Millennium Cohort Study Third Survey: A User's Guide to Initial Findings

Edited by Kirstine Hansen and Heather Joshi

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EXECUTIVE SUMMARY

This report presents the initial findings, topic by topic, of the age 5 follow-up of the UK Millennium Cohort Study (MCS 3).

1. Introduction

The third survey took place, mostly in 2006, when the children had reached age 5. Previous surveys of the families had taken place when the children were aged 9 months, in 2001-2, and when they were three years old, mostly during 2004. The study was designed to over-sample families living in electoral wards with high child poverty rates, and in areas of high ethnic minority concentration in England.

2. Data

This chapter describes details of the response to the MCS 3 survey and its distribution over the four countries of the UK.

There were 15,246 families who kindly provided usable data at sweep 3 of the study. This was only 344 families fewer than at sweep 2, due to a remarkable level of responses from families who had not responded at sweep 2. No fewer than 1,444 of them responded at MCS 3. This has kept the sweep 3 response rate at virtually the same level as sweep 2.

Seventy-nine per cent of all families eligible for sweep 3 produced a usable response. The response rate ranged from 84 per cent of the families sampled in the more advantaged wards to 73 per cent of families in areas with high minority ethnic populations in England. The response rate for families in the non-disadvantaged stratum was at least 80 per cent in each UK country. The second-lowest response rate (78%) was in the disadvantaged wards of Northern Ireland.

Among ethnic groups, families where the child was white had the highest response rate (80%), while families in the small ‘other’ ethnic-group category had the lowest response rate (68%), followed by those with black cohort children (71%) and the Pakistani and Bangladeshi group (74%).

Because some families had multiple births, there were 15,460 cohort children in total in the MCS 3 productive sample. There were 10 families with triplets, 194 with twins and 15,042 with singleton cohort children in this sample.

Virtually all the families participating in MCS 3 were still living in the country of the UK from which they had joined the study. Only 210 of the 15,246 were interviewed in a different country, with a small net movement into England from the other three countries.

3. Family demographics

This chapter presents a picture of family life when the children were aged between 9 months and 5 years. This period is dominated by the stability in families with two natural parents. MCS 3 showed that over three quarters of five-year-old children were living with both of their natural parents, the majority of whom were married. A minority of five-year-olds were living with either a lone natural mother (17 per cent) or a natural mother and a step-father (4 per cent). The most common family change for this cohort between sweeps 1 and 3 was the arrival of a new brother or sister, which happened in four families out ten.

A minority of the children's households had either gained or lost a parent. The parents lost since 9 months were primarily the children's natural fathers. Children were more likely to have lost their natural father if their parents were living together without being married at 9 months (24%) than if their parents were married to each other at that stage (8%). Interestingly, most of the parent figures that children had gained in their household since 9 months were actually their natural fathers. A minority of children had gained a step-father but, overall, it was still very uncommon for five-year-olds to be living with a step-father.

For the minority of children who did experience change in their parental situation during their first five years change may also have included gaining a younger half-sibling as a result of their mother's new relationship. It is primarily children born to teenage mothers who have experienced such family changes. Of children with mothers in this age group, only one in ten was living with married natural parents at age 5, almost half were living with their lone mother and one in seven was living with a natural mother and a step-parent. Almost four in ten had experienced family change since they were 9 months old. One in seven was living with at least one half-sibling, usually younger than them.

4. Parenting

MCS 3 includes data on various aspects of parenting: discipline practices, beliefs and activities which may encourage learning in the home. Parenting is of great interest to those in research and policy because of its potential to have strong and lasting effects and because it mediates or moderates external influences on children. Indeed many aspects of parenting have been found to be related to child outcomes, both during childhood and later in life.

This chapter describes the MCS 3 parenting data, which cover a variety of aspects of behaviour and attitudes. These were found to vary with some parental characteristics, including country of residence, employment, ethnicity and qualification level.

The finding that parents with lower qualification levels engage in educational activities (such as reading to their children) less frequently than do parents with higher qualification levels is consistent with family literacy ideas that hold that parents with higher literacy skills will pass these on to their children and that children of parents with lower literacy skills are therefore disadvantaged. These findings lend support to the case for programmes to improve adult literacy, family learning and other skills.

5. Childcare

The use of non-maternal childcare for pre-school-aged children has been increasing over recent years. This chapter looks at the childcare arrangements from MCS 2 to MCS 3. At the age 5 survey, rates of using care are lower than they had been at MCS 2, as is the average number of hours that children spent in childcare. Although the children were virtually all going to school at MCS 3, 67 per cent of mothers still used some form of childcare including their partners (84% at MCS 2). At least one form of non-parental care was used at MCS 3 by 45 per cent of mothers (81% at MCS 2). Partners (52%) and grandparents (27%) were the most common providers of care (after mothers) at MCS 3.

There are few clear patterns in childcare by ethnicity. The overall rate of childcare use was higher for Pakistani and Bangladeshi families. Black families had very low rates of use of child minders and after-school clubs, the two forms of formal care that were still being used at this age.

Though 44 per cent of mothers who were not working did use childcare, the rate of using childcare was much higher for mothers who were employed (80%). Working mothers had consistently higher rates of use of all of the care types shown.

6. School choice

In 1988, the Education Reform Act ensured that parents could express a choice over the school their child attends. Despite obvious policy interest in the extent of, and consequences of, school choice very little is actually known about it. This chapter uses MCS 3 to examine the extent to which parents do actually choose the primary schools their children attend, how successful they are in securing their first-choice school and the reasons for their choice.

Among the majority choosing to send their children to state primary schools, most said they succeeded in securing their first-choice school. This perhaps surprising result may reