded their services and activities; only 7% reported that none of their nurseries had expanded. 41% said their nurseries provided parental outreach services and 49% said that half or more provided family support. In 93% of local authorities, neighbourhood nurseries provided some form of child and family health services, but only 14% said these were provided in all or nearly all of their neighbourhood nurseries. In 71% of authorities, nurseries provided a childminder network, in 66% of authorities all or nearly all neighbourhood nurseries provided support services for parents and children with special needs, while 67% claimed that half or more of their neighbourhood nurseries had links with jobcentre plus, local training providers, FE and HE. In 93% of the local authorities, all or nearly all the neighbourhood nurseries provided early education integrated with full daycare; however, only 20% of local authorities had a half-time qualified teacher in all or nearly all of their neighbourhood nurseries.

Conclusions

The findings of the Implementation Study show that NNI has had a fair degree of success in setting up new provision in the most disadvantaged areas of the country, and in attracting some of the most disadvantaged families into the nurseries – minority ethnic families, children with lone parents, some of them using formal childcare for the first time. The programme may also be judged successful in creating affordable childcare in disadvantaged neighbourhoods, as judged by the fees charged, and in providing integrated early education and childcare, with a range of additional services developing for families with young children. The findings show considerable diversity in quality across nursery sectors, however, particularly in the educational qualifications of staff. The ‘ultimate test’ will be the *sustainability* of the new childcare serving disadvantaged

neighbourhoods – in terms of quality, access and affordability for parents, not just the financial stability of the nurseries – once NNI funding comes to an end. These findings about the implementation of the programme on the ground should be read alongside the findings on quality provision and child outcomes in the *Childcare Quality and Children’s Behaviour Study* reported in Chapter 3, and the *Impact Study* reported in Chapter 5, as well as the neighbourhood analysis reported in the *Neighbourhood Tracking Study* in Chapter 4.

The key challenges faced by neighbourhood nurseries across the Implementation Study sample which will be crucial in the development of children’s centres include the following:

- occupancy rates;
- the usefulness of eligibility criteria and priority systems for NNI places when many places were left unfilled – even in the most disadvantaged areas heavily subsidized places may be too expensive for parents in low-paid and insecure jobs;
- high unmet demand for places for younger children and babies but competition amongst nurseries for older children;
- the effect on the nurseries of children moving into nursery classes in local primary schools;
- flexibility issues – part-time places are costly to provide; and
- staff recruitment difficulties.

We can summarise the findings of the NNI Implementation Study on sector as follows. On the one hand, private sector neighbourhood nurseries, with more experience of business ethos, have been more likely to locate themselves in neighbourhoods where they can draw at least a proportion of their clientele able to afford high enough fees for the nursery to be financially sustainable. But so far they seem less likely to serve disadvantaged families, or to hire the well qualified staff needed to provide quality services for children. On the other hand, neighbourhood nurseries in the maintained sector are most likely to have highly qualified staff and to provide a range of services for the most disadvantaged families and children, but they may be less likely to achieve financial sustainability without further support. Thus one policy question raised by the Implementation Study, now that NNI has come to an end and a substantial proportion of its nurseries have been transformed into children’s centres, is whether the public funding that has been successfully applied to establishing neighbourhood nurseries in some of the most disadvantaged neighbourhoods in the country will also be required to continue in some form if those nurseries are to survive – that is, the dilemma between *sustainability, disadvantage and quality*.

3

INFANTS AND TODDLERS IN CENTRE-BASED CHILDCARE – DOES QUALITY MATTER?

THE NNI CHILDCARE QUALITY AND CHILDREN’S BEHAVIOUR STUDY

*Sandra Mathers and Kathy Sylva
Department of Educational Studies
University of Oxford*

1. Context and aims

The Implementation Study element of the national evaluation, outlined in chapter 2, explored the success of NNI in increasing provision for disadvantaged families, and the sustainability of that new provision. This chapter describes the second element of the national evaluation, the Childcare Quality and Children’s Behaviour Study⁵⁷:

- Section 1 outlines the aims of the study and the research context;
- Sections 2 and 3 present the two main strands of the Childcare Quality and Children’s Behaviour Study – the ‘childcare quality strand’ and the ‘quality and children’s behaviour strand’;
- Finally, section 4 summarises the conclusions of the study, and makes recommendations for the future.

The **Childcare Quality strand** described the quality of provision offered by a random sample of 103 neighbourhood nurseries. The aim was to establish whether the new places established by NNI were of sufficient quality to foster the development of the children attending them. While existing UK research (e.g. Mathers, Sylva and Joshi, *in press*; Sylva *et al.*, 2004) provides a relatively clear picture of childcare quality offered to children aged 3 to 5 years, less is known about provision attended by very young children in England. For this reason, the Childcare Quality strand focused specifically on the quality of NNI provision for children aged 3½ years and under.

As well as assessing the quality of provision on offer, the Childcare Quality strand was also interested in the *types* of centres taking part in NNI. Through building a profile of NNI, the Implementation Study showed that the centres taking part varied considerably in

⁵⁷ This chapter should be read alongside the full reports on the separate elements of the NNI National Evaluation summarised in this integrated report (Smith, Coxon and Sigala, 2007; Mathers and Sylva, 2007; Sigala and Smith, 2007; La Valle *et al.*, 2007).

their characteristics. All sectors were represented, and nurseries varied in size, in the qualifications of their staff, and in their links with other government programmes (e.g. Sure Start Local Programmes and the developing Sure Start Children's Centre Programme). Previous research (e.g. Melhuish, 2004b) has shown that a number of these characteristics are linked to quality of provision. It was likely, therefore, that the neighbourhood nurseries might also vary considerably in terms of the quality of provision they offered. The second aim of the Childcare Quality strand was therefore to consider whether quality varied by context, and establish which centre characteristics were related to, and predicted, provision quality.

The Childcare Quality strand also explored the relationships between user characteristics and quality. With its focus on disadvantage, NNI aimed to improve the chances of families living in difficult circumstances, for example, lone parent families, families living in deprived areas and families without employment. Previous research (e.g. Sylva *et al*, 2004) has shown that attending pre-school is particularly beneficial for children living in disadvantage. The third question posed by the Childcare Quality strand was, therefore: do centres providing for high proportions of disadvantaged families offer comparable quality to those catering for a less disadvantaged clientele? This question is particularly interesting in light of the Implementation Study findings that neighbourhood nurseries varied in their success at targeting the most disadvantaged areas and families, and that the characteristics of centres in the most disadvantaged areas were often quite different to those in less disadvantaged areas (see Chapter 2).

The **Quality and Children's Behaviour strand** used the information gathered on the characteristics of neighbourhood nursery provision to explore the effects of quality on children's social behaviour. This was intended to fill a major gap in the UK literature. Although there is a comprehensive body of research which considers the impacts of childcare on children's intellectual development, much less is known about impacts on behavioural outcomes. Previous research has drawn mixed conclusions, and there have been a number of worrying findings relating to the impact of childcare on anti-social behaviour. For example, the NICHD study found that attending group care was linked to more co-operative behaviour at age 2 (1998a), but also that the more time children spent in non-maternal care across the early years, the more problem behaviours they showed at 54 months of age and in kindergarten (NICHD, 2003). The EPPE findings (Sylva *et al*, 2004) showed that some children who attended group care before the age of 3 were more anti-social than children from similar backgrounds who did not attend early centre-based care.

The EPPE project also highlighted a possible role for *quality* in mediating the influence of childcare on children's behaviour. High quality care between the ages of 3 and 5 ameliorated (although did not eradicate) the anti-social effects of care experienced during the very early years. However, because the quality of settings for children under 3 was not measured, we do not know what role quality played before the age of 3 years. For example, it could be that the settings which appeared to increase anti-social behaviour were of low quality. Very few UK studies have explored the impacts of quality on very young children. Thus, the Childcare Quality strand of the current study focused on the

role of childcare quality in shaping the social behaviour of children under the age of 3½ years – and in particular, in encouraging the development of positive behaviours and/or reducing the likelihood of problem behaviours. The study also explored a range of other centre and childcare characteristics – for example, the number of hours children spent in centre-based childcare each week – and their relationship with children’s behaviour.

2. The Childcare Quality Study: quality and contributors to quality

Methodology

The first aim of the Childcare Quality strand was to describe the quality of provision offered by a sample of neighbourhood nurseries. The sample of 103 centres – 96 of which were shared with the Implementation Study – was stratified to be representative of the overall population of neighbourhood nurseries⁵⁸. Visits to the sample centres took place between February 2004 and July 2005, and observations using the revised version of the Infant Toddler Environment Rating Scale (ITERS-R)⁵⁹ were carried out in one of the rooms providing for children under the age of 3½ years:

The Infant Toddler Environment Rating Scale (Harms, Cryer and Clifford, 2003)

This revised version of the ITERS scale (the ITERS-R) is designed to assess provision for very young children. The 39 items of the ITERS-R are divided into 7 subscales, each measuring a different dimension of quality:

- *Space and furnishings* (e.g. layout of the room, resources, display);
- *Personal care routines* (e.g. health and safety, hygiene, meal times);
- *Listening and talking* (e.g. supporting children’s language development);
- *Activities* (e.g. dramatic play, sand and water, fine motor play);
- *Interaction* (e.g. supervision, discipline, staff-child interactions, peer interactions);
- *Program structure* (e.g. opportunities for free play, group activities, transitions);
- *Parents and staff* (e.g. information for parents, staff training opportunities).

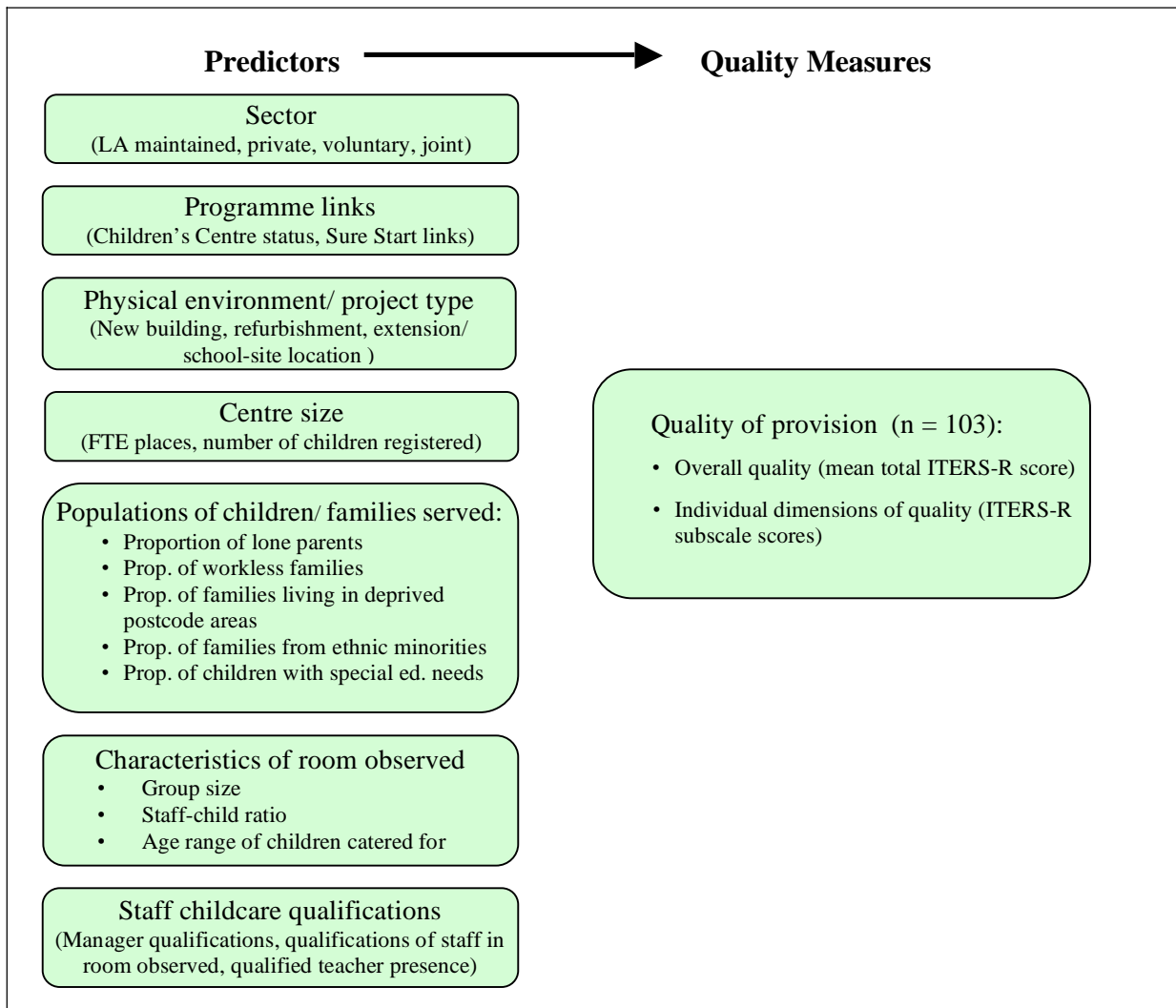
Each subscale comprises a number of items, which are rated using a 7 point scale (where 1 = inadequate, 3 = minimal, 5 = good and 7 = excellent). For the purposes of this study, scores between 1 and 3 were labelled ‘below minimal’, scores between 3 and 5 were labelled ‘adequate quality’ and scores between 5 and 7 were labelled ‘good quality’. The average of item scores in a subscale gives the mean score for that subscale. An overall quality rating for each centre is calculated by taking the mean of all items across all subscales. Where the term ‘overall quality of provision’ is used in this chapter, this refers to the mean total score achieved on the ITERS-R. Where ‘individual dimensions of quality’ are referred to, this relates to one or more of the seven individual subscales of the ITERS-R.

⁵⁸ A number of the Implementation Study sample nurseries did not provide for infants and toddlers, and were therefore not suitable for inclusion in this element of the evaluation.

⁵⁹ The observation team also used part of the Caregiver Interaction Scale (Arnett, 1989) to assess the quality of staff-child interaction. However, since few significant results were found for this scale, this chapter focuses on quality as measured by the ITERS-R.

The Childcare Quality strand also considered whether the quality of provision offered by the sample neighbourhood nurseries varied according to centre characteristics such as sector⁶⁰, centre size, staff qualifications and level of involvement in initiatives such as the children’s centre programme. Finally, the analysis considered the populations of children and families served by each of the sample neighbourhood nurseries, with the aim of establishing whether families with differing needs were being offered comparable quality of provision. Figure 3.1 shows a summary of the analysis carried out as part of the Childcare Quality strand, and a full account of the methods can be found in the main study report (Mathers and Sylva, 2007).

Figure 3.1. Identifying contributors to quality



⁶⁰ For the definition of ‘sector’, see the Glossary at the beginning of this report. ‘Maintained sector’ (see later in this chapter) is defined as ‘run by the public sector and managed by the education arm of the local authority’.

Overall quality of provision

Quality varied widely within the NNI sample: while some centres were offering a good-to-excellent standard of provision, others were of poor quality (Figure 3.2). The majority of neighbourhood nurseries were offering at least adequate quality of provision for children under the age of 3½ (Figure 3.3). Most (70%) of the rooms observed were rated as adequate (above minimal but below good). Around one quarter (23%) of the rooms observed offered a good standard of provision. These centres provided children with a nurturing, educationally stimulating and healthy environment. A small proportion (7%) offered less than minimal quality. These centres were missing basic elements of quality provision such as hygiene, safety, educational stimulation and warm staff-child interactions. On the whole, providers in the maintained sector offered the highest quality of provision. The private sector had the lowest mean quality rating, but also displayed the broadest variation in quality, with some centres operating at a very high standard.

Figure 3.2. Overall quality of provision: mean total ITERS-R scores (n = 103)

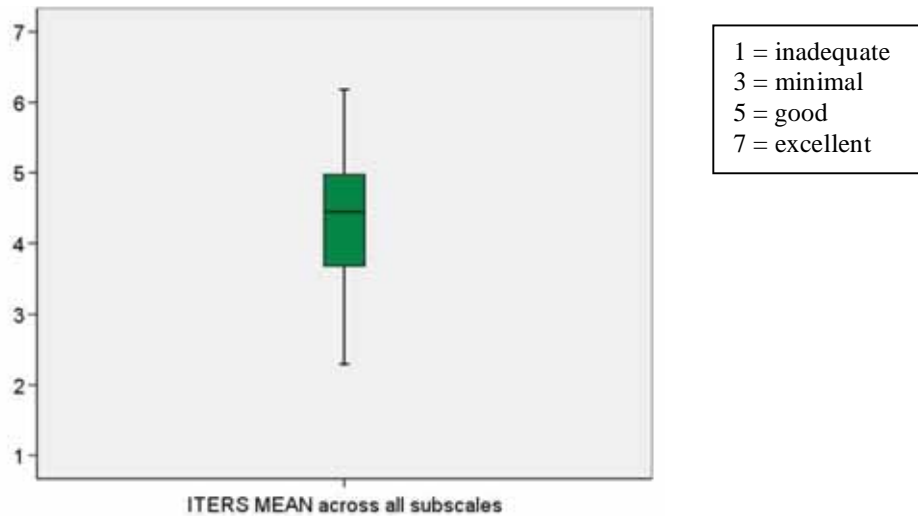
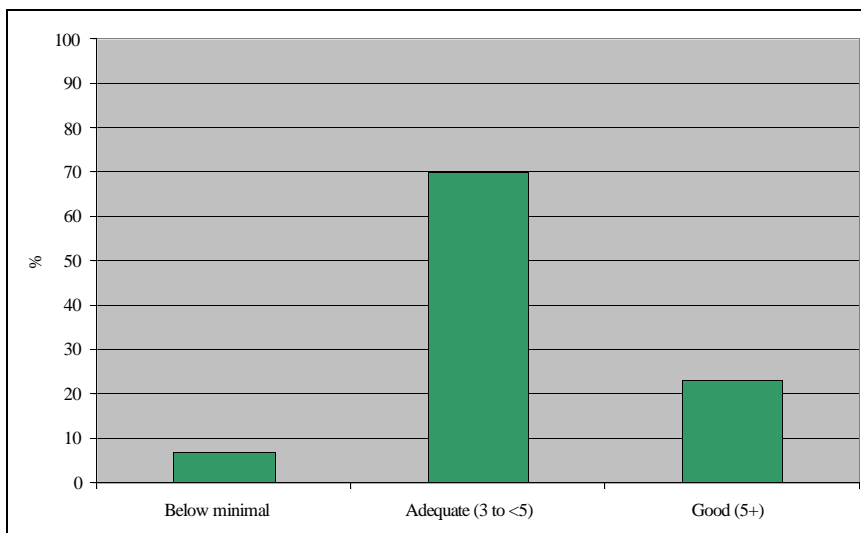


Figure 3.3. Mean total ITERS-R scores: proportions in each quality band (n = 103)

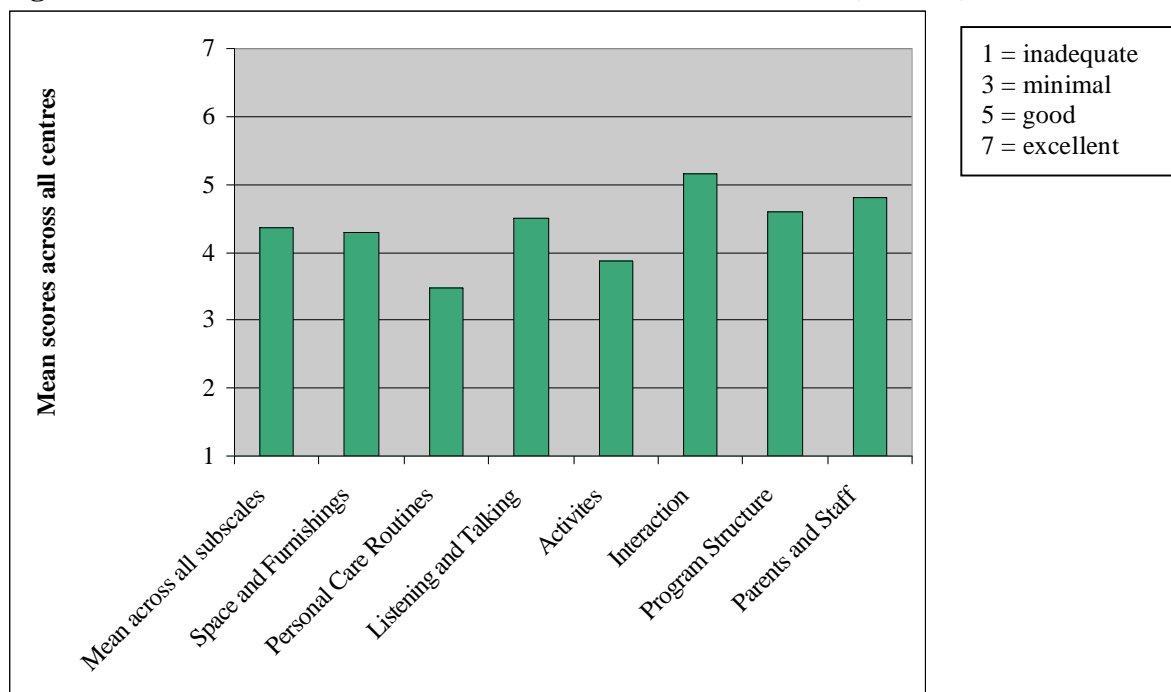


Individual dimensions of quality

Figure 3.4 shows the mean scores achieved on each of the individual ITERS-R subscales. Neighbourhood nurseries were most successful at providing children with pleasant and appropriate staff-child interaction – and they offered good quality provision in this regard. Interactions were warm and respectful, and staff helped children to develop appropriate behaviour with their peers; supervision was appropriate and staff employed positive discipline methods.

The sample centres did less well at providing hygienic and appropriate care routines such as meal times, toileting and naps. The provision of stimulating educational activities was also limited, particularly with regard to breadth of experience. For example, many centres did not provide opportunities for children to explore natural materials, or use everyday events such as the weather to help children develop their understanding of nature and their environment. This finding is of particular concern, as the provision of educational opportunities during the early years is related to later school success.

Figure 3.4. Mean ITERS-R subscale scores across all centres (n = 103)



Variations in quality according to centre characteristics

On the whole, the characteristics of the NNI quality sample⁶¹ closely reflected the patterns seen in the Implementation Study sample (Chapter 2), and in the overall NNI population (Chapter 1). In summary, the centres varied by:

- sector (with the majority of providers – 41% – in the private sector; 28% voluntary; 19% joint projects; and 12% maintained);
- level of involvement in the children’s centre programme (with just under two thirds of the sample participating: 34% as a main centre and 26% contributing to a children’s centre);
- links with SSLPs (a large proportion – 44% of the sample – were linked to a SSLP);
- type of project (44% were new buildings funded, at least in part, by NNI; 41% were refurbishments; and 15% were extensions of existing buildings. One third of the sample – 33% – were located at a school site);
- centre size (with full time equivalent places ranging from 6 to 126, and numbers of children registered ranging from 11 to 167. Private nurseries tended to be larger, with a mean of 56 fte places compared to the overall mean of 48 across all sectors);
- characteristics of the rooms observed, for example:
 - group size (ranging from 6 to 60 children registered);
 - staff-child ratios (ranging from one room with more staff members than children, to a ratio of 8 children to 1 adult);
 - age range (many infants and toddlers attending the sample nurseries were experiencing contact with older children: 36% of the rooms observed catered for children over 3 years, and 19% for children aged 4 or over).
- childcare qualifications of nursery managers (95% were qualified to at least Level 3, for example NNEB, with fairly similar qualifications seen across the different sectors);
- childcare qualifications of staff (local authority maintained nurseries had the most qualified workforce, and private sector providers the least qualified);
- presence of a qualified teacher (only 2% of the sample centres had a qualified teacher who worked at least 10 hours every week with infants and toddlers in the rooms observed; 6% had a teacher either working in the room observed or as centre manager).

Multivariate analysis was used to explore the relationships between these centre characteristics and overall quality of provision, and also the relationships with the

⁶¹ Full details of sample characteristics are given in the main study report (Mathers and Sylva, 2007).
Sources: Quality sample, 2004-2005 (103 neighbourhood nurseries); Implementation sample monitoring data, 2003-2005 (96 neighbourhood nurseries common to Implementation and Quality samples); Implementation sample later openers, 2004-2005 (71 neighbourhood nurseries).

dimensions of quality measured by the individual subscales of the ITERS-R. The most important influences on quality of provision were identified as:

- sector (maintained status);
- involvement in the children’s centre programme;
- centre size;
- age range of children catered for in the group observed; and
- staff and manager qualifications.

Table 3.1 summarises the results of the analysis.

Table 3.1. Results of multiple regression analysis: contributors to quality of provision

Centre Characteristic	ITERS-R Mean Total	Individual dimensions of quality (ITERS-R subscales)						
		Space/ furnishings	Personal care routines	Listening/ talking	Activities	Inter-action	Program structure	Parents and staff
Sector (maintained status)	✓	✓		✓	✓		✓	
Involvement in Children’s Centre Prog.	✓					✓	✓	
Larger centres (more children registered)	✓		✓	✓			✓	✓
Children 4yrs or over in group	✓			✓	✓		✓	
Higher mean qualification level	✓			✓			✓	
Higher nursery manager qualification	✓							

Maintained status was a strong predictor of provision quality. Local Authority (LA) maintained provision offered the most stimulating environment for children’s developing language and educational abilities, as well as the highest quality physical environment. One reason for this may be the more highly qualified staff teams employed by the maintained centres – both the Implementation Study and the Childcare Quality Study found that the maintained centres had the most qualified workforce. In addition, maintained pre-school settings have advantages in terms of access to the ‘educational infrastructure’ and mainstream support systems, for example, input to planning and/or access to professional help in supporting children with special educational needs. Although not considered in the current study, differences in pay and working conditions may also contribute to the differences in quality between sectors.

Involvement in the children's centre programme was also an important predictor of provision quality, over and above the influence of sector (many of the children's centres were in the maintained sector). Nurseries involved in the children's centre programme, either as main centres or by contributing to a main centre, were of higher quality than nurseries not participating. It is interesting to note that the higher quality scores found in settings with children's centre status related to interactions, and to the structure of the day, rather than to educational provision. Children's centres provided significantly higher quality interactions (e.g. warm staff-child interaction, good support for peer interactions) and 'programme structure' (e.g. opportunities for free play, appropriate group activities, smooth transitions between activities). It must be borne in mind that the children's centres visited as part of the current evaluation were very early openers (the first children's centres were only designated in summer 2003). Although staff in children's centres were on the whole better qualified than in non-children's centres, we do not have any information on how they were being deployed during these very early stages of the programme. It is possible that early efforts were being channelled into setting up integrated provision and that greater strength in educational quality might have been observed if centres had been visited at a later time.

Centre size (number of children registered) had a significant and positive relationship with overall quality, that is, larger centres offered higher quality provision. Looking at the individual dimensions of quality affected, the larger centres offered higher quality personal care routines, language (opportunities for listening/talking), program structure and provision for parents and staff. Economies of scale may mean that larger centres are able to offer a greater range of resources and facilities for children. It is also likely that they are able to offer facilities for staff and parents which the smaller centres would find prohibitively expensive (e.g. parent meeting rooms or large staffrooms with food preparation facilities). Larger centres with a bigger staff base are more able to provide cover for staff members to plan and attend training events, and may find it easier to set aside the resources required for staff training and professional development. A larger staff team also provides a richer and more diverse adult social environment and a broader range of experiences and interests to draw on when specialist knowledge is required.

Age range was linked to quality of provision: the strongest age-related predictor of quality was whether or not the room observed catered for older children (4 years or over) alongside children under 3½ years. Younger children experienced better overall quality of provision in rooms which also catered for children aged 4 years and over. The elements of quality which improved with the presence of older children related to educational provision (the 'activities' and 'listening/talking' subscales of the ITERS-R). In a mixed age room, younger children are able to experience higher level language, communication and educational activities developed to meet the needs of the older children. They are also able to interact with, and observe, children older than themselves. Thus, they have access to a richer and more stimulating environment than they would do in a room which catered only for the younger age range.

Since previous research has shown that quality of provision as measured by the ITERS is a good predictor of children's intellectual development, this suggests that younger

children may do better educationally when they are able to mix with slightly older children. Section 3 considers the effects of mixed age rooms on children's behaviour; that is, do under 3½s attending rooms which also cater for older children do better socially than children in rooms providing only for younger children? An interesting topic for future research would be to consider the impacts on the older children in mixed age rooms – do older children benefit from the presence of younger children, or are they negatively affected?

The **qualifications of centre staff**⁶² had a significant positive relationship with quality of provision, although it was difficult to separate the effect of qualifications from the effects of sector and children's centre status. The effects of qualifications were only evident when the 'maintained status' and 'children's centre status' variables were removed from the analysis. It is likely that staff qualification levels were one of several factors which contributed towards the higher quality of provision offered by the maintained centres and children's centres in the sample.

The mean qualification level of staff had a positive effect on overall quality and, in particular, to scores on the 'listening/talking' and 'programme structure' subscales of the ITERS-R. Thus, a better qualified workforce provides a more stimulating environment for children's developing communication, and a more appropriate environment in terms of the daily schedule, opportunities for free play, group activities and provision for children with special needs. The qualifications of the centre managers were also related to overall quality of provision, but not to any specific individual dimensions of quality.

A surprising finding was that the presence of a qualified teacher did not appear to have a direct relationship with quality, despite this being an important factor in predicting children's social behaviour (section 3). It is likely that this was due to the differences in sample sizes: while the sample size for the child level analysis was 810, the sample size for the quality analysis was only 103 centres, making it less likely that significant effects would be detected. The lack of qualified teachers in the sample nurseries is an interesting finding in itself. The Implementation Study found that only 10% of their sample employed a 0.5 fte qualified teacher. The Childcare Quality Study results reveal that even fewer nurseries (2%) had teachers working 10 hours or more with children under the age of 3½ years. This is particularly relevant in light of the findings of the Quality and Children's Behaviour Study (see following section), which suggest that employing qualified teachers to work with children under the age of 3½ will have a significant positive impact on their developing co-operation and other peer skills.

Do families with different characteristics receive comparable quality of provision?

The final element of the Childcare Quality strand explored the relationships between user characteristics and quality, with the aim of establishing whether centres providing for high proportions of disadvantaged families offered comparable quality to those catering

⁶² Mean childcare qualifications of staff working 10 hours or more in rooms observed (including working managers).

for a less disadvantaged clientele. NNI was targeted at disadvantaged neighbourhoods⁶³, and the Implementation Study showed that the programme was broadly successful in achieving that aim. However, within the sample there remained some variation in the success with which nurseries were able to target disadvantage, and in the make-up of families attending the nurseries (Table 3.2). Some centres provided almost exclusively for families living in deprived postcodes (as defined by the Index of Multiple Deprivation), while others had a much lower proportion of disadvantaged families. On average, just over two fifths (42%) of the centre populations lived in deprived areas. One quarter (24%) were from ethnic minority groups; the mean proportion of lone parents was 28%, and of workless households 17%. A small proportion (5%) of children attending the sample centres had special educational needs⁶⁴.

No relationship was found between any of the population characteristics measured and quality of provision. This is an important finding, and suggests that families from very different backgrounds, and with different needs, were being offered comparable quality of provision.

Table 3.2. Populations of children and families served

% of all children in centres...	N	Minimum	Maximum	Mean	Std. Dev.
...from deprived postcodes	65	0%	95%	42%	28
...with lone parents	88	0%	67%	28%	15
...in workless households	88	0%	67%	17%	17
...from ethnic minority groups	83	0%	95%	24%	28
...with special educational needs	88	0%	30%	5%	6

Source: Implementation sample, 2004–2005 (information available for the later openers)

3. The Quality and Children’s Behaviour Study

The Childcare Quality strand described the quality of provision in the 103 sample neighbourhood nurseries, and explored which centre characteristics were most important for quality. The Quality and Children’s Behaviour strand took the research one step further and explored the relationships between centre-based childcare and young children’s social and behavioural development. The analysis aimed to establish (after taking into account child and family background):

- the effect of provision quality on children’s social behaviour; and
- the relationships between centre and childcare characteristics (other than quality) and children’s social and behavioural development.

⁶³ We have used ‘neighbourhood’ throughout the text of this report to refer to the geographical unit SOA.

⁶⁴ It should be remembered that the NNI population was not necessarily representative of the proportion of SEN children living in disadvantaged areas (which tend to show higher proportions of SEN children than seen in this sample). The NNI sample was heavily biased towards the private sector (reflecting the overall NNI population of nurseries), and previous research suggests that children with a high risk of special educational needs are less likely to attend private day nursery provision.

Methodology

Of the 103 nurseries in the Childcare Quality strand, 100 had children eligible for the Quality and Children's Behaviour strand⁶⁵. Information was collected on 810 children attending these neighbourhood nurseries. The mean age of children in the sample was 33 months (2 years 9 months). On average, children in the sample spent 24 hours per week at their neighbourhood nursery, and had started attending at the age of 18 months.

A profile of the 810 children (and their families) was collected using the Adaptive Social Behaviour Inventory (ASBI), and a Family Profile devised for this study.

The Adaptive Social Behaviour Inventory (Hogan *et al*, 1992)

The ASBI records information on children's social and behavioural development across five dimensions:

- The *co-operation and conformity* subscale contains items such as 'is helpful to other children';
- The *peer sociability* subscale contains items such as 'will join a group of children playing';
- The *confidence* subscale contains items such as 'enjoys talking with you';
- The *anti-social* subscale contains items such as 'is bossy, needs to have his/her own way';
- The *worried and upset* subscale contains items such as 'gets upset when you don't pay enough attention'.

The ASBI comprises 30 of these 'behaviour statements'. The person completing the profile rates each from 1 to 3, according to how often the child displays that particular behaviour (1 = rarely or never, 2 = sometimes, and 3 = almost always).

Family Profile

As previous research had shown that home background has a large impact on children's social behaviour, it was necessary to take account of these influences when considering the impact of the NNI provision. The family profile, devised for the study, recorded:

- *Child characteristics*, e.g. gender, birth weight, special educational needs;
- *Family characteristics*, e.g. family structure and work status, mother age;
- *Current childcare and childcare history*, e.g. hours per week in centre-based provision, type/s of care attended between 1 and 2 years/under 1 year.

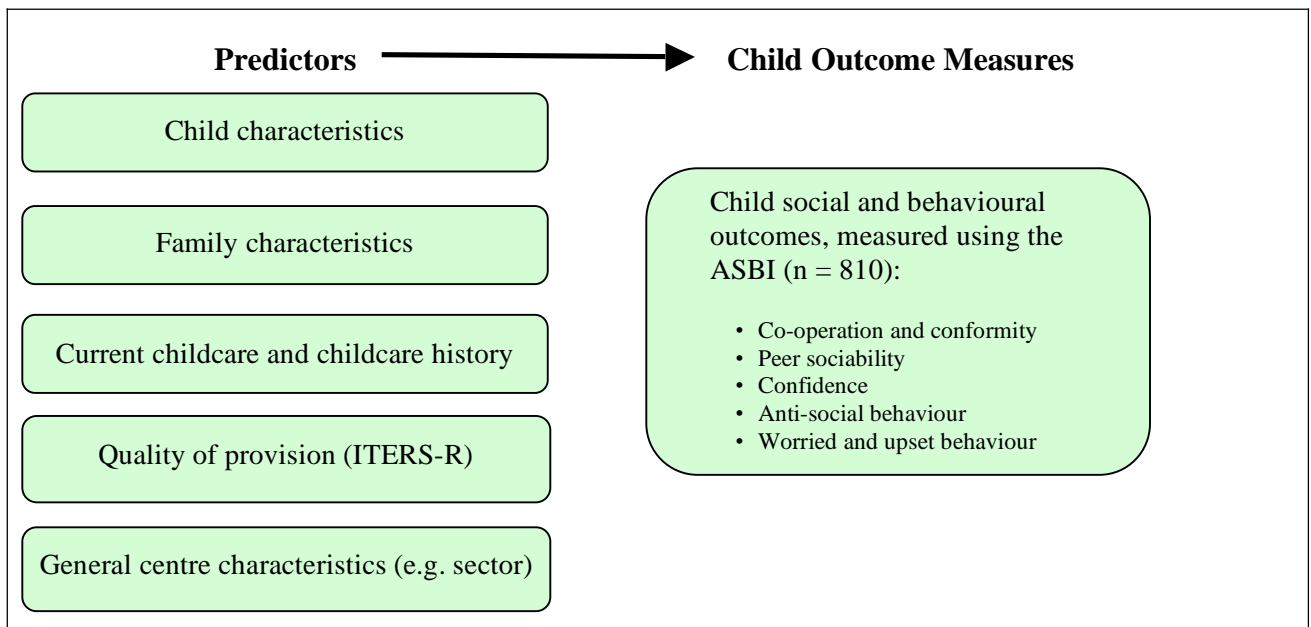
Figure 3.5 summarises the analysis carried out as part of the Quality and Children's Behaviour strand. The first analyses, using both uni- and multivariate techniques, involved the whole sample (810 children). Since the age range of the sample was fairly

⁶⁵ Children were selected using the following criteria: age (20-42 months); length of attendance at neighbourhood nursery (at least 6 months); and hours of attendance (10 hours per week or more).

broad – and since this study was particularly interested in how quality and other childcare characteristics affect very young children – the sample was also split by age for further analysis. The 800 children for whom age data was available were split into two equal groups of 400: the youngest group comprising children aged 20 to just under 33 months, and the older group comprising children aged 33 to 42 months.

The effects of time spent in group childcare on young children’s behaviour were also explored in greater depth. Previous research has drawn mixed conclusions as to the benefits of attending pre-school centres for long periods of time. Since this study identified a significant effect of time spent in centre-based care, additional analysis was carried out to explore more fully where the ‘tipping point’ lay, that is, how *much* time did children need to spend in their centre before the positive (and negative) effects were seen on their behaviour? Children were divided into groups according to the number of hours they spent in centre-based provision each week. Sub-groups were also created according to the number of days children attended their neighbourhood nursery each week, the average number of hours they attended each day, and the number of months they had been attending their neighbourhood nursery. These groups were entered separately into the regression model in order to establish when the time effect ‘became’ significant for each outcome. Full details of the groupings, analysis and variables measured are given in the Childcare Quality and Children’s Behaviour Report (Mathers and Sylva, 2007).

Figure 3.5. Identifying predictors of behaviour



Characteristics of the sample – who were the children and families attending the sample neighbourhood nurseries?

The children

The mean age of children in the sample was 33 months (2 years 9 months) and there were similar proportions of girls (47%) and boys (53%). Just under one tenth of the sample (9%) had an identified special need (although not necessarily a formal statement of SEN), and a similar proportion (14%) had experienced medical problems during the first three months of life. Birthweights varied widely, ranging from a 16 ounce premature baby to a child weighing 215 ounces at birth. The majority (77%) of children were white. One tenth (10%) were black, 8% were of mixed heritage, 4% Asian and 1% from other ethnic groups (including Chinese).

The families

Just under three quarters of the children (72%) lived in a household with two adults – either with both parents, or with one parent plus the parent's partner. Approximately one quarter (26%) lived with a lone parent, while a small proportion (2%) had other household arrangements. The majority of children came from small families, and were either only children (39%) or had one sibling (37%). Only a very small proportion (4%) had four or more siblings. Just over half of the sample (52%) were the first born child in the household.

The average age of mothers in the sample was 31 years, with fathers and partners slightly older on average (mean age 35 years). There was a broad range of educational experiences, with four mothers in the sample who left full time education at the age of 10 and, at the other end of the scale, a mother still in full time education at the age of 44. The average age for mothers to leave full time education was 18 (i.e. following A levels). The picture was similar for fathers, and also for partners.

In terms of parental employment, almost all children (92%) lived in households with at least one working adult. Most mothers (82%) were working – 37% full time and 45% part-time. Around two thirds (69%) of children had a father (or parent's partner) who was working. English was the main language spoken at home in almost all families (97%). This included families from ethnic minorities (e.g. Afro-Caribbean) as well as white families.

Childcare

The mean age at which children in the sample started attending their neighbourhood nursery was 18 months (1½ years), although starting ages varied widely. On average, the children in the sample had attended their neighbourhood nursery for 15 months prior to taking part in the study. This gives us confidence in considering children's developmental status in relation to their experiences in childcare.

Children in the sample spent an average of 24 hours per week at their neighbourhood nursery, and 25 hours per week in centre-based childcare as a whole (a very small proportion – only 5% – attended more than one centre). Daily attendance ranged from 1

day to 5 days per week, with an average of 3.6 days per week. An estimate of the number of hours children attended their neighbourhood nursery each day was calculated by dividing the number of hours children attended each week by the number of days they attended: the average was 7 hours per day. Two fifths of the sample (40%) were also cared for by grandparents, other friends or relatives in addition to their time spent in centre-based provision. However, very few (2%) were cared for by childminders.

Between the ages of 12 and 24 months, around three quarters (72%) of the sample were attending some form of centre-based provision. Just over one quarter (27%) were being cared for by relatives or family friends and, again, only a small proportion (5%) were cared for by childminders. Although centre-based provision was less common during the first year of life, one third (33%) of children in the sample did attend a centre during this period, while two fifths (40%) were cared for by a relative, friend or childminder.

The relationship between quality and children's behaviour

The effects of quality on children's behaviour were significant but modest. Although overall quality of provision (mean total ITERS-R scores) was not linked to children's behaviour, a number of effects were identified for the individual dimensions of quality measured by the ITERS-R subscales. The statistically significant results from the multiple regression analysis are summarised below, and full details can be found in the Childcare Quality and Children's Behaviour Report (Mathers and Sylva, 2007).

The **quality of the physical environment** was important. Children displayed significantly fewer worried and upset behaviours in centres which offered a spacious, well-maintained and pleasant physical environment, with appropriate furniture for care routines and educational activities, and comfortable areas for children to relax and spend quiet time. This study confirms the findings of the EPPE project, which concluded that high quality provision can reduce some of the negative behaviours associated with attending group care.

The **structure of the day** was related to older children's levels of sociability. Children aged between 33 and 42 months were significantly more sociable in centres which scored highly on the 'programme structure' subscale of the ITERS-R. These centres offered a predictable yet flexible daily schedule, many opportunities for free play and high quality group play activities. The children attending them were more likely, for example, to say nice or friendly things to others (ASBI item 12), or play games and talk with other children (item 19) than children in centres which offered lower quality programme structure.

When the sample was split into age groups, the older children displayed a significant negative relationship between scores on the **personal care routines** subscale of the ITERS-R and co-operative behaviour, social skills and confidence. Children in centres which scored highly on this subscale were rated as less co-operative, less sociable and less confident. For example, children in these centres were less likely to understand the feelings of others (ASBI item 1), to be calm and easy going (item 18), or to be confident

with other people (item 22). It could be that, in centres where hygiene and care routines were paramount, less time and attention was paid to developing children's interactions and social behaviour.

The effect of centre characteristics on children's behaviour

Many of the centre characteristics which were identified as important predictors of high quality care (section 2) were also found to be significant predictors of children's social and behavioural development.

The **qualifications of centre staff** were related to children's social and behavioural outcomes. Children with access to a qualified teacher, either working in their room or as the nursery manager, were significantly more co-operative and sociable than children without access to a trained teacher. These children were more likely to share their toys or possessions (ABSI item 20), say 'please' and 'thank you' when reminded (item 16) or be sympathetic towards other children's distress (item 7). Children in rooms with a high mean staff qualification level were also more co-operative and displayed fewer worried and upset behaviours than children cared for by a less well qualified staff team. For example, they were more likely to follow rules in games (item 5), and more likely to accept changes without fighting against them or becoming upset (item 25). Finally, centres with better qualified managers had younger children who were less anti-social (for example, less likely to prevent other children from carrying out routines: item 23).

Involvement in the children's centre programme had a significant positive relationship with children's co-operative behaviour, particularly for the younger age group. Children under 2 years 9 months attending children's centres were more co-operative than their counterparts in nurseries not involved in the children's centre programme – they were more helpful towards other children (item 2), more obedient and compliant (item 3) and were more likely to share their toys with other children (item 20).

Children in **larger centres** were significantly less anti-social and displayed fewer worried and upset behaviours than children in smaller centres. For example, they were less likely to tease other children or call them names (item 21), or get upset when not paid enough attention (item 6). However, larger centres were not always better for children: children in larger centres also displayed fewer *positive* behaviours, such as co-operation and sociability, than children in smaller centres. The effect of centre size on children's behaviour is clearly complex. It is possible that larger centres show lower rates of anti-social behaviour because they have more explicit procedures for dealing with children's negative behaviours, in comparison to smaller centres which may operate more *ad hoc* and informal approaches to discipline.

The **age range** of the rooms had a weak but significant effect on children's worried and upset behaviour. Children aged 3½ years and under displayed more worried and upset behaviours when they attended a mixed age range room with children aged 4 years and over. In mixed groups, they were more likely to frown, shrug, pout or stamp their feet when given an idea for playing (item 4), or to be worried about not getting enough

attention, or access to toys, food or drink (item 28). This is particularly interesting since mixed age range rooms were rated as being of higher quality. In-depth analysis of quality showed that the elements of provision which improved with the presence of older children related to *educational* provision. Thus, mixed age range rooms may be better for children in terms of cognitive development, but not in terms of behavioural development.

Children in centres with **high proportions of working households** were significantly more co-operative and less anti-social than children from centres with low proportions of working families (families with at least one employed adult). These children were more likely, for example, to be calm and easy-going (item 18), and less likely to be bossy and need their own way (item 29). In fact, attending a *centre* with a high proportion of children from working households had more of an impact on anti-social behaviour than the child's *own family* employment status. Only one employment effect was found for the child's own family – children living in houses with at least one working adult were more sociable with their peers than those living in workless families. This evidence provides strong support for the aims of NNI, and suggests that encouraging parents to return to work will have positive benefits for children.

No specific sector effect was identified in relation to children's social and behavioural development, despite maintained status being identified as an important predictor of centre quality. This apparent contradiction is not surprising when we consider the individual quality subscales on which the maintained sector excelled. Maintained centres provided significantly higher quality in those domains related to *educational* provision – thus, we would expect to see an impact on children's cognitive development but not necessarily on their social behaviour.

The effect of time spent in centre-based care on behaviour

The findings of the Quality and Children's Behaviour strand confirm previous research (e.g. Melhuish *et al*, 2001) in suggesting that attending centre-based childcare provision has both beneficial and detrimental effects on children's social and behavioural development. The more time (hours and days) children spent each week at a childcare centre, the more confident they were, and the more sociable they were with their peers. The children who spent more time each week at their pre-school centre had greater opportunities to mix with other children, and to become confident in their social skills, than those who attended for less time. Staff in the sample centres rated them as more likely to say nice or friendly things to others (ASBI item 12) or to join a group of other children playing (item 13), and as more confident with other people (item 22). This effect was stronger for the younger children in the sample (those under 2 years 9 months), and for children attending 35 hours per week or more.

However, time spent in centre-based childcare was also significantly related to negative behaviours. Children who attended for at least 30 hours and/or 3 days each week were rated as more anti-social, more likely to tease other children and call them names (ASBI item 21), prevent other children from carrying out routines (item 23) or be bossy and need their own way (item 29). Moreover, children who attended for 35 hours or more

each week displayed more worried and upset behaviours⁶⁶. These ‘tipping points’ (i.e. the number of hours/days per week of childcare beyond which a statistical effect is shown) in relation to time spent in centre-based provision are similar to those identified by the NICHD study (2005). When the sample was split by age, the effect on anti-social behaviour was significant for both age groups, suggesting that intensity of childcare (measured in hours/days per week) is relevant for children up to the age of 3½ years.

Length of day (the number of hours children attended their centre each day) did not appear to be detrimental: there were no significant differences between children who attended for long periods each day and those who attended for shorter days in terms of co-operative behaviour, peer sociability, anti-social behaviour or worried/ upset behaviour. A significant effect was seen on children’s levels of confidence, but only at very high levels of daily attendance (in comparison to children who attended less than 5 hours per day on average, children who attended for 9 hours or more were significantly more confident). However, this sample was not the most appropriate for assessing the effect of length of day, and these results should be interpreted with caution⁶⁷.

Duration of childcare during the early years had a statistically significant effect – the greater the number of months children had been attending their neighbourhood nursery, the more likely they were to display anti-social behaviours. Interestingly, the age at which children started attending their neighbourhood nursery did not have an impact on their behaviour (either positive or negative). Thus, it is not the age at which children start at their centres which is important, but the cumulative number of months they attend, and the amount of time they spend in centre-based provision each week.

The effect of child and family characteristics on behaviour

In line with previous research, children’s positive behaviours were most strongly predicted by child and family characteristics (Melhuish *et al*, 2001; NICHD, 1998b), while negative behaviours were more strongly related to childcare experiences and centre characteristics. In general, girls displayed more positive behaviours than boys, and older children were rated as being more confident, sociable and co-operative than younger children. Perhaps not surprisingly, children with special needs were rated by their caregivers as being less sociable with their peers, and less confident, than children

⁶⁶ The high attenders rated as more co-operative, sociable and confident were not usually the same children who were rated as more anti-social or worried/upset by their caregivers. In fact, inter-correlations between the subscales of the ASBI show small (≤ 0.22) or non-significant relationships between positive behaviours (such as confidence) and negative ones (such as anti-social behaviour). Thus, some children showed increased positive behaviours with time spent in group care while others showed increased negative behaviours.

⁶⁷ The children in the sample were relatively high attenders: average day length was 7 hours, and only 16% of the sample attended for fewer than 5 hours each day on average. In particular, there were very few children in the sample who attended for many short days each week, and also few children who attended for a small number of long days. Further exploration in a sample with greater variability in attendance, and for which data on actual (rather than derived) day length has been collected is recommended.

without special needs. Children for whom English was not the first language spoken at home were also rated as less sociable with their peers.

4. Conclusions and recommendations

The Childcare Quality and Children's Behaviour Study concluded that:

- There was wide variation in the quality of provision for children in infant and toddler rooms.
- Higher quality was seen in the local authority maintained sector, in children's centres and in larger centres.
- Observers found higher quality provision, particularly educational provision, in mixed age rooms which included older children as well as infants and toddlers. However, the presence of older children was not always beneficial for the younger ones, who displayed more worried and upset behaviours in mixed age rooms.
- No relationships were found between the population of children and families served and quality of provision. This suggests that families from very different backgrounds, and with different needs, were being offered the same quality of provision.
- The findings highlighted the importance of a well-qualified workforce for the provision of high quality caregiving and for child outcomes. Children with access to a trained teacher were more co-operative and sociable, and children in rooms with a better qualified workforce were more co-operative and displayed fewer worried and upset behaviours than children cared for by less well-qualified staff teams.
- The quality of the physical environment was identified as important. Children displayed fewer worried and upset behaviours in centres which offered a spacious, well-maintained and pleasant physical environment, with appropriate furniture for care routines and educational activities, and comfortable areas for children to relax and spend quiet time.
- Older children (those aged between 33 and 42 months) showed more peer sociability in centres which provided a high quality daily structure, for example an appropriate schedule, opportunities for free play and high quality group play activities.
- The effects of quality on children's behaviour were significant, but moderate in size compared with other (stronger) influences such as gender, age, special needs and time spent in centre-based childcare.
- Time spent in centre-based childcare (hours/days per week) had some beneficial effects on children, such as greater confidence and sociability. This effect was stronger for the younger children in the sample (those under 2 years 9 months), and for children attending 35 hours per week or more. However, time spent in centre-based childcare was also related to negative behaviours. Children who attended 30 hours or more each week were rated as more anti-social, while children who attended 35 hours or more displayed more worried and upset behaviours.
- Although the age at which children started attending their neighbourhood nursery did not have an effect (either positive or negative) on their behaviour, duration of childcare during the early years was important: the longer children had been attending their neighbourhood nursery, the more likely they were to display anti-social behaviours.
- Although larger centres were generally of higher quality, the effects of centre size on children's behaviour were mixed. Children in larger centres were less anti-social and

displayed fewer worried and upset behaviours, but were also rated as less co-operative and less sociable than children in smaller centres.

- Attending a centre with a high proportion of working families had a positive effect on children's co-operative behaviour, and also reduced anti-social behaviour. This supports the aims of the Neighbourhood Nurseries Initiative, and suggests that encouraging parents to return to work may have positive benefits for the development of their children.

Based on these conclusions, the study makes the following recommendations:

- The development of a well-qualified childcare workforce is vital for improving quality and positive child development. In particular, employing qualified teachers to work with children under the age of 3½ will have a significant impact on their development of co-operation and other peer skills.
- The development of children's centres should be supported. NNI settings with children's centre status were of higher quality and had better child outcomes. Future support (and evaluation) of the programme should focus on the educational aspects of provision to ensure that the 'learning' aspects of the curriculum are given equal weight to the more 'social' aspects.
- This research supports the development of larger centres: these offered higher quality (measured on the ITERS-R scale) and their children showed reduced levels of anti-social and worried/upset behaviour. However, larger centres need to be supported in finding ways to ensure that their children are not overwhelmed by size, and are provided with the nurturing environments they need to develop their confidence and sociability.
- Further research into the impact of mixed age rooms is recommended. They may enhance cognitive development at the price of emotional security.
- More research is also required to explore the effects of length of day on children's behaviour. In particular, the effects of attending for a small number of long days over a week, as compared to a greater number of short days, need to be explored.
- A broad social mix is recommended for early childhood settings – higher proportions of working families were related to decreased anti-social behaviour. Initiatives such as NNI which address unemployment should be encouraged and supported.
- Maintained centres should continue to be supported and developed, as these were particularly effective at offering high quality educational provision. Nurseries in other sectors also need further support to raise the quality of the provision they offer.

4

NEIGHBOURHOOD DYNAMICS AND DISADVANTAGED FAMILIES WITH PRESCHOOL CHILDREN: THE NNI NEIGHBOURHOOD TRACKING STUDY

Maria Sigala and George Smith
Department of Social Policy and Social Work
University of Oxford

Context and Aims

Good geographical access to childcare increases a mother's probability of being in paid work (Van Ham and Mulder, 2004) and mothers who are unhappy with the regional childcare provision are the least likely to look for a job (Van Ham and Büchel, 2004). Lack of affordable childcare close to home is more of a constraint to paid work for low income out-of-work families (Bryson *et al.*, 2006). These three research findings provide a backdrop to the main objectives of the neighbourhood tracking study. These were:

- To identify the most disadvantaged neighbourhoods and their differential levels of access to the new NNI provision
- To measure the overall change from 2001 when the NNI was formally launched by the government, to 2005 when it was fully implemented, particularly in terms of the levels of claiming out-of-work means tested welfare benefits by parents of preschool age children in these disadvantaged areas
- To assess how far these changes related to potential access to NNI provision.

The tracking study thus provides the context for the other three studies in the overall evaluation of NNI (*Implementation, Impact and Childcare Quality and Children's Behaviour*) by describing the patterns of change in terms of claiming means-tested out of work benefits by parents with preschool children over this five year period.

We should underline that the analysis reported here is of large-scale trends and changes that were taking place in these most disadvantaged areas targeted by the NNI programme. The analysis is not focused on parents who necessarily had any contact with or made any use of the neighbourhood nurseries, though it focuses on the groups that were the *prime* target of NNI policy (parents of preschool children dependent on out of work benefits living in the 20% most disadvantaged areas of England). Both the neighbourhood trends

and the individual movements and transitions by these claimants will be the product of many factors, of which NNI could be one and other childcare provision another. Although we assess the relationship between living in a disadvantaged area with high levels of neighbourhood nursery provision (NNI-rich) and the probability of leaving benefits, there may be further important variables (e.g. local labour and housing markets) which we have not been able to take fully into account in this study. What the analysis does generate is a detailed and accurate picture of the overall pattern of change by all IS/JSA working age claimants with preschool children over the five year period, as the data set is not a sample but effectively the total group.

Identifying the most disadvantaged neighbourhoods and access to neighbourhood nurseries: Methods

The main data used were 100% extracts from the individual level administrative data records for Income Support (IS) and Jobseeker's Allowance (JSA). We focused on working age claimants with children aged between 0 and 4 years old. The longitudinal element was formed by linking together the annual extracts from each benefit at individual claimant level. Based on information from these records, working age claimant parents could be further divided into different categories including 'lone parents on IS only', 'lone parents with a disability or other condition', 'partnered parents on JSA', 'partnered parents on IS only' and 'partnered parents on IS with a disability or other condition'. These categories reflected the constraints which – in addition to childcare responsibilities – might affect any exit from benefits and entry into paid work.

We used 'exit' from out-of-work benefits as the criterion rather than entry to work as such. The reasons for 'exiting' could include starting work, re-partnering with a person who is not themselves claiming out-of-work benefits, ceasing to claim for other reasons, emigration from the UK or death. It is therefore clearly a 'softer' criterion than full entry to the labour market, but remains valid for assessing trends across time at the local area level. Also, we distinguished and compared patterns in the 'pre-NNI cohort' (those claiming between 2001 and 2003, shortly before full implementation of the NNI) and the 'NNI cohort' (those claiming between 2003 and 2005, when NNI was more or less fully implemented).

Since this is an evaluation of an initiative to improve the lives of very young children and their families, we selected the Income Deprivation Affecting Children (IDAC) measure from the Index of Multiple Deprivation 2004 to identify the 'most deprived neighbourhoods in England'. For the purposes of this evaluation, the target neighbourhoods were the 20% most deprived areas on the IDAC 2004 Index (Noble *et al.*, 2004)⁶⁸. The 2004 measures used the new sub-ward geographies, known as 'Super

⁶⁸ The IDAC Index is released at the level of the Super Output Area (SOA). SOAs are aggregates of Census Output areas and contain an average of 1,500 people. The Index was part of the 2004 Indices of Deprivation produced by the Social Disadvantage Research Centre at the University of Oxford on behalf of the Office of the Deputy Prime Minister (ODPM). The IDAC measure is based on the percentage within any neighbourhood (SOA) of children under sixteen who are living in families in receipt of Income Support (IS) or Job Seeker's Allowance (JSA(IB)) or families in receipt of WFTC/ DPTC whose equivalised

Output Areas' with populations of around 1,500 people. We have used this measure consistently across all four studies in this evaluation.

However, in practice, such areas may have differential access to NNI provision. The aim was therefore to identify those neighbourhoods with potentially high or low levels of access to NNI provision. To identify these 'NNI poor' and 'NNI rich' areas, we used the DfES quarterly data which gave the exact location and number of full-time NNI places in each neighbourhood nursery due to open by March 2005, as the measure of NNI provision. We then identified all the 2001 census output areas (OAs⁶⁹) that fell into the poorest 20% of super output areas (SOAs) on the IDAC measure. In total there were 33,184 OAs in this 20% category.

Using GIS techniques, a 'buffer zone' was drawn around the population-weighted centre point of each of these deprived OAs. The radius used to draw this OA-centred buffer zone in each area was based on an analysis of the DfES Pupil Level Annual School Census (PLASC) that contained the postcodes of all maintained schools and of their pupils. This analysis generated 'crow flies' distances travelled by pupils to their schools. For the purposes of the NNI study this was restricted to pupils aged 5 to 7 years old in each local authority district. The radius was calculated by taking the average distance plus half (rather than the whole) of the standard deviation. This distance, it was argued, represented a 'reasonable travelling distance to a childcare facility', based on the *actual* travel to school journeys made by local children aged 5-7 in that particular district. Using the number of NNI places in each location, the number of NNI places per child aged 0-4 within each buffer zone and the distance to the nearest NNI provision were calculated.

Following this analysis, a 'NNI rich area' was defined as an OA in the most disadvantaged 20% of SOAs on the IDAC measure, which fell into the 33% best serviced areas in terms of number of NNI places per child aged 0-4 (i.e. 0.10 to 0.69 NNI places per child) *and* also fell into the 60% best areas in terms of distance to the nearest neighbourhood nursery (i.e. 1 km or less). A 'NNI poor area' was an equally most deprived OA which fell into the 67% lowest areas in terms of number of NNI places per child aged 0-4 (i.e. <0.09 NNI places per child) *and* also fell into the 40% worst areas in terms of distance to the nearest neighbourhood nursery (i.e. > 1 km away)⁷⁰.

Despite the fact that both NNI rich and NNI poor areas were drawn from the 20% most deprived areas of England on the IDAC measure, many significant differences were found between NNI poor and NNI rich areas in terms of their scores on the ID 2004 domains (see Table 4.1). Compared with NNI poor areas, NNI rich areas overall had

income is below 60% of the median income before housing costs. We have used 'neighbourhood' throughout the text of this report to refer to the geographical unit SOA.

⁶⁹ Output Areas (OAs) are the smallest areas for which national census data is released. They typically have populations of 150-200. OAs nest within SOAs, which also nest within wards.

⁷⁰ The above calculations were also based on the number of neighbourhood nurseries to be opened in March 2005. However, after March 2005, the DfES provided a further dataset on the state of all neighbourhood nurseries that had actually opened as planned. We therefore repeated the previous process and selected as NNI rich and NNI poor those areas that were consistently categorised as such using both before and after March 2005 DfES data.

higher deprivation scores on the income deprivation affecting children, income, employment, health and disability, living environment, crime and on the access to housing and services deprivation indices for 2004 as well as on the 2004 overall index of multiple deprivation. Only in respect of Education and Skills for Adults were NNI rich areas less disadvantaged than NNI poor areas.

Table 4.1 Differences in mean scores in NNI rich and NNI poor areas on various domains of the 2004 Indices of Deprivation (2004 ID at SOA level)

	NNI provision at OA level	Mean Score	Std. Deviation	t-test	Sig. (2-tailed)
Income Deprivation Affecting Children (IDAC) scores at SOA level ID 2004	NNI poor	0.46	0.10	-17.52	0.00
	NNI rich	0.49	0.11		
Income scores at SOA level ID 2004	NNI poor	49.11	15.19	-23.83	0.00
	NNI rich	54.62	16.47		
Employment scores at SOA level ID 2004	NNI poor	46.98	19.85	-12.60	0.00
	NNI rich	50.67	20.17		
Health and Disability scores at SOA level ID 2004	NNI poor	45.46	20.68	-10.23	0.00
	NNI rich	48.57	20.90		
Education, Skills and Training for Adults scores at SOA level ID 2004	NNI poor	43.14	23.49	14.93	0.00
	NNI rich	37.71	26.27		
Living Environment scores at SOA level ID 2004	NNI poor	31.94	22.95	-16.68	0.00
	NNI rich	37.43	21.77		
Crime scores at SOA level ID 2004	NNI poor	37.22	21.13	-20.43	0.00
	NNI rich	43.63	21.70		
Access to Housing and Services scores at SOA level ID 2004	NNI poor	22.50	19.05	-19.09	0.00
	NNI rich	28.46	23.84		
Index of Multiple Deprivation at SOA level ID 2004	NNI poor	42.57	12.65	-20.66	0.00
	NNI rich	46.32	11.99		

*NNI Poor= 10,452 Output Areas; ** NNI rich=8,376 Output Areas; ***The higher the score the greater the deprivation. The IDAC score shows the proportion of all children in the area in families dependent on IS, JSA and WFTC (where the income before housing costs was less than 60% of the national median) e.g. 46% in NNI poor areas.

The finding that NNI rich areas are *more* deprived than NNI poor areas is probably not surprising and may well indicate the relative *success* of the NNI targeting. For the purposes of this study, however, it is important to bear in mind that in any comparisons of trends and changes between NNI rich and NNI poor areas these potential differences in starting point need to be taken into account. For the full impact study (see Chapter 5), which also used the same NNI rich and NNI poor analysis, a propensity score matching techniques was applied to ensure that equally matched samples were drawn from the two types of area.

Trends in claiming out-of-work means tested benefits by families with children aged 0-4, 2001-2005, in NNI areas

From 2001 to 2005, there has been a clear and steady reduction in the *proportion of children* aged 0 to 4 in families dependent on IS/JSA. This is the case for *all* claimant families whether they are lone parents (see Figure 4.1) or partnered parents (Figure 4.2), across the whole of England as well as in the 20% most deprived areas. The fall, however, is more pronounced for those children who live in the 20% most deprived parts of England where the rates are, as expected, much higher overall. In order to measure any specific ‘NNI effect’ we have to take into account the overall reduction in the numbers on out-of-work means tested benefits that affected families with preschool age children across England as a whole over this time period.

Figure 4.1 Percentage of children aged 0 to 4 living in households of working age claimants of IS/JSA who were lone parents, in England and the 20% most deprived areas, 2001-2005

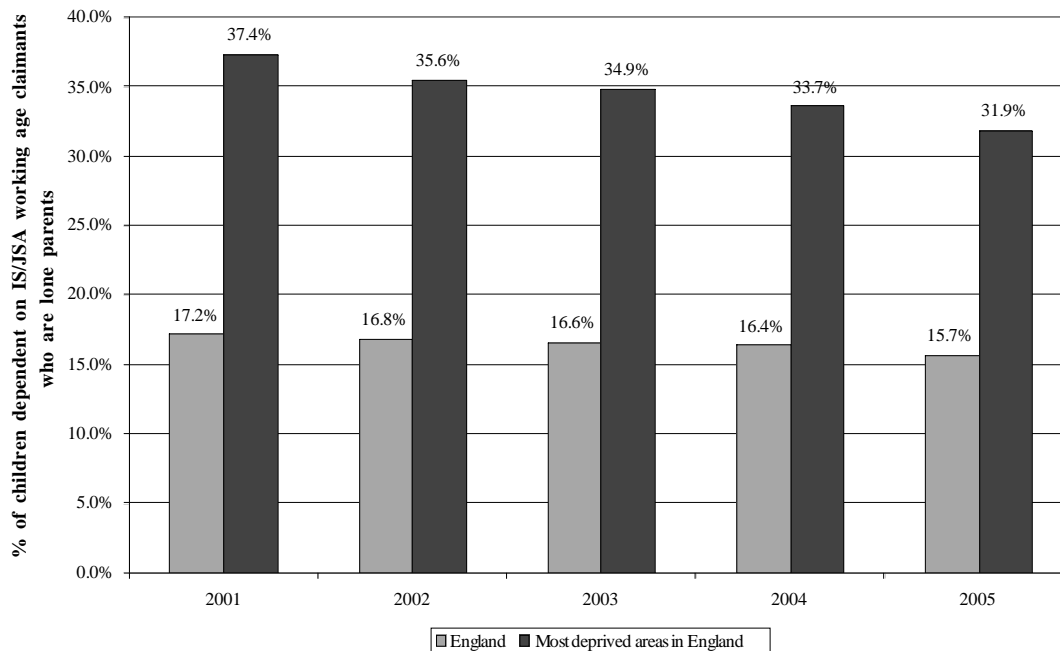
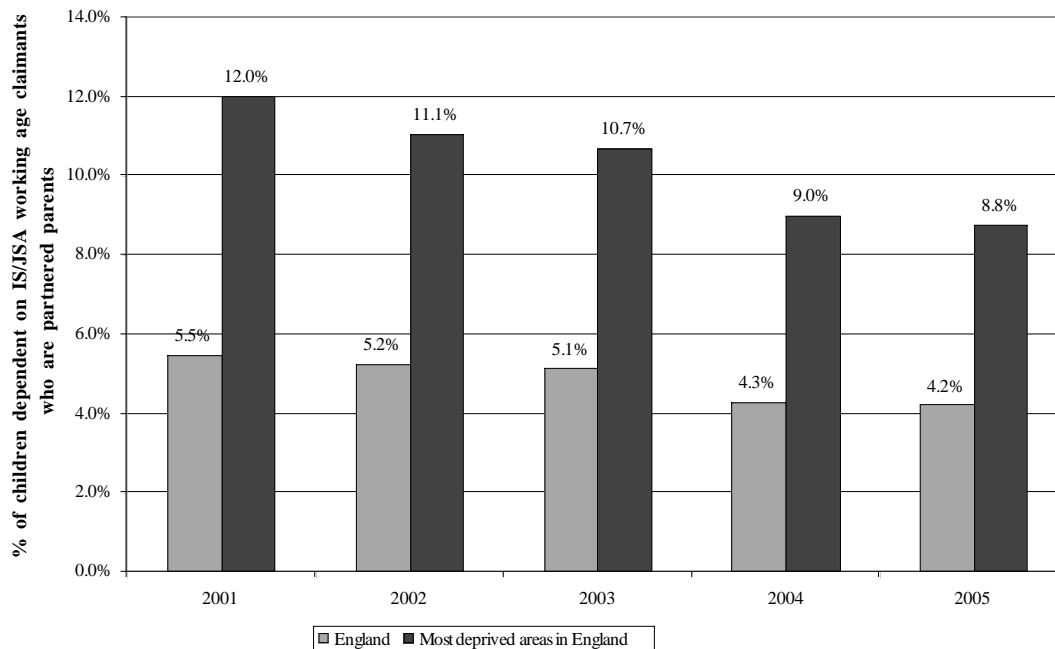


Figure 4.2: Percentage of children aged 0 to 4 living in households of working age claimants of IS/JSA who were partnered parents, in England and the 20% most deprived areas, 2001-2005



By far the largest category of families with children aged 0-4 on IS or JSA in all areas is that of ‘Lone Parents on IS’. From 73% to 75% of claimants with children aged 0-4 were classified in this group, though the overall numbers were falling steadily throughout the period. The largest group of couple parents with children aged 0-4 is those on JSA. This group has been falling sharply over the period in all areas. Finally, partnered parents claiming the IS disability premium, like their equivalents in the lone parent group, show a relatively static picture in terms of overall numbers. The 20% most deprived areas in England and also the ‘NNI poor’ and ‘NNI rich’ areas follow very similar patterns. However the rate at which numbers are falling, as with the numbers of children in these households, is rather more rapid than for England as whole. From 2001 to 2005, across the whole of England, the number of ‘partnered parents’ with children aged 0-4 on IS/JSA dropped by 26% and for lone parents’ by 12%. The NNI rich areas show marginally lower rates of decline in the numbers of lone and partnered parents with very young children on IS/JSA compared with the NNI poor areas over this period, though both are marginally better than for England as a whole (though have higher rates initially and therefore more scope to fall). So, whatever is going on nationally, it does not seem that the 20% most disadvantaged areas were *missing out* on these trends. In 2005 the numbers of IS/JSA lone parents with very young children living in NNI rich areas had dropped by 14% since 2001 whilst the equivalent rate of decrease for claimants in NNI poor areas was a percentage point higher at 15%. The same pattern is repeated for the group of partnered parents on IS/JSA; in the NNI rich areas the group had decreased in size by 26% and in NNI poor areas by 27% (see Figures 4.3 and 4.4).

Figure 4.3 Percentage change in numbers of lone parents of working age with children aged 0 to 4, since 2001

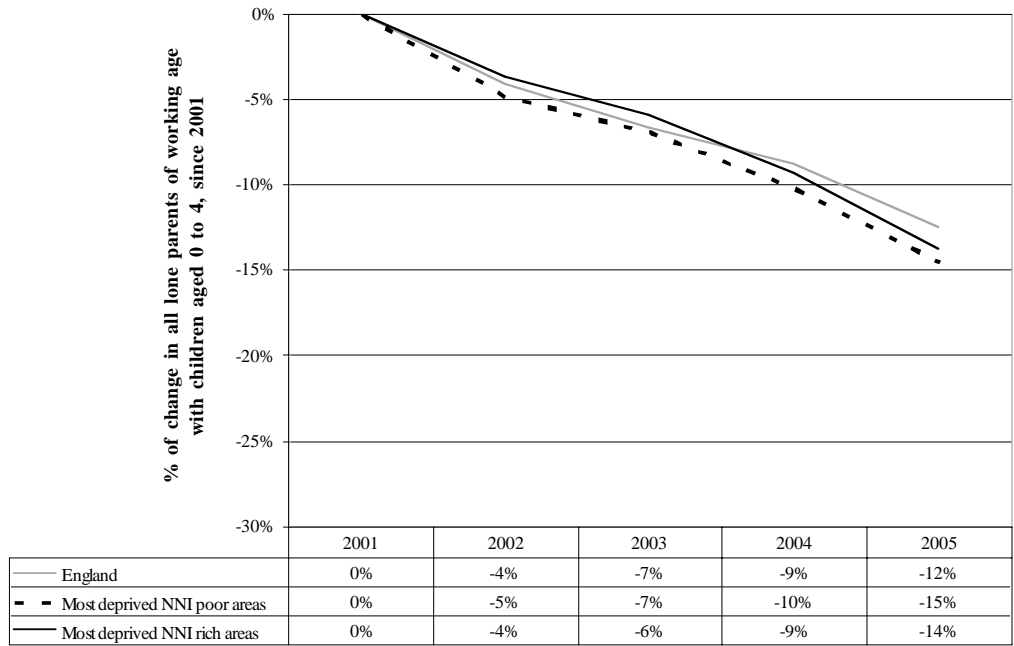
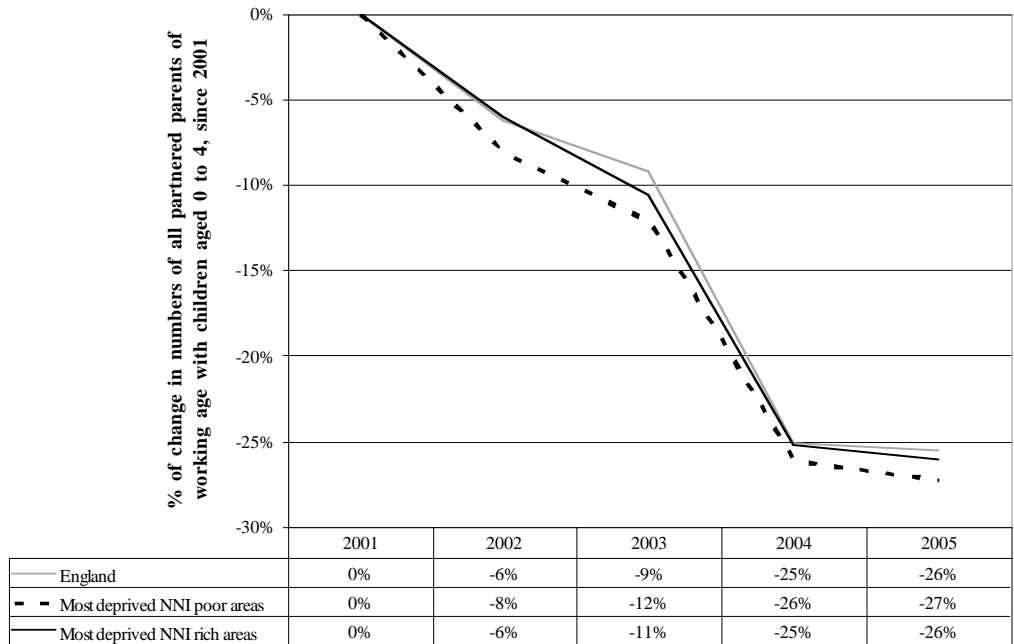


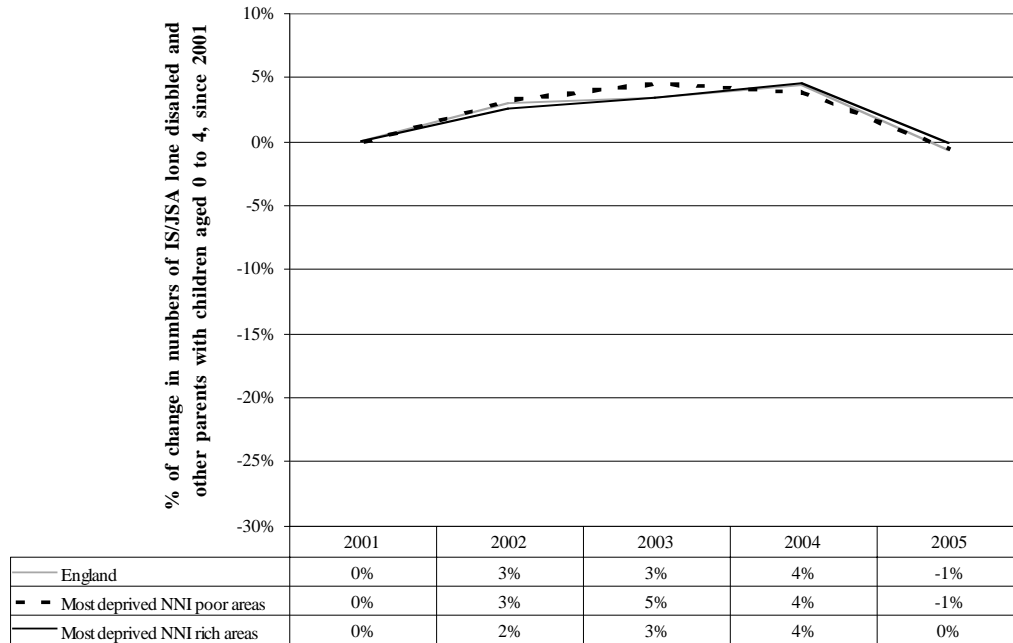
Figure 4.4 Percentage change in numbers of all IS/JSA partnered parents of working age with children aged 0 to 4, since 2001



The numbers of lone parents with a disability or other work limiting condition increased from 2001 to 2004 and then in 2005 began to decline (see Figure 4.5). For the partnered parents on JSA the trends are very different (see Figure 4.6). These show a steep decline

with numbers typically reduced by 40% from 2001 to 2005, though the fall effectively ended in 2004 and numbers began to rise again in 2005, perhaps reflecting the tightening labour market nationally. One consequence of these varying trends is the way that by 2005 the largest group of partnered parents on these out-of-work benefits was those with a disability or other work limiting condition.

Figure 4.5 Percentage change in numbers of disabled and other lone parents of working age with children aged 0 to 4, since 2001



Overall 27% of these working age claimants with very young children in NNI poor and rich areas lived in London, only 2% lived in areas classified as ‘rural’ and the rest (71%) lived in all other areas across England. Numbers of lone parents in London have not decreased as rapidly as in the rural and other areas. London, unlike rural and all other areas, has twice as many claimant parents living in NNI rich as in NNI poor areas. Between 2001 and 2005, in the NNI rich areas of London, there were 11% fewer lone parents whilst in the NNI poor areas of London lone parents were reduced by 9% (see Figure 4.7).

Figure 4.6 Percentage change in numbers of unemployed partnered parents of working age with children less than 5 yrs old, since 2001

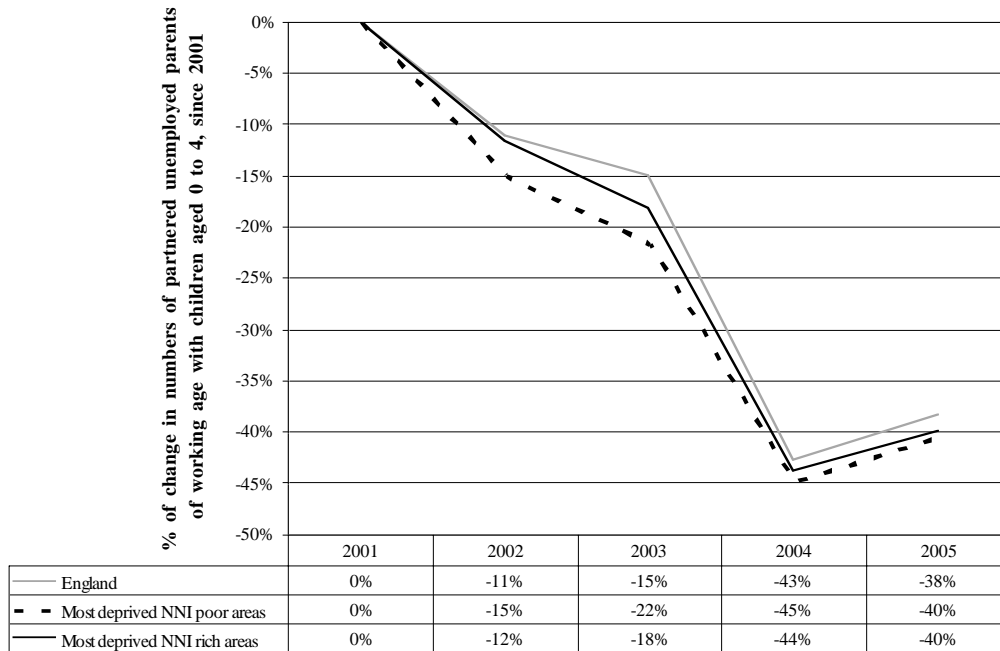
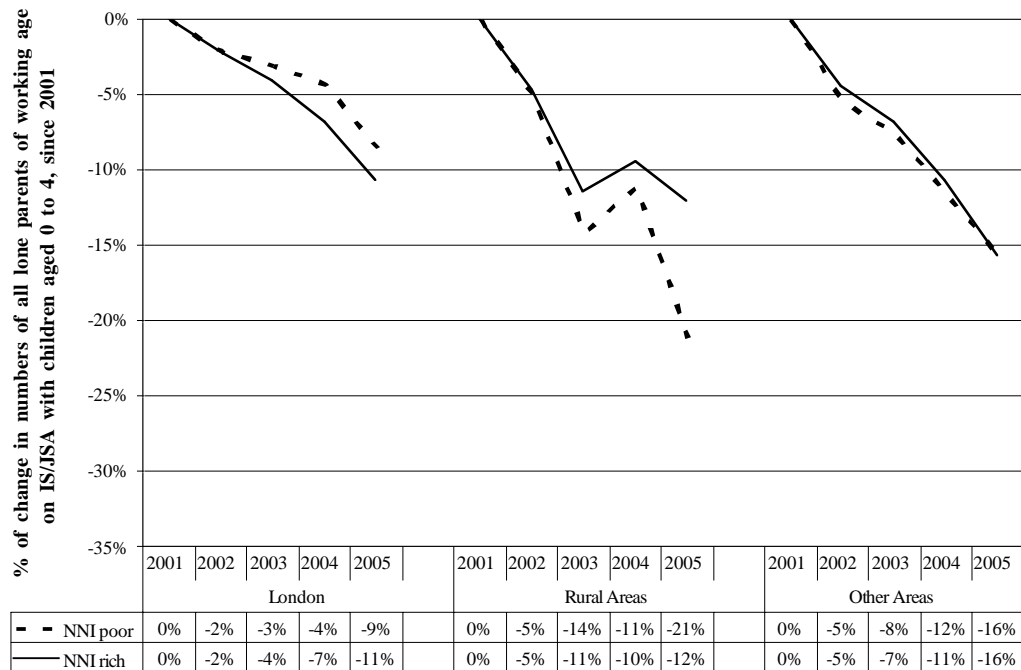


Figure 4.7 Percentage change in numbers of all lone parents of working age with children aged 0 to 4, in NNI rich and NNI poor areas by London, rural and other Areas, 2001-2005



The differences between the NNI rich and NNI poor areas of London were even greater for the group of partnered parents: there were 28% fewer partnered parents in the NNI rich areas of London as opposed to 22% in the NNI poor areas of London. These differences may have nothing to do with the impact of the NNI programme and may reflect differences in access to an appropriate labour market. It should also be underlined that these are simply broad comparisons of trends, and do not control for other differences between the areas. Thus it may be that the NNI rich areas in London are more concentrated in the most disadvantaged central parts of the city, while the NNI poor areas are scattered throughout other parts of London.

These differences underline the difficulty of identifying the impact of the NNI programme, given the potentially different underlying trends and characteristics of these different areas. The trends over the period also underline the increasingly tough challenge a programme such as NNI might face as the more mobile enter or return to the labour market. Thus by the end of the period studied, children aged 0-4 in the 20% most disadvantaged areas, who were living in a family dependent on out-of-work means tested benefits, were more likely to be in a lone parent family or if in a two parent family, one with adults having a long term work-limiting illness or disability. Though their overall numbers fell, other groups declined much more rapidly, leaving them as a larger proportion of the total in the target group.

Individual movements on and off out-of-work benefits: NNI rich and NNI poor areas, 2001-2005

When we focus on *individual* claimants' movements, some striking patterns emerge. If we focus on the 'pre-NNI cohort', that is on the people who claimed benefits in 2001 following them into 2003, we find that lone and partnered parents with very young children for England as a whole had higher exit rates than those from the NNI poor or NNI rich areas (see Tables 4.2a and 4.2b). In these two disadvantaged areas in terms of access to NNI provision, lone parents tended to have slightly higher exit rates in NNI poor areas, though for couple parents the exit rates were very similar in the NNI rich and poor areas. This 'pre-NNI cohort' would have had little chance to access NNI provision at this point. NNI rich areas tended to be slightly more disadvantaged, which might explain the lower exit rates by lone parents in these areas.

Table 4.2a Exit rates by 2003 for all lone parents with children aged 0 to 4 claiming IS/JSA in 2001 (pre-NNI cohort)

2001	Exit from IS/JSA		
	England 2003	NNI poor 2003	NNI rich 2003
Lone Parents on IS with children aged 0-4	104242	15382	12372
	28%	26%	24%
Disabled and other lone parents with children aged 0-4	3384	488	395
	15%	13%	12%
<i>All Lone Parents with children aged 0-4</i> ⁷¹	108315	15948	12867
	28%	25%	23%

Table 4.2b Exit rates by 2003 for all partnered parents with children aged 0 to 4 claiming IS/JSA in 2001 (pre-NNI cohort)

2001	Exit from IS/JSA		
	England 2003	NNI poor 2003	NNI rich 2003
Partnered Parents on IS with children aged 0-4	7520	993	1086
	38%	33%	36%
Unemployed Partnered Parents with children aged 0-4	32869	4689	4218
	61%	58%	58%
Disabled and other partnered parents with children aged 0-4	7839	1164	873
	20%	18%	17%
<i>All Partnered Parents with children aged 0-4</i>	48228	6846	6177
	43%	39%	40%

⁷¹ Includes a very small minority of unclassified families with children aged 0-4

If we look at those claiming in 2003 and follow them to 2005 ('the NNI cohort') we see that England as a whole continues to have higher exit rates than the more deprived NNI poor or NNI rich areas (see Tables 4.3a and 4.3b). Lone parents and disabled parents also continue to have lower exit rates; lone parents in NNI rich areas continue to show lower exit rates than those in NNI poor areas. Partnered parents in the NNI rich areas, however, still show marginally higher exit rates (45%) than those in the NNI poor areas (44%).

Table 4.3a Exit rates by 2005 for all lone parents with children aged 0 to 4 claiming IS/JSA in 2003 (NNI cohort)

2003	Exit from IS/JSA		
	England 2005	NNI poor 2005	NNI rich 2005
Lone Parents on IS with children aged 0-4	102566	15264	12667
	30%	28%	26%
Disabled and other lone parents with children aged 0-4	4450	683	577
	19%	17%	17%
<i>All Lone Parents with children aged 0-4⁷²</i>	107780	16030	13346
	29%	27%	25%

Table 4.3b Exit rates by 2005 for all partnered parents with children aged 0 to 4 claiming IS/JSA in 2003 (NNI cohort)

2003	Exit from IS/JSA		
	England 2005	NNI poor 2005	NNI rich 2005
Partnered Parents on IS with children aged 0-4	7140	1050	959
	42%	40%	39%
Unemployed Partnered Parents with children aged 0-4	31388	4119	3939
	69%	65%	66%
Disabled and other partnered parents with children aged 0-4 yrs	9991	1532	1290
	25%	24%	24%
<i>All Partnered Parents with children aged 0-4</i>	48519	6701	6188
	47%	44%	45%

These data suggest that although exit rates in the NNI rich and poor areas remained below the national figures, in these most deprived areas exits from benefits also increased, following national trends. It could be that there was increasing pressure on people to leave the out-of-work benefit system, increased availability of suitable work and more attractive in-work benefits, or simply changing 'mores' over mothers with

⁷² Includes a very small minority of unclassified families with children aged 0-4

young children joining the labour market. The improved availability of local childcare (not just NNI) may also have been a contributory factor.

Rural areas have the highest exit rates for lone parent claimants but areas classified as rural have very small numbers of claimants. They may well experience very different labour market and social conditions from their counterparts in London. London, on the other hand, had the lowest exit rates among lone parent claimants compared with rural and all other areas (see Tables 4.4a and 4.4b, for London and all other areas excluding rural areas). This is the case for both NNI rich and poor areas and for the pre-NNI and the NNI cohorts. So, in the NNI rich areas of London, the NNI cohort had an exit rate of 19% compared with 37% in the rural NNI rich areas and with 29% in all other NNI rich areas for that period.

Table 4.4a Exit rates for claimant lone parents with children aged 0 to 4 in the London NNI rich and poor areas: pre-NNI and NNI cohorts

LONDON – Lone Parents	NNI rich	NNI poor
<i>2001 Cohort followed into 2003 (pre-NNI cohort)</i>	3863	2272
	19%	19%
<i>2003 Cohort followed into 2005 (NNI cohort)</i>	3684	2249
	19%	20%

Table 4.4b Exit rates for claimant lone parents with children aged 0 to 4 in other NNI rich and NNI poor areas: pre-NNI and NNI cohorts

OTHER AREAS – Lone Parents	NNI rich	NNI poor
<i>2001 Cohort followed into 2003 (pre-NNI cohort)</i>	8582	13148
	25%	26%
<i>2003 Cohort followed into 2005 (NNI cohort)</i>	9262	13381
	29%	29%

Table 4.5a Exit rates for claimant partnered parents with children aged 0 to 4 in London NNI rich and poor areas: pre-NNI and NNI cohorts

LONDON – Partnered Parents	NNI rich	NNI poor
<i>2001 Cohort followed into 2003 (pre-NNI cohort)</i>	1967	1152
	41%	41%
<i>2003 Cohort followed into 2005 (NNI cohort)</i>	2037	1250
	47%	47%

Table 4.5b Exit rates for claimant partnered parents with children aged 0 to 4 in other NNI rich and NNI poor areas: pre-NNI and NNI cohorts

OTHER AREAS – Partnered Parents	NNI rich	NNI poor
<i>2001 Cohort followed into 2003 (pre-NNI cohort)</i>	4043	5488
	39%	39%
<i>2003 Cohort followed into 2005 (NNI cohort)</i>	3984	5283
	44%	43 %

Exit rates for partnered parents are typically *much* higher (see Tables 4.5a and 4.5b). London makes a particularly interesting case where, although exit rates for lone parents are as low as 19%, the equivalent rate for partnered parents is as high as 47%. There are no differences between the exit rates for NNI poor and rich areas in London. While the exit rates for lone parents in London changed little between the two pre-NNI and NNI cohorts, the exit rates for partnered parents in the NNI rich and poor areas of London increased quite markedly for the NNI cohort in both NNI rich and NNI poor areas – up from 41% to 47%. The same applies for the ‘all other areas’ where again in both NNI rich and poor areas the exit rates have increased from 39% for the pre-NNI cohort to 44% and 43% for the NNI cohorts. However, the absolute number of lone parent claimants (typically 80% of this ‘out-of-work’ claimant population) means that they will dominate the overall picture.

To further understand the dynamics responsible for changes in the size of the claimant populations before and during NNI, we focused on two of the largest groups (lone parents on IS and couple parents on JSA). In the NNI poor areas proportionally more lone parents on IS exited benefits during NNI (28%) than before the implementation of NNI (26%). At the same time, lone parents continued to join the IS benefit system in these areas. So, for the pre-NNI cohort, by 2003 new entrants made up 32% of the total on IS only, but during NNI this rate of joiners increased to 35% (or to put it another way there was a very similar number of joiners to a smaller pool) (see Table 4.6a).

Table 4.6a Benefit exits and entries in NNI poor areas for lone parents on IS: Pre-NNI and NNI cohorts

	Pre-NNI cohort (2001 to 2003)	NNI cohort (2003 to 2005)
Into the benefit system	17613 (32% of all in this group for 2003)	17826 (35% of all in this group for 2005)
Out of the benefit system	15382 (26% of all in this group for 2001)	15264 (28% of all in this group for 2003)
Staying exactly the same	22936 (38% of all in this group for 2001)	19101 (34% of all in this group for 2003)

Note: in Tables 4.6a to 4.7b, for entrants in each group we have used the population at the end of the period i.e. 2003 and 2005 as the reference point; for those exiting we have used the population at the start (i.e. 2001 and 2003).

As in the NNI poor areas, exit rates for the NNI rich areas increased between the cohorts; 24% of lone parents left benefits in the pre-NNI cohort compared with 26% of lone parents who exited the benefit system in the NNI cohort. However, as in the NNI poor areas, there is similar sized intake of lone parents who start claiming IS (see Table 4.6b).

Table 4.6b Benefit exits and entries in NNI rich areas for lone parents on IS: Pre-NNI and NNI cohorts

	Pre-NNI cohort (2001 to 2003)	NNI cohort (2003 to 2005)
Into the benefit system	15595 (32% of all in this group for 2003)	15298 (34% of all in this group for 2005)
Out of the benefit system	12372 (24% of all in this group for 2001)	12667 (26% of all in this group for 2003)
Staying exactly the same	21310 (41% of all in this group for 2001)	17929 (37% of all in this group for 2003)

Also there are sizeable geographical movements over time. In every 10 lone parents on IS only, there is at least one who, in a period of two years, will have moved out of, say, a NNI rich area or into one. In the NNI rich areas, as in the NNI poor areas, unemployed partnered parents make up a very dynamic group of claimants whose movements into and out of benefits during the NNI period have intensified (see Tables 4.7a and 4.7b). During the NNI period, 2003 to 2005, more than half the unemployed partnered parents left benefits and more than half came in as new claimants. Also, unlike lone parents on IS only, unemployed partnered parents who exit benefits, in both cohorts, outnumber new claimants. This trend clearly makes a major contribution to the falling numbers of claimants in this category. What is also striking is that there are proportionally fewer claimants in this group who continue to claim benefits once their children grow out of the preschool age group.

Table 4.7a Benefit exits and entries in NNI poor areas for unemployed partnered parents: Pre-NNI and NNI cohorts

	Pre-NNI cohort (2001 to 2003)	NNI cohort (2003 to 2005)
Into the benefit system	3556 (56% of all in this group for 2003)	2869 (60% of all in this group for 2005)
Out of the benefit system	4689 (58% of all in this group for 2001)	4119 (65% of all in this group for 2003)
Staying exactly the same	1086 (14% of all in this group for 2001)	642 (10% of all in this group for 2003)

Table 4.7b Benefit exits and entries in NNI rich areas for unemployed partnered parents: Pre-NNI and NNI cohorts

	Pre-NNI cohort (2001 to 2003)	NNI cohort (2003 to 2005)
Into the benefit system	3357 (56% of all in this group for 2003)	2665 (61% of all in this group for 2005)
Out of the benefit system	4218 (58% of all in this group for 2001)	3939 (66% of all in this group for 2003)
Staying exactly the same	1107 (15% of all in this group for 2001)	602 (10% of all in this group for 2003)

NNI rich area provision as a predictor of benefit exits

Further analysis of individual exit rates, where the individual- and area-based characteristics available to the research team were taken into account, showed a number of significant relationships. Younger claimant parents, those who are not lone parents or disabled, with fewer children aged 0-2, 2-3, and/or 5 years or over, and/or those who live in areas with greater childcare provision in addition to NNI, and/or those who live in less deprived areas in terms of child poverty, are also more likely to leave benefits. For example, in comparison to claimants in their forties, those in their twenties are 24% more likely to exit benefits and those in their thirties are 23% more likely to do so. Also, lone parents are 72% less likely⁷³ and disabled parents are 71% less likely to exit benefits (Table 4.8).

One of the most important mediating factors between a NNI rich area and an individual claimant's probability of exiting from benefits is the region in which they live. Once regional differences were taken into account, living in a NNI rich area appears to increase rather than decrease the chances of leaving the benefit system. In comparison to claimants in London, those in all other regions in England are significantly *more* likely to exit the IS/JSA benefit system, even *after* controlling for many important individual differences, area deprivation and childcare provision. It seems very likely that 'region' stands here for a composite effect of labour market factors, cultural differences (for example, attitudes about women with children entering the labour market) and factors such as housing costs, which might, if they were very high, act as a disincentive to leaving the benefits system.

⁷³ This finding, which is consistent with many other studies, is not in conflict with the finding in the Impact Study (Chapter 5) which found that 'work-ready' lone parents were one of the groups with the highest entry to work rates. This part of the evaluation, the *Neighbourhood Tracking Study*, focused on all lone parents with a child aged 0-4. The 'work-ready' group will form only part of this population.

Table 4.8 Model for 2003 claimants in the most 20% deprived areas (on IDAC) showing odds ratios for 2005 exits from the IS/JSA benefit system⁷⁴

	Step 1	Step 2	Step 3	Pre-NNI cohort (step 3)
<i>Intercept</i>	0.43***	1.99***	1.75***	1.26***
<i>NNI rich area level provision</i>	0.98*	0.99	1.03*	1.00
<i>Income Deprivation Affecting Children (IDAC) scores at SOA level ID 2004</i>		0.44***	0.43***	0.48***
<i>Regions (Reference =London)</i>				
<i>South East</i>	-	-	1.43***	1.34***
<i>South West</i>	-	-	1.44***	1.35***
<i>East Midlands</i>	-	-	1.48***	1.40***
<i>West Midlands</i>	-	-	1.31***	1.29***
<i>East of England</i>	-	-	1.42***	1.59***
<i>North East</i>	-	-	1.52***	1.37***
<i>North West</i>	-	-	1.37***	1.25***
<i>Yorkshire and the Humber</i>	-	-	1.54***	1.37***
<i>Claimant's Age (Reference=41-50 yrs old)</i>				
<i>21-30 yrs old</i>	-	1.32***	1.24***	1.40***
<i>31-40 yrs old</i>	-	1.24***	1.23***	1.36***
<i>Number of children 0-2 yrs old</i>	-	0.83***	0.83***	0.82***
<i>Number of children 3-4 yrs old</i>	-	0.88***	0.87***	0.85***
<i>Number of children 5 or over</i>		0.88***	0.87***	0.87***
<i>Lone parent</i>	-	0.27***	0.28***	0.30***
<i>Disabled parent</i>	-	0.30***	0.29***	0.25***
<i>Proportion of non NNI childcare places to children 0-4 yrs old in claimant's Output Area</i>	-	1.68***	1.15**	1.29***

After controlling for differences in individual and area level variables and particularly region, IS/JSA claimant parents of children aged 0-4 in 2003 were 3% more likely to exit the IS/JSA benefit system by 2005 if they lived in a NNI rich area. This effect was not present for the pre-NNI cohort (see Table 4.8 col. 5). The effect also held up when the NNI rich areas were compared with either the NNI poor areas or the other 20% most

⁷⁴ *** p<=0.001, ** p<= 0.01, * p<=0.05

disadvantaged areas that were ‘mixed’ (that is, neither NNI rich nor NNI poor). This marginally positive result has to be viewed in the context of the limited number of variables available for this analysis and the small size of this effect.

Conclusions

The findings of the present study show that NNI took place at a period of steadily falling numbers of out-of-work parents on IS or JSA who had children aged 0-4. Comparative trends in different areas suggested that the most disadvantaged areas were not missing out in this decline; and NNI clearly helped boost childcare places in the most deprived areas of England, as intended.

However, there is considerable variability among different sub-groups of this claimant population. The number of partnered parents on IS/JSA declined at a faster rate than lone parents. But the latter group makes up the vast majority of claimants with preschool children in all areas. As the more mobile groups have left the out-of-work benefit system, those remaining are increasingly groups facing higher barriers to work entry (e.g. lone parents or parents with long-term work-limiting illness or disability).

There are also striking differences between regions, with London and lone parents in London particularly, showing lower rates of exit compared with rural and all other deprived areas. However, there are no major differences in overall trends between NNI rich and NNI poor areas, though NNI rich areas are consistently more disadvantaged than NNI poor areas.

During the NNI period (2003-5), exit rates from benefit increased as more claimant parents in both NNI rich and NNI poor areas left the out-of-work benefits system. Again, partnered parents exit at a much higher rate than lone parents and the difference in these groups is most marked in the London area. However, the rate of *entry* to benefits by lone parents remained more or less the same over the time period, underlining the way that programmes have to work hard to stay in the same place as there are always potentially new recruits for their services – the factors generating the arrival of a lone parent onto the system are not directly affected by the NNI programme. Lone parents with children aged 0-4 were also a more *geographically* mobile population than couple parents in the same areas, suggesting a further barrier to using childcare services and getting employment.

When individual, area and some regional characteristics were taken into account, the relationship between living in a NNI rich area (that is, having a higher chance of access to neighbourhood nurseries) and the chance of exiting out-of-work benefits becomes positive and just significant, though of marginal size. This analysis, it should be underlined, was conducted on effectively *all* claimants of IS and JSA who had a child aged 0-4 and lived in the 20% most disadvantaged areas. No information on whether they had made *any* use of NNI or other childcare services was available to this part of the study. This is the focus of the next chapter on the impact of NNI.

5

THE IMPACT OF NEIGHBOURHOOD NURSERIES ON FAMILIES: THE NNI IMPACT STUDY

*Ivana La Valle, Ruth Smith, Susan Purdon
National Centre for Social Research*

*Lorraine Dearden, Jonathan Shaw, Luke Sibieta
Institute for Fiscal Studies*

Introduction

A key element of the NNI evaluation was the Impact Study, which aimed to assess how the programme has affected families' childcare and work decisions. More specifically, the Impact Study has provided:

- an assessment of the extent to which NNI has succeeded in making daycare more accessible, particularly among the most disadvantaged families, such as lone parents, low income families and ethnic minority groups
- a detailed exploration of the views and experiences of parents who have taken up a neighbourhood nursery place, including the reasons for using daycare (e.g. to work or increase their employability), how much NNI and other provision they use, the cost of the nursery and take-up of childcare subsidies
- an assessment of the impacts of NNI on use of formal childcare, parental employment, take-up of benefits and tax credits among families from different groups
- a cost-benefit analysis of the initiative.

In this chapter we first briefly outline the methodology used for the Impact Study. We then provide an overview of the profile of neighbourhood nursery users, followed by a discussion of parents' experiences of using and paying for the nursery. Later on in the chapter we present the results on the impact of NNI; they include both a formal impact assessment and self-reported impact based on parents' views of how NNI affected their circumstances. We then present the findings from the cost-benefit analysis. In the final part of the chapter, we draw together the results from the Impact Study to provide an overall picture of the extent to which NNI has achieved its key objectives.

Methodology

Estimating the impact of NNI raised considerable methodological challenges. First, while NNI is an area-based programme available to all families with preschool children, there is a question mark on whether the evaluation should attempt to measure the impact on the whole of this population. While there is plenty of evidence showing that lack of adequate and affordable provision prevents many families from using daycare, research has also shown that some parents do not want to use (formal) provision, as they believe that parental and/or informal care is best for their children (Bell *et al.*, 2005; Bryson *et al.*, 2006; La Valle *et al.*, 2000). This raised the question of whether an impact assessment of NNI should focus just on parents who would be willing to use formal childcare, or all parents, regardless of their attitudes towards formal provision.

A second problem was linked to difficulties in defining NNI (and non-NNI) areas. Early analysis of neighbourhood nurseries' 'catchment' areas showed that these could be very large. This suggested that the overall impact of the initiative was likely to be very dispersed and therefore difficult to detect. This meant that realistically an impact assessment requiring the collection of new data had to focus on areas where NNI provision was sufficiently high to be likely to have a detectable impact.

Lack of uniformity in terms of use of NNI funding also raised methodological difficulties. There was considerable flexibility in how nurseries could use NNI funding; for example, some used it to subsidise places targeted at disadvantaged families, others used it to reduce fees across the board. This made it difficult to distinguish between the beneficiaries of NNI (e.g. those who took up a place subsidised with NNI funding), and those who, while using a neighbourhood nursery, were not really 'benefiting' from the programme, as they were not using a place that was created or subsidised with NNI funding.

To overcome these difficulties, we used four different impact designs, which, in combination, have provided a more comprehensive analysis and better understanding of the NNI impact than would have been possible if a single approach had been used.

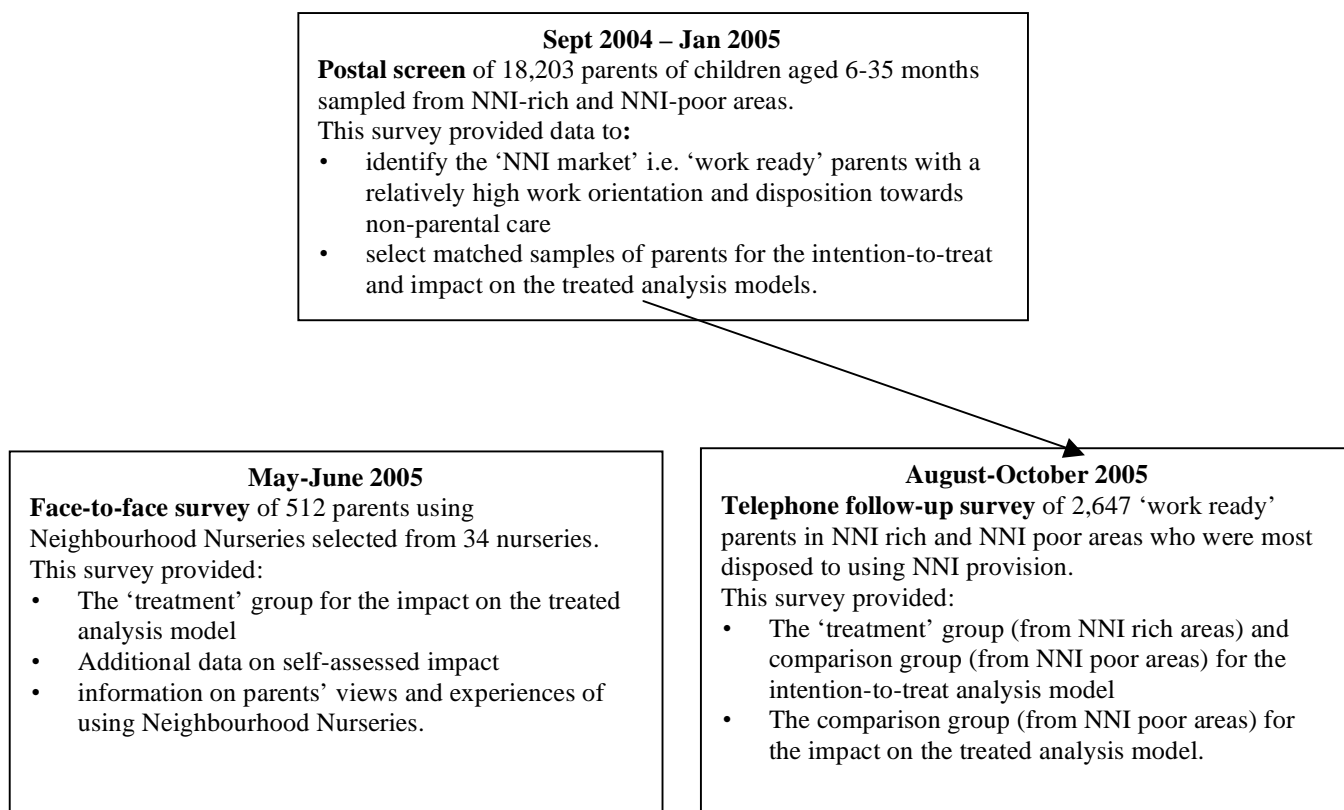
- The first approach involved an *intention to treat-to-treat design* which assessed the impact of NNI on the whole population of parents with pre-school children. The impact on these families was measured by comparing outcomes for parents living in areas with high levels of NNI provision ('NNI-rich' areas), with outcomes for parents in areas with no or very little NNI provision ('NNI-poor' areas)⁷⁵. Administrative data from the Work and Pensions Longitudinal Study was used for this comparison.

⁷⁵ 'NNI-rich' areas were those that fell into the 33% top locations in terms of number of NNI places per child aged 0-4 (i.e. 0.10 to 0.69 places per child), and were also the 60% best areas in terms of distance from the nearest neighbourhood nursery (i.e. 0.01-1 km away). 'NNI-poor' areas were at the bottom of the distribution in terms of NNI places (i.e. 0-0.09 places per child); they were also the worst in terms of distance from the nearest neighbourhood nursery (i.e. 1.052-42.146 km away). All other locations were classified as 'middle NNI areas' and were excluded from the study. Both NNI-rich and NNI-poor areas were among the 20% most deprived areas.

- The second approach also involved an *intention-to-treat design*, but was focused on what we considered to be the ‘*NNI market*’, that is parents who were most likely to benefit from an increase in affordable daycare provision and were ‘work ready’. Through a large postal screen we identified a sub-group of the population of parents who might potentially take up a NNI place, on the grounds that they had similar characteristics to actual NNI users (e.g. in terms of socio-economic profile, but also work orientation and disposition towards using formal childcare). We have termed these the ‘work-ready’ population. Work-ready parents in NNI rich areas were then matched to similar work-ready parents in NNI poor areas. Comparing outcomes for the two groups gives an estimate of the impact of NNI measured across the population of both actual and potential users. The data for this approach was collected by a telephone survey (see Figure 5.1).
- The third approach involved an *impact on the treated design* and compared outcomes for neighbourhood nursery users with a matched comparison sample of non-users. This gives estimates of the impact of the programme on those who took up a NNI place. The data for this approach were also collected by survey; face-to-face interviews were carried out with neighbourhood nursery users, while telephone interviews were conducted with the comparison group (see Figure 5.1). As it was not possible to identify ‘NNI funded places’, for the reasons outlined above, only users from the 20% most deprived areas were included in this analysis, as this was the best proxy available to try and identify ‘beneficiaries’ of the programme.
- The fourth approach consisted of a *self-assessment of impact*: that is, neighbourhood nursery users were asked how using the nursery had affected their employment circumstances and other aspects of their lives.

Figure 5.1 provides an overview of the surveys we carried out for the Impact Study. More details about the methodology can be found in the Impact Study report (La Valle *et al.*, 2007).

Figure 5.1 Measuring the impact of NNI



Parents' views and experiences

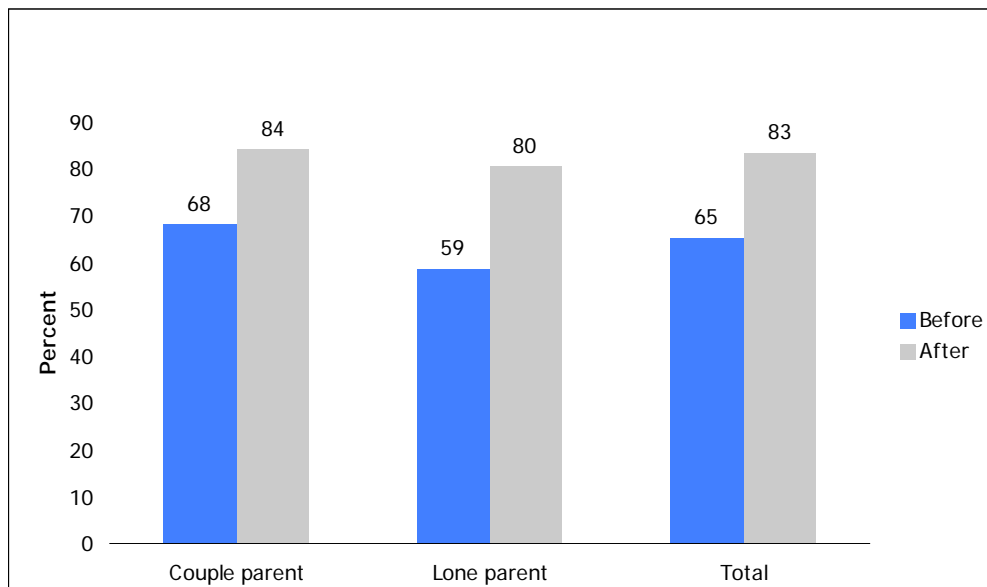
The study included a survey of neighbourhood nursery users, which provided some detailed information on the profile of these families and their experiences of using the nursery.

The Neighbourhood Nursery Users survey seems to indicate that NNI has been successful in reaching the most disadvantaged groups:

- 30% of users were lone parents
- 50% of the families had an household income of £25,000 per year or less
- 40% of parents had no or low qualification levels (i.e. NVQ 1-2)
- 19% were from ethnic minority groups.

Neighbourhood nurseries were used mainly by working parents or those undertaking training, who represented 83% of users. The proportion of parents in work or training rose by 18 percentage points between the month before taking up the neighbourhood nursery place and the time of interview. However, most parents were already in employment before they started using the nursery (Figure 5.2).

Figure 5.2 Proportion of parents in paid work or training before and after starting to use a neighbourhood nursery, by household status



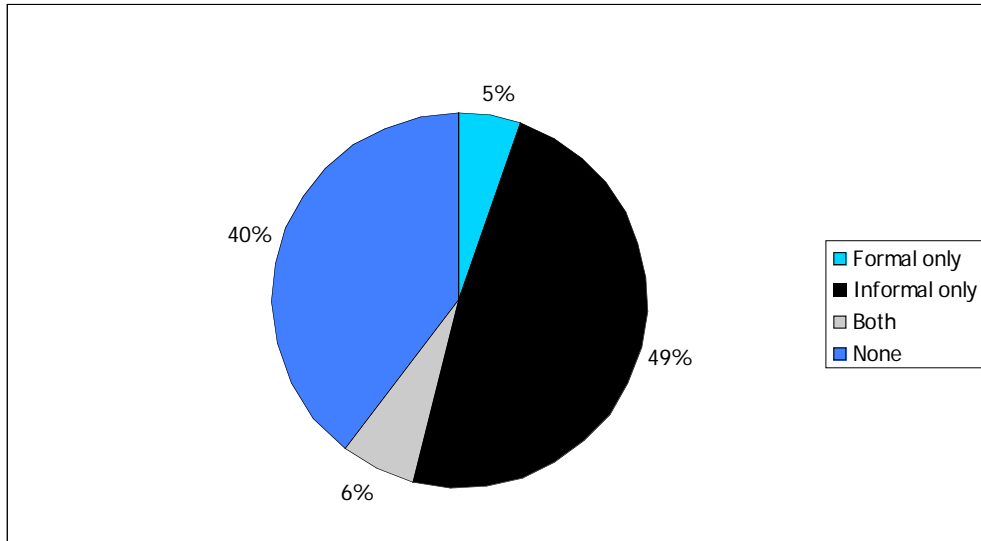
Base: All Neighbourhood Nursery users

Half of the parents interviewed had not used any (formal or informal) childcare prior to taking up the neighbourhood nursery place, and only 20% had used formal provision in the past⁷⁶. Most parents (60%) used some form of additional (mainly informal) childcare

⁷⁶ Formal childcare includes nursery class, nursery school, day nursery, playgroup or pre-school, childminder, breakfast and after-school club; informal care comprises relatives, friends and ex-partners.

alongside the neighbourhood nursery (Figure 5.3). A substantial proportion of these parents were using additional care during the early morning and evening, highlighting a potential need for childcare outside standard hours.

Figure 5.3 Childcare used alongside the neighbourhood nursery (excluding the nursery itself)



Base: All Neighbourhood Nursery users

A combination of mothers' part-time work and the reliance on additional informal care meant that most parents (64%) used neighbourhood nurseries on a part-time basis (i.e. for up to 25 hours a week), while only 14% used it for 38 or more hours a week (Table 5.1).

Table 5.1 Usual weekly hours of neighbourhood nursery used during the last month

	%
12.5 or fewer	24.6
13 to 25	39.7
25.5 to 37.5	21.4
38 or more	14.3
Mean number of hours used	22.4
Median number of hours used	20.0
Base	509

Base: All Neighbourhood Nursery users who gave valid hours information

Finally, there is evidence to suggest that a number of nurseries had moved towards the children's centre model as they were providing a range of family support services or information on these:

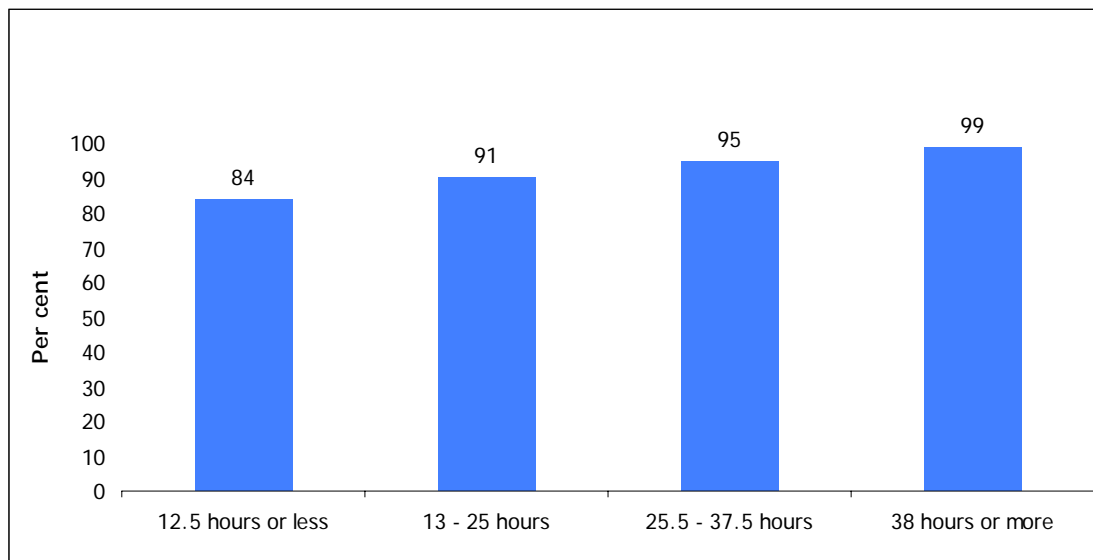
- 58% of parents reported that at least one type of family service (e.g. parenting support, training, health services, career advice) was available at their nursery, and 59% of these parents had used at least one of these services
- in addition, 39% of parents said their nursery had provided some information about family services available elsewhere.

Paying for the Neighbourhood Nursery

Ninety-one per cent of parents paid for their neighbourhood nursery place, to cover fees and/or other costs such as meals, refreshments, transport and use of equipment. Working parents were significantly more likely than others to have paid for their neighbourhood nursery place (96% and 74% respectively). Families with a household income of £15,000 a year or less were less likely than more affluent families to have paid (81%, compared with 92%-96% in the higher income groups). More than half of the parents interviewed (52%) said that they had been required to pay for a full session of neighbourhood nursery care when they had only used part of it. This could reflect a tension between flexibility and financial sustainability, which had led some of the nurseries researched for the NNI Implementation Study to consider abandoning or limiting the provision of part-time places (see Chapter 2).

Figure 5.4 shows a clear relationship between number of hours of neighbourhood nursery use and whether a payment was made for this provision. It is clear that families using a greater number of hours were more likely to pay for it.

Figure 5.4 Whether parent paid for neighbourhood nursery provision, by hours of neighbourhood nursery used

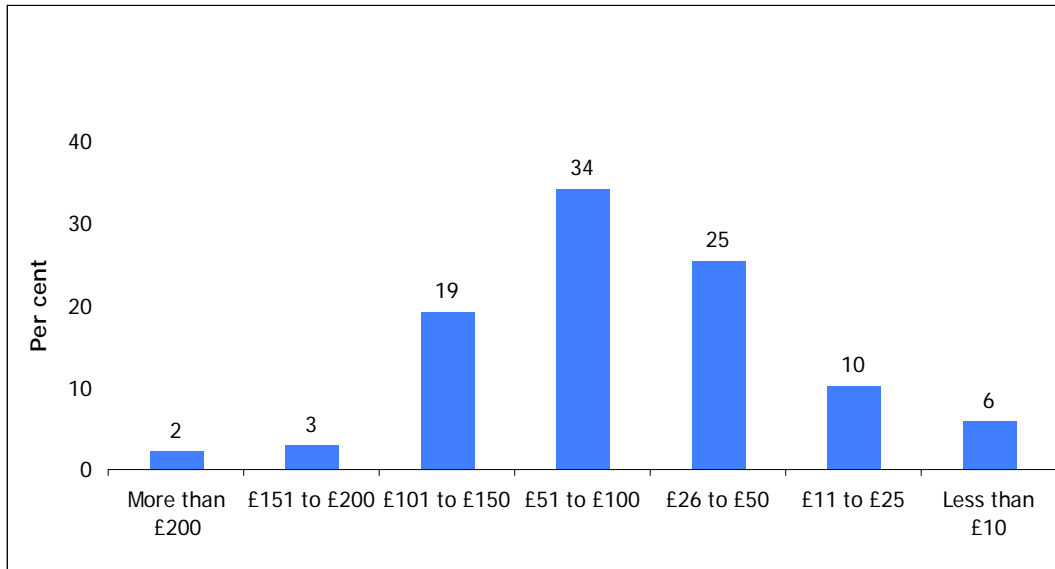


Base: All Neighbourhood Nursery users who gave valid hours information

Weekly amounts paid

The mean amount paid for a neighbourhood nursery place was £72.71. Figure 5.5 shows the proportion of families who paid different weekly amounts, with the largest group (34%) comprising those who paid between £51-£100.

Figure 5.5 Amount paid per week to neighbourhood nursery



Base: All Neighbourhood Nursery users who gave information on the amount paid

Lone parents were likely to pay more than partnered parents for their neighbourhood nursery place (with respective means of £78.27 and £69.66), in spite of the fact that there was no significant difference between the number of hours of neighbourhood nursery care used by the two groups (with the respective mean hours being 24 and 21).

Table 5.2 shows that working parents were paying more than non-working parents, partly reflecting the fact that the former were using more hours of neighbourhood nursery provision than their non-working counterparts. However, the findings on amounts paid should be interpreted with a degree of caution owing to the small sample of non-working parents.

Table 5.2 Amount paid per week to neighbourhood nursery, by parental employment

	<i>In paid work</i> %	<i>Not in paid work</i> %
Less than £10	2.3	[22.4]
£11 to £25	7.2	[23.7]
£26 to £50	22.9	[36.8]
£51 to £100	40.6	[5.3]
£101 to £150	21.7	[7.9]
£151 to £200	3.5	-
More than £200	1.7	[3.9]
Mean	£79.06	[£43.91]
Median	£75.00	[£30.00]
Base	345	76

Base: All Neighbourhood Nursery users who paid for their place and gave information on the amount paid

Note: Square brackets are used where the base is less than 100

Overall, Table 5.3 indicates a positive correlation between household income and the amount paid for neighbourhood nursery care. This again is likely to reflect the fact that working parents use more hours of neighbourhood nursery care.

Table 5.3 Amount paid per week on average to neighbourhood nursery, by household income

	<i>£15,000 or less</i> %	<i>£15,001–£25,000</i> %	<i>£25,001–£40,000</i> %	<i>£40,001 or more</i> %
Less than £10	[16.9]	[4.4]	3.0	[1.0]
£11 to £25	[11.2]	[10.0]	10.4	[7.2]
£26 to £50	[23.6]	[25.6]	31.9	[19.6]
£51 to £100	[29.2]	[32.2]	34.1	[42.3]
£101 to £150	[15.7]	[21.1]	16.3	[23.7]
£151 to £200	[2.2]	[4.4]	2.2	[3.1]
More than £200	[1.1]	[2.2]	2.2	[3.1]
Mean	[£60.52]	[£76.62]	£70.47	[£84.97]
Median	[£50.00]	[£76.00]	£60.00	[£72.00]
Base	89	90	135	97

Base: All Neighbourhood Nursery users who paid for their place and gave information on the amount paid per week and on their household income

Note: Square brackets are used where the base is less than 100

Help with the costs of childcare

Just over a third (34%) of parents who used paid childcare said that they found it difficult to pay for it. Table 5.4 shows the proportion of parents who reported various kinds of financial help available from their neighbourhood nursery. The most common form of help was allowing families to pay in arrears (38%), while between a fifth and a quarter of parents reported free or reduced fees for low-income/non-working families, permanently or for a trial period, or a reduced fee for more than one child. Free places or reduced fees for parents during a period of change (such as a family break-up or moving into a new area) were the least likely concessions to be reported (5%). It is interesting to note that a high proportion of parents (between 30% and 61%) did not know whether different types of financial help were available at their neighbourhood nursery.

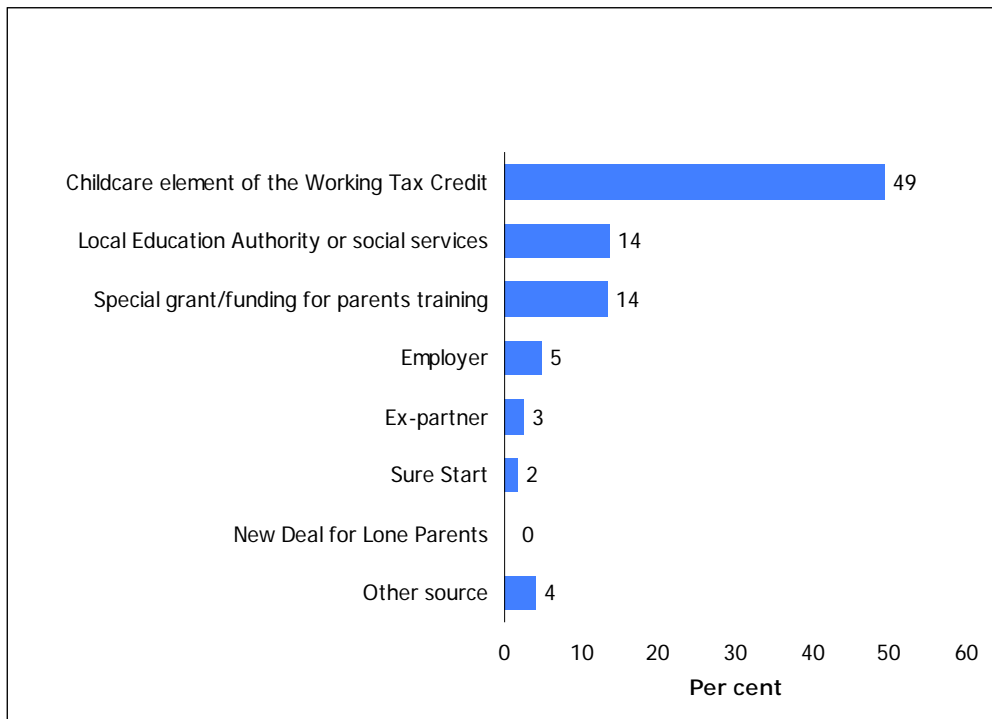
Table 5.4 Financial help offered by neighbourhood nurseries

	<i>Free/reduced places for low-income/non-working families</i>	<i>Free/reduced places for 'trial' or 'taster' period</i>	<i>Reduced fee for more than one child</i>	<i>Free/reduced places during period of change</i>	<i>Parents allowed to pay in arrears</i>
	%	%	%	%	%
Available and received	8.8	19.7	7.4	2.0	27.7
Available but not received	14.5	3.1	17.6	3.3	10.2
Not available	26.0	46.9	22.7	33.8	29.9
Don't know	50.8	30.3	52.3	60.9	32.2
Base	512	512	512	512	512

Base: All Neighbourhood Nursery users

As well as financial assistance from the neighbourhood nursery, the survey explored access to other sources of help. As shown in Figure 5.6, by far the most common source of financial help was the childcare element of the Working Tax Credit (WTC) received by almost half of the parents (49%) who were paying for their neighbourhood nursery place.

Figure 5.6 Financial help from other sources



Base: All Neighbourhood Nursery users who paid for childcare

All parents were asked whether they had ever received any information about the childcare element of the WTC from their neighbourhood nursery, and 39% said they had.

The impacts of NNI on employment, benefits and childcare use

In this section we discuss the impact of NNI on parental employment, take-up of tax credits and use of formal childcare. We present the results from the impact on the treated and intention-to-treat analyses discussed earlier on. These show the impact NNI had on parents who had used a neighbourhood nursery, and the impact on work-ready parents with preschool children in NNI rich areas, as well as the impact on all parents with preschool children in NNI rich areas. The findings on self-reported impact are discussed in the next section.

The impact on the treated analysis shows that NNI has had a positive impact of employment, with 20% of users in work who would have not been working if the nursery had not been available. The impact is greatest on full-time and ‘high’ part-time work (16-29 hours a week). Around 9% of NNI users are estimated to be in full-time work who otherwise would not have been, and 14% in ‘high’ part-time work (Table 5.5).

Table 5.5 NNI Impact on respondents’ working status

	<i>NNI user</i> %	<i>Matched non>NNI user</i> %	Difference	p value for difference
Work	70.8	50.8	20.1	0.0001
Of which:				
Full-time (30+ hrs)	29.2	20.4	8.7	0.0003
High Part-time (16-29 hrs)	38.0	23.9	14.0	
Low Part-time (0-15 hrs)	3.7	6.4	-2.7	
<i>Unweighted Base</i>	216	200		
<i>Weighted Base</i>	216	200		

Base: All Neighbourhood Nursery users selected for the impact on the treated analysis

The impact on employment was greatest for some key target groups, including lone parents and those with low/no qualifications:

- 30% of lone parents who were using the nursery would have not been in employment if NNI had not been available; the impact for partnered parents is around half the size at 16%
- the impact of NNI is estimated to be 22% for parents with an NVQ level 2 qualification or lower, while there is a smaller, and non statistically significant, impact of 14% on those with higher qualifications.

Given the above results on the impact of employment, it was not surprising to find that NNI had a positive impact on the take-up of the WTC, and in particular its childcare element, with 28% of users in receipt of the latter, who would have not been receiving it

if NNI had not been available. Again the impact on the take-up of the WTC and its childcare element was greatest for lone parents and for those with low/no educational qualifications.

NNI was also found to have a positive outcome on take-up of formal childcare: about 28% of users would not have been using formal provision if NNI had not been available. Again family structure was found to be related to the size of impact: while 74% of partnered parents would have found alternative formal childcare if NNI had not been available, the corresponding figure for lone parents is 69%. Among parents with different qualification levels, we find a different pattern from that emerging from other results. Seventy-six per cent of users with NVQ level 2 or lower qualifications would have found alternative formal childcare in the absence of NNI, compared to 68% of those with higher qualifications. These results could suggest that almost all the additional take-up of childcare among parents with lower qualifications is employment related, whereas among better qualified parents the additional use might be determined by other reasons.

The results suggest that NNI has had a positive and reasonably large, impact on **users**. However, the number of users of NNI is fairly low, with just 10% of parents with preschool children in NNI rich areas having taken up a place. So, when measured across this broader population, the impacts are considerably smaller, although still positive:

- the impact of NNI is estimated to have increased employment by just 1.3% among work-ready parents (a figure which is not statistically significant) and 0.8% among all parents with preschool children in NNI rich areas⁷⁷
- the take-up of the childcare element of the WTC and formal provision among work-ready parents were estimated to have increased by just 1.2% and 1.8% respectively (neither figure is statistically significant)⁷⁸.

In conclusion, while overall NNI has had considerable positive impacts for individual families, it has had relatively little impact on areas, simply because only a small percentage of families (10%) were affected by the initiative.

Self-reported impact of NNI

The Neighbourhood Nursery Users survey provided an opportunity to explore parents' perceptions of the impact of NNI. The findings constitute a subjective assessment of the initiative. Whilst they do not constitute a robust measure of impact, some do correspond well with the formal impact estimates, and so provide both a validation of some of those findings and a better understanding of how these effects were brought about.

⁷⁷ The 0.8% employment impact relates only to those parents who had received a benefit other than child benefit some time since 1998 (roughly 70% of parents with preschool children), as we did not have access to employment data for parents without a benefit claim.

⁷⁸ It was not possible to calculate the impact on take-up of the childcare element of the WTC and formal childcare on all parents with preschool children, as this information was not available from the administrative data sources we used.

The overwhelming majority of parents (92%) felt that the neighbourhood nursery had played a role in enabling them to work (Table 5.6). A substantial minority of parents (22%) thought they would have not been able to work if the neighbourhood nursery had not been available; this figure is comparable to the estimate of impact on users mentioned above. Lone parents and those with no/low qualifications were particularly likely to report that they would not have been able to work without NNI (with the respective figures being 29% and 31%), again a finding that is in line with the impact assessment results presented above.

Table 5.6 Parents’ views on how the Neighbourhood Nursery helped them to work, by family structure

	<i>Couples</i> %	<i>Lone parents</i> %	<i>Total</i> %
Gave me time to work	72.5	82.7	75.3
Provided childcare that was trustworthy/safe	74.9	71.8	74.1
Provided childcare that was available at the right times	59.1	65.5	60.8
Provided childcare that I could afford	47.4	47.3	47.4
Made me think (harder) about working	7.6	9.1	8.0
I got a job at the nursery itself	0.7	1.8	1.0
Nursery gave me information on work	-	1.8	0.5
Any of these	91.1	92.7	91.5
None of these	8.9	7.3	8.5
Base	291	110	401

Base: All Neighbourhood Nursery users who had worked since using the nursery

Note: Percentages may add up to more than 100 because respondents could give more than one reply

As well as affecting their ability to work, some parents felt that the neighbourhood nursery had also influenced the nature of their work:

- 30% of parents had changed jobs or their role at work since using the neighbourhood nursery, and 70% thought that the nursery played a role in this change
- 46% had changed their working hours since using the neighbourhood nursery, and 78% thought that the nursery had enabled them to make this change
- 42% of parents felt more confident or happier about working, and 33% believed they had more employment options; these effects were particularly likely to be reported by lone parents.

Parents felt that the nursery had had an impact on other aspects of their lives, including enabling them to socialise, relax, have fun or pursue leisure activities. Parents’ well being seems also to have been positively affected by the neighbourhood nursery, with 41% saying they felt less stressed, 36% less worried or anxious and 20% less tired.

Finally, parents' perceptions of the childcare they would have used had the neighbourhood nursery not been available differed considerably from the estimate of impact on users. 48% said they would not have used formal care, in contrast to the estimate of around 20% from the impact on users analysis. This discrepancy seems to suggest that parents over-estimate the difficulty of finding (other) formal childcare.

Cost-benefit analysis

As part of the Impact Study, we have compared the total economic costs of NNI with its total economic benefits, to assess whether, overall, the initiative was beneficial to society. As some guide to this, we have used the Family Resources Survey to estimate the costs and benefits of NNI from the perspective of government finances. This ignores some dimensions of costs and benefits (such as what the government does with any savings it makes from the initiative), these being beyond the scope of what can be done here.

According to our estimates, if the government required a rate of return of 3.5%, then £98m. and £347m. would represent our estimates of the lower and upper bounds on the maximum cost of NNI to deem the project a financial success. The lower bound represents what we estimate the revenue gains to be if they last for only one year, and the upper bound is if they last for five years (for more precise details and methodology see the Impact Study report, La Valle *et al.*, 2007).

Has NNI worked?

While the results from the Impact Study provide an overall positive picture of the effects of NNI on users, some of the findings could raise questions about the effectiveness of some aspects of the programme, and in particular why only 10% of parents with preschool children in NNI rich areas took up a neighbourhood nursery place. There could be three possible reasons for this.

First, one possibility is that NNI might have not created enough (additional) places to meet parents' needs in the 20% most deprived neighbourhoods⁷⁹, particularly given that a considerable proportion of neighbourhood nurseries and their users were located outside these areas⁸⁰. It is difficult to make an overall assessment of whether insufficient supply might have determined the low level of use, as levels of supply seemed to vary considerably. For example, in the NNI rich areas used for this study, the level of NNI provision ranged from one NNI place per 1.4 children under 5 in some locations, to others which had one NNI place per 10 children. Similarly, the evidence from the Implementation Study on any spare capacity nurseries might or might not have had is not conclusive: while nearly two thirds of nurseries had a waiting list, fluctuations in demand were reported by many nurseries and typically not all (NNI) places were filled. The

⁷⁹ We have used 'neighbourhood' throughout the text of this report to refer to the geographical unit SOA.

⁸⁰ Note the research design for the Impact Study was based on the 20% most disadvantaged neighbourhoods. See the chapter on the Implementation Study for analysis of the targeting of the programme in both the 20% and the 30% most disadvantaged neighbourhoods.

Neighbourhood Nursery Users survey also shows that only a small number of parents (less than a fifth) had to wait for a place. These results suggest that while lack of places might have been an issue in some areas, overall this does not seem to be the main reason for the relatively low level of neighbourhood nursery use.

Second, low level of NNI use could be due to a mismatch between what the nurseries provide (e.g. in terms of location, opening hours, cost) and what local parents need and can afford. There is some evidence from the Implementation Study as well to suggest that the kind of service provided by neighbourhood nurseries might not be adequate to meet the needs of all parents (e.g. those requiring flexible provision or childcare at atypical hours). However, as the Implementation Study has also indicated, cost was probably a bigger barrier to access, particularly among non-working parents who could not afford daycare without an income from employment and the childcare subsidies available to working parents.

Third, low NNI use could reflect a limited need for formal childcare in these areas. Reluctance to use formal care among parents with a strong disposition towards parental care and/or with a preference for informal care could partly explain the low level of use of neighbourhood nurseries (there was some suggestion of this in the interviews with nursery managers reported in the Implementation Study). However, lack of adequate information about local childcare services and the subsidies available to parents could also have played a part. While the evaluation has not explored the views of parents who were not using NNI, there is evidence from other research showing a possible link between attitudes towards formal childcare and parents' knowledge of and familiarity with childcare services (e.g. Bell *et al.*, 2005).

What are the implications for childcare policy?

Most of the results on the impact of NNI point in the right direction (e.g. in terms of increases in employment and employability, take-up of formal childcare, the groups that are most likely to benefit), but despite the considerable impact NNI has had on users, the area level impact has been small. Given that decisions about using (formal) childcare are affected by cultural and attitudinal factors, which might in turn be influenced by the availability of childcare services, early results might not provide a very good indication of the overall impact of the initiative, and evidence from other research seems to suggest that take-up could increase with time (e.g. Bryson *et al.*, 2006; La Valle *et al.*, 2000). However, current childcare funding policy (which relies heavily on demand-side subsidies available only to working parents) means an increase in take-up of daycare will depend to a considerable extent on achieving synergy at the local level between employment/regeneration initiatives and childcare programmes. As the Implementation Study results show, an increase in daycare provision is only sustainable if parents can find jobs and can therefore afford to pay for daycare.

Another issue to consider is whether better outreach and information strategies are needed to ensure that all parents are fully aware of the childcare services available in their local area. As the Impact Study has shown, parents might be overestimating the

difficulties of accessing formal childcare. Evidence from other studies (e.g. Bell *et al.*, 2005; Bryson *et al.*, 2006) also suggests that better information about childcare services could lead to an increase in the take-up of formal provision, as it enables parents to make more informed choices about childcare and work.

Finally, as shown elsewhere in the report, a relatively high proportion of neighbourhood nurseries and families using these nurseries were located outside the 20% most disadvantaged areas which have been the focus of the Impact Study. As the Implementation Study findings show, analysis of NNI provision in the 30% most disadvantaged neighbourhoods reveals more successful targeting, with approximately three quarters of the neighbourhood nurseries located in these areas and over half the users living in such areas. The question remains, however, whether NNI would have had a greater impact if it had been more focused on its target locations. But like most childcare providers, many neighbourhood nurseries faced considerable difficulties in becoming financially viable. Aiming for a diverse ‘client group’, in terms of socio-economic composition, might be an effective way of ensuring their long-term viability, as has been highlighted by the Implementation Study and other research on local childcare markets (Harries *et al.*, 2004). In addition, evidence from the Childcare Quality and Children’s Behaviour Study, as well as other research (Sylva *et al.*, 2004), has shown that attending a childcare setting which is mixed in terms of the children’s socio-economic background can have considerable additional benefits for children from disadvantaged groups.

6

WHAT DIFFERENCE HAS NNI MADE? CONCLUSIONS

Teresa Smith

*Department of Social Policy and Social Work
University of Oxford*

The national evaluation of NNI

Chapter 1 of this report set out the questions the national evaluation of the Neighbourhood Nurseries Initiative (NNI) sought to answer, documented the research and policy background, and described the overall programme. This final chapter summarises the four studies⁸¹ reported in Chapters 2-5, and brings together the main conclusions in an overall discussion in the context of the research and policy presented in the introduction in Chapter 1. Studying the impact of a programme – its effectiveness for children, families and neighbourhoods – requires us to understand in detail the operation of the programme, the quality of its services, who uses the services (and who does not), and the neighbourhood context where the services are located. As described in Chapter 1, the NNI national evaluation has combined four different studies as separate but overlapping strands, using a mix of quantitative and qualitative methods. This complex design is set out in more detail in each of the chapters in this integrated report, as well as in the methodological appendices in each of the separate reports.

Conclusions: what difference has NNI made?

The research background to NNI is based on the well-documented links between child poverty and long-term disadvantage, the socio-spatial concentrations of poverty and low income families in disadvantaged neighbourhoods, the persistence of these patterns over time, and the links to educational under-achievement. The policy drivers have been child poverty on the one hand and child outcomes on the other, and the interface between family, work and childcare showing the geographical disparities in provision and in take-up of services (see Chapter 1).

⁸¹ See the separate reports: Smith, Coxon and Sigala, 2007; Mathers and Sylva, 2007; Sigala and Smith, 2007; La Valle *et al.*, 2007. Two reports on the early implementation and impact of the NNI programme were published in January 2005: Smith *et al.*, 2005; and Bell and La Valle, 2005.

The questions we ask here to bring together the overall findings are as follows:

- **Has NNI boosted the supply of childcare in disadvantaged neighbourhoods?**
- **Has NNI boosted the take-up of childcare by disadvantaged families living in disadvantaged neighbourhoods?**
- **Do neighbourhood nurseries provide high quality childcare for disadvantaged children under three?**
- **What has been the impact of NNI – on children, families and neighbourhoods?**
- **Could NNI have been more effective in reaching potential users?**

Has NNI boosted the supply of childcare in disadvantaged neighbourhoods?

The first question is the location of neighbourhood nurseries – how successful the programme has been in its aim of establishing nurseries and increasing childcare places in the most disadvantaged neighbourhoods⁸² of the country. DfES figures charting the national profile of NNI, from its announcement in 2000 and launch in 2001 as part of the government’s National Childcare Strategy to the completion of the programme in 2005, show that the original target of 45,000 new childcare places offering full daycare for children aged 0-4 in disadvantaged neighbourhoods was achieved by August 2004. By mid-2005 approximately half of all neighbourhood nurseries were in the process of transforming themselves into children’s centres⁸³, with more to follow. It is important to note that although the private sector dominated numerically (providing approximately 40% of the total number of neighbourhood nurseries and greatly expanding the size of already established nurseries by making use of NNI funding), private sector neighbourhood nurseries were least likely of all sectors – maintained, joint or voluntary – to be located in the most disadvantaged neighbourhoods (Tables 1.4 and 2.8), or to have developed more integrated services by linking to Sure Start Local Programmes (SSLPs) or children’s centres (Table 2.4).

Overall across England, by 2005 three quarters (74%) of 1,314 neighbourhood nurseries were located in the 30% most disadvantaged neighbourhoods on the Index of Deprivation Affecting Children (IDAC), and three fifths (59%) in the 20% most disadvantaged neighbourhoods (see Table 1.4). Concentrations of disadvantage vary across the country, and regions and local authorities show different rates of targeting the nurseries (Tables 1.2 and 1.3). London, for example, with one of the lowest rates of childcare provision according to the National Audit Office’s 2004 report, has the highest concentration of 30% most disadvantaged neighbourhoods (50%) and also demonstrates the highest success rate in using NNI to target its nurseries in those neighbourhoods (88%). Local authorities with rather different levels of disadvantage had similar success rates in targeting their nurseries. Hackney in London, for example, with very high levels of disadvantage (96% of its small neighbourhoods in the 30% most disadvantaged neighbourhoods) also had a very high success rate of targeting its neighbourhood nurseries (100% in the 30% most disadvantaged neighbourhoods). Liverpool in the North West, with lower levels of disadvantage overall (71%), had a slightly lower targeting success rate (93%). Bristol in the South West, with much lower overall levels of disadvantage (39%), had a not dissimilar targeting success rate (88%).

⁸² We have used ‘neighbourhood’ throughout the text of this report to refer to the geographical unit SOA.

⁸³ These figures are drawn from the latest DfES data collection in March 2005.

This suggests that NNI has had considerable success at increasing the supply of childcare by locating nurseries in the most disadvantaged neighbourhoods, which at the least can be judged a significant step in closing or helping to reduce the ‘childcare gap’ between disadvantaged and more advantaged local authorities set out in the NAO’s report (NAO, 2004). However, the success of targeting varied between regions, areas, and sectors. Neighbourhood nurseries located in less disadvantaged neighbourhoods had only a minority of their children drawn from the most disadvantaged neighbourhoods (Table 2.9).

Mapping techniques show examples of the range in neighbourhood nursery catchment areas, with some nurseries located in the centre of very large and highly disadvantaged areas (parts of London, for example) and drawing almost entirely from a highly disadvantaged catchment area, while others were located in disadvantaged neighbourhoods but on the edge of more advantaged areas, or located in less disadvantaged neighbourhoods but on the edge of more disadvantaged areas, so able to draw on a more mixed clientele in terms of disadvantage⁸⁴.

It is still an open question whether all the new nursery places established in the most disadvantaged areas will be sustainable in the longer term. Evidence from the Implementation Study (see Chapter 2), drawn from interviews with neighbourhood nursery managers, the 2005 survey of local authority advisors (many of whom came from a business background and acted as Business Support Officers to the nurseries) and interviews with the DfES regional advisors carried out in 2003/04, strongly indicates that nurseries serving the most disadvantaged neighbourhoods may have the most difficulty in surviving without some form of continuing subsidy, unless they can attract sufficient custom from high fee-paying parents, which nurseries serving more mixed areas were thought more likely to do. While a detailed analysis of conditions for sustainability was beyond the scope of this study, the explanations offered for this longer ‘lift-off period’ are worth noting. Disadvantaged parents in the most disadvantaged neighbourhoods may take longer to develop the self-confidence, the skills or the practical arrangements needed to move into the job market – this means a longer ‘employment trajectory’. Particular groups may have less of an ‘employment culture’ for women with young children. The job market itself in such areas may offer more fragmented and low-paid employment. These considerations suggested that nurseries serving the most disadvantaged families in the most disadvantaged areas may need a longer period than the three years of ‘pump-priming’ public funding offered by the NNI capital and revenue grants to develop their sustainability, whereas nurseries serving more mixed neighbourhoods may have faster ‘lift-off’.

Has NNI boosted the take-up of childcare by disadvantaged families living in disadvantaged neighbourhoods?

The second question is whether neighbourhood nurseries have been successful at attracting the clientele for which NNI was intended – disadvantaged groups likely to have more difficulties in finding or using childcare, such as lone parents, ethnic minority groups, and low income

⁸⁴ See Chapter 5 in the Implementation Study Final Report (Smith, Coxon and Sigala, 2007). See also the report published on the ‘earlier openers’ in the implementation study sample (Smith *et al*, 2005) for examples of mapping nursery catchment areas.

families living in disadvantaged neighbourhoods. This question focuses on *user take-up* rather than *nursery location*.

The monitoring data collected from the sample of nurseries included in the Implementation Study (reported in Chapter 2) included 4,976 children:

- 53% of the 4,976 children lived in one of the 30% most disadvantaged neighbourhoods, and 40% in one of the 20% most disadvantaged neighbourhoods;
- 63% of the 4,976 children occupied a ‘NNI place’ (that is, were defined as disadvantaged on the eligibility criteria operated by the neighbourhood nurseries);
- 25% of the 4,976 children came from a lone parent family;
- 15% came from a family with no parent in employment;
- 5% had special needs; and
- 8% had English as a second language.

The implementation sample nurseries served areas with large minority ethnic communities, and successfully attracted higher proportions of Black children into NNI places than might be expected from their catchment areas (8% of the users were Black, compared with 5% of children aged 0-4 in their catchment areas), though not of Asian children⁸⁵ – this is not surprising in the context of research on the economic activity among minority ethnic mothers with young children.

Neighbourhood nurseries that were themselves located in the most disadvantaged neighbourhoods were more successful at attracting children who also lived in the most disadvantaged neighbourhoods (Tables 2.9 and 2.10). For example, in the Implementation Study sample, nurseries located in the 30% most disadvantaged neighbourhoods had 63% of their children also living in such neighbourhoods. Neighbourhood nurseries located in less disadvantaged neighbourhoods served a less disadvantaged clientele, although they did attract some of their children from more disadvantaged neighbourhoods.

NNI also served large numbers of low-income families. Although information from the nurseries was patchy about low-income parents receiving Working Tax Credit (nurseries are no longer required to sign off applications for WTC as they were for its predecessor, the Working Families Tax Credit), some two thirds of the children in NNI places in the implementation sample had at least one parent in paid work receiving WTC, and most of these were receiving the WTC childcare element. According to the Impact Study, when NNI users were compared with a matched group of non-users, 28% of the users took up the WTC childcare element who would not have been claiming without access to NNI, and neighbourhood nurseries appeared to be reaching some of the most disadvantaged groups and families living in the most disadvantaged neighbourhoods, including lone parents (30% of lone parent users were in work who would not have been without NNI, compared to about 16% of couple families), some ethnic minority groups, and families on low incomes and with low qualification levels (22% of users with NVQ level 2 qualifications or lower were in work who would not have been without NNI, compared to 14% of those with higher qualifications). The NNI national evaluation shows a success story here.

⁸⁵ These categories are drawn from the Census: ‘Black’ includes Black Caribbean, Black African, and other; ‘Asian’ includes Indian, Pakistani, Bangladeshi and other.

A tougher version of the question of NNI's success in reaching disadvantaged groups is whether neighbourhood nurseries have been successful in attracting 'new' childcare users. This appears to be the case. According to the users survey carried out for the Impact Study, half of the parents surveyed had not used any childcare before, either formal or informal, and only a fifth had used formal childcare in the past; most users (83%) were in work or training (Chapter 5). According to the monitoring data collected from the Implementation Study's 102 nurseries (Chapter 2), 71% of the children on the books were 'new users' (i.e. new to the neighbourhood nursery in question)⁸⁶. The evidence from neighbourhood nurseries thus shows a significant proportion of 'new users' as a result of NNI.

Do neighbourhood nurseries provide high enough quality childcare for disadvantaged children under three?

The third question focuses on the quality of the early education and childcare provided by neighbourhood nurseries. Previous research (for example, the *Effective Provision of Preschool Education Project*, Sylva *et al.*, 2004) gives a clear picture of childcare quality offered to children aged 3 to 5 in England. However, less is known about the quality of provision used by very young children. This is the question addressed by the childcare quality strand of the NNI national evaluation (see Chapter 3), which focuses on provision for children under the age of three and a half. Quality varied widely within the 103 nurseries in the quality NNI sample, as measured on the ITERS-R. The majority of neighbourhood nurseries studied (70%) were offering at least adequate quality; just under a quarter (23%) provided a good standard, providing children with educationally stimulating, nurturing and healthy environments; a small proportion (7%) offered less than adequate quality, missing basic aspects of hygiene, safety, educational stimulation or warm staff-child interaction.

A number of centres provided consistently higher quality. On the whole, the local authority maintained sector nurseries achieved the highest quality ratings, while private sector nurseries had the lowest mean quality rating, but also showed the biggest variation, with some private nurseries operating at a very high standard. Maintained sector status, and children's centre status, were both strong predictors of quality. So was centre size, and age range: larger centres, and rooms catering for older children aged 4 or over as well as infants and toddlers, were both linked to higher quality. Centres with better qualified staff provided higher quality for children under the age of three and a half years, and it is likely that staff qualification levels were one of several factors which contributed towards the higher quality of provision offered by the maintained centres and children's centres in the sample. An important finding is the low use of qualified teachers. Only 10% of the 102 nurseries in the implementation sample employed the equivalent of a half-time teacher; in the childcare quality sample of 103 nurseries only 2% had teachers working 10 hours or more with the under threes.

A key question asked in the childcare quality study was whether nurseries providing for high proportions of disadvantaged families offered comparable quality services to centres serving a

⁸⁶ Note that the data in the Impact Study are drawn from parents direct, while the data in the Implementation Study are drawn from the monitoring data kept by nurseries.

less disadvantaged clientele. It was significant that quality did not appear to vary according to the make-up of the families using the nurseries: families from very different backgrounds and with different needs were being offered comparable quality of provision.

What has been the impact of NNI – on children, families, and neighbourhoods?

The final and most important question for the NNI national evaluation concerns the effectiveness of the programme – ‘does it work?’ Three types of information were collected about impact – on children’s development (see Chapter 3), on parents’ entry or return to the labour market (see Chapter 5), and on the neighbourhoods served by the programme (see Chapters 4 and 5). We consider each of these in turn.

NNI’s effect on children’s development

First, how effective has NNI been in boosting children’s development, particularly their social behaviour? Although there is a considerable body of literature which explores the effects of childcare on children’s intellectual development, much less is known about the effects on behavioural development, and previous research has drawn mixed conclusions. The EPPE findings (Sylva *et al.*, 2004) showed that some children who attended group care before the age of three displayed more anti-social behaviour than children from similar backgrounds who did not attend early centre-based care. EPPE also showed the importance of quality in shaping children’s behaviour: high quality care for older children could reduce the anti-social effects of group care experienced in the very early years. But EPPE was not designed to measure the quality of settings for children under three in order to relate quality to behaviour – and this was what the NNI evaluation set out to do. (Note that EPPE is a longitudinal study, while the NNI Childcare Quality and Children’s Behaviour Study is a cross-sectional research design.)

In order to relate the quality of the nurseries (which was measured as part of the study) to children’s behaviour, child and family profiles were collected for 810 children in 100 neighbourhood nurseries. The children were aged on average 2 years and 9 months, had started attending nursery at 18 months, and on average spent 24 hours a week in their nursery. Several modest but significant effects of quality on children’s behaviour were identified. In particular, the physical environments of the nurseries, the structure of the day, and staff’s emphasis on personal care routines were important. Children in nurseries with spacious, well maintained and pleasant environments, appropriate furniture, and comfortable areas for children to relax and spend quiet time showed significantly less worried and upset behaviour. Children in nurseries with flexible but predictable daily schedules, opportunities for free play and appropriate group play activities were more sociable. However, children in nurseries where there was a greater emphasis on hygiene and personal care routines were rated less confident, sociable or co-operative – possibly because less time was spent on developing children’s interactions and social behaviour in these nurseries.

Many of the nursery characteristics related to high quality were also related to children’s social and behavioural development. The qualifications of staff working with the children were particularly important: children in rooms with well-qualified staff teams, and children with

access to a trained teacher, showed more positive behaviours than children cared for by less well-qualified staff teams. Nurseries designated as children's centres also had better child outcomes. However, the effect of centre size was mixed: children in larger centres displayed less anti-social behaviour and were less worried and upset, but were also less cooperative and less sociable.

A crucial question concerns the age mix in the rooms. The presence of older children alongside infants and toddlers was beneficial in terms of quality, particularly educational quality. However, children up to the age of three and a half years displayed more worried and upset behaviour when they attended a mixed age room with children aged four and over. It seems that the effects here pull in different directions: while mixed age rooms may be better for young children's cognitive development, they may not always be beneficial for their behavioural development.

One final question posed here concerns the impact on children's development of attending nurseries with large concentrations of children from families with at least one adult in work. This appears to be largely positive in effect: children in nurseries with high proportions of working families were significantly more co-operative and less anti-social than children in nurseries with low proportions of working families, and this centre characteristic seems to be stronger than a child's own family employment status. This strand of the NNI national evaluation strongly suggests that encouraging parents to return to work may also have positive benefits for children.

NNI's impact on families

Second, how effective has the programme been in enabling parents to enter or return to employment? This was NNI's central objective in tackling child poverty and improving children's life chances, based on the assumption that low rates of employment of parents with young children in disadvantaged neighbourhoods were largely explained by lack of available and affordable childcare, so that if childcare became available parents would use it to return to work. The picture produced by the NNI findings is complex. Certainly a proportion of neighbourhood nursery users were 'new users' (that is, parents who had not used childcare before, or only informal care provided by family or friends), while other parents used a neighbourhood nursery place to increase their work hours or upgrade jobs. Some of the nurseries in the Implementation Study were making great efforts to offer hours and charge fees which suited local parents in the local job market, for example by offering variable part-time hours to suit seasonal work.

The methodological difficulties of evaluating an area-based programme such as NNI are outlined in Chapter 5. The Impact Study addressed the question of effectiveness in an innovative way, by in effect combining four different designs (Figure 5.1). In the first design, outcomes for neighbourhood nursery users were compared with a matched comparison sample of non-users to estimate the impact of NNI on parents who used neighbourhood nurseries for their childcare. This is an 'impact on users' design. In the second design, a group of parents living in areas with high levels of NNI provision ('NNI-rich' areas) who might potentially take up a neighbourhood nursery place were identified by a postal screen as 'work ready' – that is,

similar to actual users in terms of socio-economic characteristics, work orientation, and disposition towards using formal childcare. This group of ‘work-ready’ parents was matched with a similar group of work-ready parents living in an area of low NNI provision (‘NNI-poor’ areas), and outcomes for the two groups were compared to estimate impact across the population of both actual and potential users. This is an ‘intention to treat’ design which focused on ‘work-ready’ parents (rather than all families with preschool children). In the third design, administrative data from the Work and Pensions Longitudinal Study (WPLS) was used to estimate impact by comparing outcomes for parents with preschool children living in NNI-rich and NNI-poor areas. This is an intention to treat design that covered all ‘eligible’ families. And finally, a survey of users provided information on parents’ views and experiences of using the nurseries – a self-assessed impact design.

The four impact estimates suggest overall that NNI has had a positive impact on those taking up a neighbourhood nursery place. In particular, when NNI users were compared to a matched group of non-users, NNI has had a positive impact on

- *work* – 20% of neighbourhood nursery users were in work but would not have been if the nursery had not been available; this effect was particularly strong for lone parents (30% in work compared to 16% of couple parents) and parents with low educational qualifications (22% with NVQ Level 2 or lower compared to 14% with higher qualifications)
- *take-up of the Working Tax Credit (WTC) and its childcare element* – 28% of neighbourhood nursery users were in receipt of the latter but would not have been claiming it without the neighbourhood nursery place; again the impact was greatest for lone parents and those with no/low qualifications
- *take-up of formal childcare* – 28% of neighbourhood nursery users would not have been using formal childcare if the neighbourhood nursery place had not been available (the overall figure masks considerable variation between the impact on lone parents, estimated to be 31%, and the corresponding figure for couples, 26%).

However, the use of neighbourhood nursery places was fairly low, with just 10% of parents with preschool children taking up a place in NNI-rich areas. This means that, even though the impact on users is reasonably high, the impact on local parents is small, although still positive (being about one-tenth of the impact on users). For instance, measured across ‘work-ready’ parents, the impact of NNI is estimated to have increased employment by just 1.3%.

NNI’s impact on neighbourhoods

Third – what about neighbourhoods? By defining NNI-rich and NNI-poor neighbourhoods across England, the Neighbourhood Tracking Study was able to analyse the pattern of change in terms of low income families with preschool children dependent on out-of-work means tested benefits. The key points to emerge from this study were the quite rapid decline in the overall numbers and proportions of such families over the period studied (2001-2005), and the relatively high rates of exit from such benefits by partnered parents compared with the exit rates for lone parents and those with disabilities. These differential rates also varied significantly in different regions in England. Over the period studied the analysis suggested that there were increasing levels of ‘benefit mobility’ (fewer claimants remained in the same

category over a two year period). While the number of new claimants in the unemployed category fell back, the numbers of lone parents entering the benefits system remained at the same level. There was also significantly higher geographical mobility by lone parents (compared to partnered parents in the same area). These findings on the overall rate of exit from out of work benefits by lone parents suggest that the findings from the Impact Study on the particularly positive effect of NNI on users who were lone parents, may apply to lone parents who were particularly 'work-ready' and had therefore sought out childcare provision.

Overall the reduction in the numbers of unemployed claimants with children aged 0-4 meant that the overall group was increasingly made up of lone parents and those with a work-limiting illness or disability (who have much lower exit rates). By 2005, roughly 92% of families with children aged 0-4, dependent on means tested out-of-work benefits in the 20% most disadvantaged neighbourhoods, were either lone parents or partnered parents with a work-limiting illness or disability. Only 8% were registered as unemployed and claiming JSA. In 2001 this group had made up 11% of the total.

All these factors underline the problem of identifying a specific 'NNI effect' at the neighbourhood level, that is over and above all this existing movement. The Impact Study findings suggest that NNI has had little impact on neighbourhoods, simply because only a small proportion of families was directly involved in the programme (see Chapter 5). However, the evidence from the Neighbourhood Tracking Study (Chapter 4), suggests a possible 'NNI effect'. A small but just statistically significant relationship can be seen between living in a 'NNI-rich' area (and therefore in theory having greater access to provision) and leaving out-of-work benefits. This analysis takes account of a limited set of measures on the locality, including the existence of other preschool provision. Region is a particularly important element, with London having a much lower rate of exit.

Could NNI have been more effective in reaching potential users?

Why did approximately only one in ten of the work-ready parents in disadvantaged neighbourhoods use a neighbourhood nursery? This is the question raised at the end of the Impact Study report. Three possible reasons might be suggested.

First, NNI might not have created sufficient provision in these areas; that is, demand outstripped supply. In general, this seems unlikely, given the findings from the nurseries in the implementation sample that typically not all places were filled. It is also possible that places were 'over-used' by parents living outside the 30% or 20% most disadvantaged areas. However, as shown in Chapter 2 and earlier in this chapter, it is clear that nurseries located in the 30% and 20% *most disadvantaged* neighbourhoods were successful at drawing the majority of their clientele from families living in such areas. By contrast, nurseries located in the 30% *least disadvantaged* areas were used largely by children living in the least disadvantaged areas, although they also had some children living in the 30% most disadvantaged neighbourhoods.

A second possibility is that there was a mismatch between what the nurseries were offering and what local parents wanted. Evidence from the Implementation Study showed that mismatches between demand and supply were frequent – particularly unmet demand for 'baby places'.

Cost and lack of flexibility were issues particularly highlighted in managers' interviews. Nurseries needed to fill their places and charge fees to be financially viable, which meant they could be less flexible about offering part-time hours, allowing changes of schedule, or postponing or subsidising fees while parents were gaining the necessary self-confidence to move into training or a 'taster job'. It is possible that even subsidised childcare, with the support of WTC and its childcare element for parents working in low paid jobs, is still unaffordable for parents who may have to pay fees 'up front'. (Note that only 49% of neighbourhood nursery users in the Impact Study were actually claiming the WTC child care element.) It is likely that nurseries need to have closer links with the local job market (see Harries *et al.*, 2004). Although a proportion of nurseries provided employment-related advice and links with Jobcentre Plus the numbers must have been rather small, or the services not very prominent, as only 12% of the users interviewed in the Impact Study said that job/ career advice was available from their nursery, and there was little evidence from the nurseries in the implementation sample of links with local employers.

A third possibility is that a proportion of parents in the disadvantaged neighbourhoods that are the focus of NNI are reluctant to make use of formal childcare, or do not yet see themselves as ready for employment on a significant scale. Nursery managers interviewed for the Implementation Study spoke of close-knit communities, where informal care was traditionally available, as 'barriers' to the development and take-up of formal provision. The latest national figures on childcare take-up (Bryson *et al.*, 2006) suggest a small shift to increased use of formal childcare in disadvantaged neighbourhoods, so this culture may be changing – possibly with the development of programmes such as NNI. Neighbourhood nurseries are successful at attracting Black parents keen to take up employment, but have so far had little success with Asian parents, who are keen to make use of the free early education entitlement for their young children but are not in employment so cannot afford childcare fees. Previous research (e.g. Bell *et al.*, 2005; Dale *et al.*, 2005; Hall *et al.*, 2004) and current work by the Equalities Review⁸⁷ will be relevant in documenting this background in greater detail and suggesting ways forward.

⁸⁷ See, for example, the seminars organised by the Equalities Review, autumn 2006, in preparation for the publication of its interim review spring 2007. www.theequalitiesreview.org.uk

Summary and recommendations

Here we summarise our conclusions and recommendations.

Neighbourhood nurseries, disadvantage and sustainability

- NNI has delivered an expansion of childcare for disadvantaged families in some of the most disadvantaged neighbourhoods of the country: according to DfES figures, 45,000 new childcare places with 74% of the approximately 1,400 neighbourhood nurseries located in England's 30% most disadvantaged neighbourhoods and 60% in the 20% most disadvantaged neighbourhoods. Both 'NNI rich' and 'NNI poor' areas were in the 20% most disadvantaged neighbourhoods, but 'NNI rich' areas – that is, areas with a high level of neighbourhood nurseries – were more disadvantaged than 'NNI poor' areas, with higher deprivation scores on income deprivation affecting children (IDAC 2004) as well as income, employment, health and disability, living environment, crime, and access to housing and services (ID 2004) (Chapters 1 and 4).
- 50% of the neighbourhood nursery parents in the Impact Study's survey of users were 'new users', that is, parents who had not previously made use of formal childcare or any childcare at all for their children. According to the monitoring data supplied by the Implementation Study's 102 nurseries, 71% of the children on their books were new entrants to the nurseries concerned (Chapters 2 and 5).
- Neighbourhood nurseries have successfully targeted some of the most disadvantaged groups – low income parents, lone parents, and minority ethnic groups where mothers with young children are more likely to be in the labour market (Black families although not Asians). 53% of the approximately 5,000 children attending the Implementation Study's 102 nurseries were living in the 30% most disadvantaged neighbourhoods and 40% in the 20% most disadvantaged neighbourhoods. 63% were allocated NNI places, that is, were defined as disadvantaged on the eligibility criteria used by nurseries (Chapters 1, 2 and 5).
- But why has NNI not been even more successful at targeting its nurseries at the most disadvantaged areas and groups? Location of neighbourhood nurseries varied by region and local authority (see Tables 1.2 and 1.3). Private sector nurseries, which made up a high proportion in the programme, were less likely than maintained or voluntary sector nurseries to be located in disadvantaged areas (Tables 1.4 and 2.8) or to provide services for disadvantaged groups (Table 2.4), although they had initially been faster off the ground than other sectors in their response to NNI funding (Chapters 1 and 2). Though nurseries located in less disadvantaged neighbourhoods catered for some children from the most disadvantaged neighbourhoods, it was a minority (Table 2.9).
- These positive initial effects also raise questions about longer term sustainability. Will it be possible for the new nurseries serving the most disadvantaged areas to continue to offer childcare for the most disadvantaged families? Nurseries serving more 'mixed'

areas were considered more likely to be financially sustainable since they attracted more high fee-paying users (Chapter 2).

It may be necessary to consider additional support for nurseries serving more disadvantaged neighbourhoods where parents may be at an earlier stage in their ‘employment trajectory’ or where there is a less developed ‘employment culture’ amongst parents with young children, for example in Asian communities. In such areas nurseries may require a longer period of time before they can become self-sustainable. This suggests a good case for the continuation of a ‘supply side subsidy’ in such areas.

- The cost of nursery places, as well as the sustainability of the new nursery places, particularly for the most disadvantaged families in the nurseries serving the most disadvantaged neighbourhoods, was highlighted as a serious issue (Chapter 2).

More information is needed on the operation of the Working Tax Credit and its childcare tax credit element in such nurseries. The assumption underpinning government policy that WTC operates as a ‘demand side subsidy’ sufficient to support nursery provision in the most disadvantaged areas as well as in less disadvantaged areas needs to be tested further.

Quality and impact on children’s behaviour

- Neighbourhood nurseries showed wide variation in the quality of provision for children in infant and toddler rooms. However, families from very different backgrounds and with very different needs were being offered comparable quality of provision. Higher quality was found in the local authority maintained sector, in children’s centres, and in larger centres. Higher quality, particularly of educational provision, was found in mixed age rooms which catered for older children as well as younger children. However, children under three and a half attending rooms which also catered for children aged four years or over displayed more worried and upset behaviour. The impact of quality on young children’s behavioural outcomes highlighted the importance of the physical environment, programme structure, and a well qualified workforce (in particular, access to a trained teacher). Time spent in the nursery (hours/ days per week) had both positive and negative effects on children’s social behaviour. Although the age at which children started attending nursery did not appear to have an impact, either positive or negative, on their behaviour, the duration of their attendance did: the greater number of months children had been attending, the more likely they were to display anti-social behaviours. Finally, attending a nursery with a high proportion of working families had a positive impact on children’s cooperative behaviour and reduced anti-social behaviour (Chapter 3).

The evidence on quality suggests that maintained sector nurseries should be further supported, as these were particularly effective at offering high quality educational provision, and had a better qualified workforce. Nurseries in other sectors also need further support to raise the quality of the provision they offer. The development of children’s centres should be supported; nurseries with children’s centre status were of

higher quality and had better child outcomes. Better training to produce a well qualified workforce is essential: qualifications are vital for improving quality and positive child development. In particular, employing qualified teachers to work with the under threes may have a significant impact on developing cooperation and other peer skills (that is, not just cognitive outcomes). More research is needed into the impact of mixed age rooms: they may boost cognitive development but prejudice emotional security for younger children. A broad social mix should be encouraged in early childhood settings, as higher proportions of working families encourage cooperation and reduce anti-social behaviour. Programmes such as NNI and children's centres which indirectly address unemployment should be encouraged.

NNI's impact on getting employment

- The Neighbourhood Tracking Study demonstrated that overall rates of dependency on out-of-work means-tested benefits by families with children aged 0-4 fell steadily during the study period, particularly in the most disadvantaged areas. There is considerable and increasing benefit mobility anyway. To measure a 'NNI effect' requires something over and above what is already happening.
- NNI's central objective in tackling child poverty and improving children's life chances was to enable parents to (re)enter the labour market through the provision of childcare. This was based on the assumption that low rates of employment of parents with young children in disadvantaged neighbourhoods were largely explained by lack of available and affordable childcare, so that if childcare became available parents would use it to return to work. The Impact Study estimated that 20% of neighbourhood nursery users were in work who would not have been without the programme. This effect was largest for full-time and high part-time work. The effects were also largest for some of the most disadvantaged groups – lone parents and parents with low educational qualifications. About 28% of users would not have been using formal childcare if a neighbourhood nursery place had not been available. At least 28% of users were taking up the childcare element of WTC who would not have been able to do so without NNI. So the effects on users were positive and relatively large (Chapter 5).
- These effects were underlined by evidence from changes in the neighbourhoods served by NNI, which suggest a possible small 'NNI effect', once a range of individual, neighbourhood, regional and other factors were taken into account. This effect was not found in the pre-NNI period. The Impact Study's finding that NNI's effect on employment rates was particularly large for lone parents may be an example of a 'NNI effect', given that lone parents overall were significantly less likely than partnered parents to 'exit' from out-of-work benefits (Chapters 4 and 5).
- However, the proportion of parents with young children who are actual NNI users is relatively low compared with the population of potential users, with only an estimated 10% of potential users ('work-ready' parents) taking up a place. So the impact across this larger population is considerably smaller – about one-tenth of the impact on users – though still positive. Analysis of data from the Work and Pensions Longitudinal Study

(WPLS) suggests a very small but significant and positive impact for families with young children, by .8 percentage points, which was observed across twelve months. (But note that WPLS data excludes individuals earning below the PAYE limit and those who have not been on a DWP benefit or programme since 1999.) (Chapter 5) These findings on NNI's impact on employment are important in that they consistently point in the same direction – though the results for the 'work-ready' sample were not statistically significant, and the effects on all parents with preschool children in the neighbourhood was small.

Programmes which indirectly address unemployment through providing childcare in disadvantaged areas, such as NNI and children's centres, should be supported. Centres serving families with young children should put effort into providing parents with job-related information, particularly information about applying for benefits such as the Working Tax Credit and its childcare element, and about training. Information should also be routinely provided about other possible sources of childcare subsidy, e.g. from employers, or training bodies such as the Learning and Skills Councils (LSC).

Findings from the Implementation Study and the Impact Study's survey of users suggest that attention should be paid to the 'barriers' to employment take-up indicated by the low take-up of NNI provision by potential users. As already discussed, it is possible that mismatch between nurseries' provision, local needs and economies (e.g. the local labour and housing markets) may have deterred some potential users (e.g. lack of flexibility in hours offered or the fee system). It is also possible that local 'culture' (e.g. use of informal childcare by working mothers, or resistance to mothers with young children taking up employment) acts as a 'barrier'.

Final comments

- NNI is an example of what may be termed 'flexible family programmes' – that is, large-scale family programmes which change as they are implemented or 'rolled out'. NNI is a case in point: the programme began with one clear objective – the creation of childcare provision in disadvantaged neighbourhoods, to reduce child poverty and improve children's life chances through enabling parents to return to the labour market. A second objective was then added – the creation of high quality childcare to improve children's life chances directly. Children's centres are an even more complex example. Programmes of this kind pose problems for evaluation because of both their complexity and their 'flexibility'. The NNI national evaluation represents a complex and innovative evaluation design to tackle these complex programmes.

Consideration needs to be given to the timing of future programmes and of their evaluation. Programmes need to 'bed down' before they are evaluated, and studying impact has to wait until results begin to emerge. But studying the implementation of programmes needs to start early if the process of implementation is to be captured. If impact (on children, families, or neighbourhoods) is to be linked with programme characteristics (the style of delivery, the mix of services, the level of user take-up, centres'

ethos and workforce), then attention has to be paid from the time point of the initial commissioning to a research design which can combine both implementation and impact, even if the research components are carried out at different times and by different research teams.

- Programmes of this kind may only be able to make a modest impact. The NNI findings suggest considerably larger impacts on actual users in an ‘impact on users’ design, but much smaller effects for ‘work-ready’ parents overall, that is, potential users, on an ‘intention-to-treat’ or community-based design. It is worth noting that the Sure Start national evaluation (NESS) relied on an area-based ‘intention-to-treat’ design in the cross-sectional study that provided the basis for the interim reports, which also reported small effects, and has included a retrospective ‘impact on users’ design in the longitudinal study now under way. It may also be that intervention programmes of this type have mixed effects – some positive, others less desirable.

Expectations of the impact of complex family programmes, particularly those tackling some of the most deep-seated and resistant problems of society, need to be realistic, particularly in terms of short-term impact. The problems of disadvantaged neighbourhoods – low income, low performance, poor services, in different combinations – have persisted over generations and have been subject to generations of policy initiatives. The findings from the NNI national evaluation suggest that it is possible for such programmes to have significant impact, even if modest – an important lesson for children’s centres in the future. The trick may be how to maintain and improve on this impact. Because of high initial expectations, such modest success is often rated a failure. But this could be to ignore a significant and valuable long-term gain.

BIBLIOGRAPHY

Alakeson, V. (2005), *Too much, too late: life chances and spending on education and training*. London: Social Market Foundation.

Arnett, J. (1989), Caregivers in day-care centers: Does training matter? *Journal of Applied Developmental Psychology*, 10: 541-552.

Bell, A. and La Valle, I. (2005), *Early Stages of the Neighbourhood Nurseries Initiative: Parents' Experiences*, Research Report: SSU/2005/FR/006. Sure Start Unit, Department for Education and Skills.

<http://www.dfes.gov.uk/research/data/uploadfiles/SuerstartReportFR006.pdf>

Bell, A., Bryson, C., Barnes, M. and O'Shea, R. (2005), *Use of childcare among families from minority ethnic backgrounds*, SSU/2005/FR/011. Sure Start Unit, Department for Education and Skills.

Bertram, T., Pascal, C., Bokhari, S., Gasper, M. Holtermann, S., John, K. *et al.* (2004), *Early Excellence Centre Pilot Programme Third Annual Evaluation Report 2001-2002*, Department for Education and Skills.

<http://www.surestart.gov.uk/doc/P0001371.doc>

Brooks-Gunn, J., Duncan, G.J. and Aber, J.L. (eds: 1997a), *Neighborhood Poverty: Context and Consequences for Children*. Volume 1. Brooks-Gunn, J., Duncan, G.J. and Aber, J.L. (eds: 1997b), *Neighborhood Poverty: Policy Implications in Studying Neighbourhoods*. Volume 2. New York: Russell Sage Foundation Press.

Bryson, C., Kazimirski, A. and Southwood, H. (2006), *Childcare and Early Years Provision: A Study of Parents' Use, Views and Experiences*. Department for Education and Skills.

Buchanan, A., Bennett, F., Smith T., Smith, G., Ritchie., C., Harker, L. and Vitali S. (2004), *The impact of government policy on social exclusion among children aged 0-13 and their families: a review of the literature for the Social Exclusion Unit in the Breaking the Cycle series*. Social Exclusion Unit/ Office of the Deputy Prime Minister.

Childcare Act 2006, introduced November 8 2005, passed into law 11 July 2006.

<http://www.surestart.gov.uk/resources/general/childcareact/>

Children Act 2004, www.dfes.gov.uk/publications/childrenactreport

Churchill Associates (2003), *Extended Schools, the Role of the Childcare Coordinator*, Research Report 457, Department for Education and Skills.

<http://www.dfes.gov.uk/research/data/uploadfiles/RR457.pdf>

- Corlyon, J. and Meadows, P. (2004), *Methods Paper: Defining a Local Childcare Market*, Research Report RR526MP. Department for Education and Skills.
<http://www.dfes.gov.uk/research/data/uploadfiles/RR526MP.pdf>
- Cummings, C., Dyson, A. and Todd, L. (2004), *Evaluation of the Extended Schools Pathfinder Projects*, Research Report 530, Department for Education and Skills.
<http://www.dfes.gov.uk/research/data/uploadfiles/RR530.pdf>
- Cummings, C., Dyson, A., Papps, I., Pearson, D., Raffo, C. and Todd, L. (2005), *Evaluation of the Full Service Extended Schools Project: end of first year report*, Research Report RR 680, Department for Skills and Education.
<http://www.dfes.gov.uk/research/data/uploadfiles/RR680.pdf>
- Dale, A., Lindley, J. and Dex, S. (2005), *A life-stage perspective on ethnic differences in women's economic activity in Britain*.
<http://www.ccsr.ac.uk/research/ethniclifecourse.pdf>
- Daycare Trust (2003). *Towards universal childcare*. London: Daycare Trust
- Department for Education and Employment (1998), *Meeting the Childcare Challenge*, Cm 3959. London: The Stationery Office.
<http://www.surestart.gov.uk/doc/P0000584.doc>
- Department for Education and Skills (2005), *Extended Schools: Access to Opportunities and Services to All. A prospectus*.
<http://www.teachernet.gov.uk/doc/8509/Extended-schools%20prospectus.pdf>
- Department for Education and Skills (2006a) *Choice for parents, the best start for children: making it happen: an action plan for the ten year strategy: Sure Start Children's Centres, extended schools and childcare*.
<http://www.everychildmatters.gov.uk>
- Department for Education and Skills (2006b) *Provision for children under five years of age in England: January 2006 (final)* National Statistics First Release. SFR 32/2006, 31 August 2006. <http://www.dfes.gov.uk/rsgateway/DB/SFR/>
- Department of the Environment, Transport and the Regions (2000) *Measuring Multiple Deprivation at the Small Area Level: the Indices of Deprivation 2000*. London: DETR
- Dex, S. (2003), *Families and Work in the 21st Century*. Joseph Rowntree Foundation. York: York Publishing Services.
- Dickens, S., Taylor, J. and La Valle, I. (2005), *Local Childcare Markets – A Longitudinal Study*, Research Report: SSU/2005/FR/016. Sure Start Unit, Department for Education and Skills.
<http://www.dfes.gov.uk/research/data/uploadfiles/SSU2005FR016.pdf>

Feinstein, L. (2004), 'Mobility in pupils' cognitive attainment during school life', *Oxford Review of Economic Policy*, 20(2): 213-229.

Hall, K., Bance, J. and Denton, N. (2004), *Diversity and Difference: Minority ethnic mothers and childcare*, Women and Equality Unit, Department of Trade and Industry.
http://www.womenandequalityunit.gov.uk/publications/min_eth_childcare.pdf

Harker, L. (2006). Tackling poverty in the UK – have we reached the limits? *Public Policy Research* 13(1) Institute for Public Policy Research.

Harms, T., Cryer, D., and Clifford, R.M. (2003), *Infant/Toddler Environment Rating Scale, Revised Edition (ITERS-R)*. New York: Teachers College Press.

Harries, T., La Valle, I. and Dickens, S. (2004), *Childcare: How local markets respond to national initiatives*, Research Report 526, Department for Education and Skills.
<http://www.dfes.gov.uk/research/data/uploadfiles/RR526.pdf>

HM Government (2003) *Every Child Matters Green Paper*, Cmnd 5860, Department for Education and Skills, London: The Stationery Office.
http://www.everychildmatters.gov.uk/_files/EBE7EEAC90382663E0D5BBF24C99A7AC.pdf

HM Treasury, Department for Education and Skills, Department for Work and Pensions and Department of Trade and Industry (2004), *Choice for parents, the best start for children: a ten year strategy for childcare*. London: The Stationery Office.
http://www.everychildmatters.gov.uk/_files/C7A546CB4579620B7381308E1C161A9D.

Hogan, A.E., Scott, K.G. and Bauer, C.R. (1992), The Adaptive Social Behaviour Inventory (ASBI): A new assessment of social competence in high risk three year olds. *Journal of Psychoeducational Assessment*, 10 (3), 230-239.

Holterman, S., (2001), *Children's Centres: Exploring the costs and delivery of a national scheme*. London: Daycare Trust.

La Valle I., Finch S., Nove A. and Lewis C. (2000), *Parents' Demand for Childcare*, DfEE Research Report 176, Nottingham: DfEE Publications.

La Valle, I., Arthur, S., Millward, C., Scott, J. and Claydon, M. (2002), *Happy Families? Atypical work and its influence on family life*. York: Joseph Rowntree Foundation.

La Valle, I., Smith, R., Purdon, S., Bell, A., Dearden, L., Shaw, J., and Sibieta, L. (2007), *Impact Study Final Report*. London: Department for Education and Skills.

Laing and Buisson (2005), *Children's Nurseries: UK Market Sector Report*. London: Laing and Buisson.

Mathers, S., Sylva, K., and Joshi, H. (*in press*), *Quality of Childcare Settings in the Millenium Cohort Study*. London: Department for Education and Skills.

Mathers, S. and Sylva, K. (2007), *Childcare Quality and Children's Behaviour Study Final Report*. London: Department for Education and Skills.

Melhuish, E. C., Sylva, K., Sammons, P., Siraj-Blatchford, I. and Taggart, B. (2001), *The Effective Provision of Pre-School Education (EPPE) Project: Technical Paper 7 – Social/Behavioural and Cognitive Development at 3-4 years in relation to family background*. London: DfEE/Institute of Education, University of London.

Melhuish, E.C. (2004a), *A literature review of the impact of early years provision on young children, with emphasis given to children from disadvantaged backgrounds*. London: National Audit Office.

http://www.nao.org.uk/publications/nao_reports/03-04/268_literaturereview.pdf

Melhuish, E.C. (2004b), *Child benefits: The importance of investing in quality childcare*. London: Daycare Trust.

National Audit Office (2004), *Early Years: Progress in developing high quality childcare and early education accessible to all*. HC 268 Session 2003-2004: 27 February 2004. London: The Stationery Office.

http://www.nao.org.uk/publications/nao_reports/03-04/0304268.pdf

NICHD (1998a), Early child care and self-control, compliance and problem behavior at 24 and 26 months. *Child Development*, 69: 1145-1170.

NICHD (1998b), Relations between family predictors and child outcomes: Are they weaker for children in child care? *Developmental Psychology*, 34: 1119-1128.

NICHD (2003), Does amount of time spent in child care predict socio-emotional adjustment during the transition to kindergarten? *Child Development*, 74: 976-1005.

NICHD (2005), *Child Care and Child Development: results from the NICHD Study of Early Child Care and Youth Development*. New York: The Guilford Press.

Noble, M., Wright, G., Dibben, C., Smith, G., McLennan, D., Anttila, C. and Barnes, H. (2004), *The English Indices of Deprivation 2004*, Office of the Deputy Prime Minister, Neighbourhood Renewal Unit.

Schweinhart, L.J., Montie, J., Xiang, Z., Barnett, W.S., Belfied, C.R. and Nores, M. (2005), *Lifetime Effects: the High/Scope Perry Preschool Study through age 40*. Ypsilanti, Michigan: the High/Scope Press.

www.highscope.org/NewsandInformation/PressReleases/PerryP-Age40.htm

Sigala, M. and Smith, G. (2007), *Neighbourhood Tracking Study Final Report*. London: Department for Education and Skills.

Smith, T., Coxon, K. and Sigala, M. (2007), *Implementation Study Final Report*. London: Department for Education and Skills.

Smith, T., Sylva, K., Mathers, S., Dearden, L., Goodman, A., Kaplan, G., Bryson, C., Joy, S. and La Valle, I. (2004), *National Evaluation of the Wraparound Care Pilot Project*, Sure Start Unit, Department for Education and Skills.
<http://www.surestart.gov.uk/doc/P0001257.pdf>

Smith, T. and Lee, C. with Braswell, S., Coxon, K., Smith, G., Sylva, K. and Tanner, E. (2005), *Early Stages of the Neighbourhood Nurseries Initiative: Opening the Nurseries*, Research Report: SSU/2005/FR/007. Sure Start Unit, Department for Education and Skills.
<http://www.dfes.gov.uk/research/data/uploadfiles/SurestartReportFR007.pdf>

Statham, J. and Mooney, A. (2003), *Around the Clock: Childcare services at atypical times*. Family and Work Series. The Policy Press/ Joseph Rowntree Foundation.
<http://www.jrf.org.uk/knowledge/findings/socialpolicy/653.asp>

Strategy Unit (2002), *Inter-Departmental Childcare Review: Delivering for Children and Families*.
<http://www.strategy.gov.uk/downloads/su/childcare/downloads/su-children.pdf>

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*, Department for Education and Skills.
http://www.dfes.gov.uk/research/data/uploadfiles/SSU_FR_2004_01.pdf

van Ham, M. and Mulder, C.H. (2004), Geographical access to childcare and mothers' labour force participation. *Journal of Economic and Social Geography*, 96, 63-74.

van Ham, M. and Buchel, F. (2004), Females' willingness to work and the discouragement effect of a poor local childcare provision. *Applied Economics Quarterly*, 4, 363-377.

Waldfoegel, J. (2004), *Social mobility, life chances, and the early years*. CASEpaper 88. London: Centre for Analysis of Social Exclusion, London School of Economics.
<http://sticerd.lse.ac.uk/dps/case/CP/CASEPaper88.pdf>

Waldfoegel, J. (2006), *What children need*. Cambridge Mass: Harvard University Press

Woodland, S., Millar, M. and Tipping, S. (2002), *Repeat Study of Parents' Demand for Childcare*, Research Report RR348, Department for Education and Skills.
<http://www.dfes.gov.uk/research/data/uploadfiles/RR348.pdf>

ANNEX A

Table 2.9a: Implementation Study: neighbourhood nursery location in 20% most disadvantaged neighbourhoods, and users served: by links with schools, Sure Start Local Programmes (SSLPs) and children’s centres (30% figures in brackets)

Neighbourhood nurseries	Located in 20% most deprived area (30%)	Not located in 20% most deprived area (30%)	Total Number
On school site	55% (70%) (on average 64% (66%) users living in most deprived area)	46% (30%) (on average 24% (42%) users living in most deprived area)	33
Not on school site	60% (75%) (on average 61% (69%) users living in most deprived area)	40% (25%) (on average 23% (30%) users living in most deprived area)	67
With SSLP link	74% (84%) (on average 67% (76%) users living in most deprived area)	26% (16%) (on average 39% (55%) users living in most deprived area)	38
No SSLP link	46% (65%) (on average 58% (59%) users living in most deprived area)	54% (35%) (on average 17% (28%) users living in most deprived area)	46
Main children’s centres	65% (84%) (on average 63% (71%) users living in most deprived area)	36% (16%) (on average 23% (35%) users living in most deprived area)	31
Linked to a children’s centre	52% (65%) (on average 74% (76%) users living in most deprived area)	48% (35%) (on average 21% (35%) users living in most deprived area)	23
Not linked to a children’s centre	53% (63%) (on average 62% (67%) users living in most deprived area)	47% (37%) (on average 18% (30%) users living in most deprived area)	19
Children’s centre status missing/ undecided	59% (72%) (on average 53% (60%) users living in most deprived area)	41% (28%) (on average 27% (37%) users living in most deprived area)	29

Source: Implementation sample, monitoring data, 2003-2005; 102 neighbourhood nurseries

Copies of this publication can be obtained from:

DfES Publications, PO Box 5050, Sherwood Park, Annesley,
Nottingham, NG15 0DJ; Tel 0845 6022260; Fax 0845 6033360;
Textphone 0845 6055560; E-mail <mailto:dfes@prolog.uk.com>

Please quote reference: SS/2007/FR/024

© Her Majesty's Printer and Controller of HMSO 2007

ISBN 978 1 84478 911 5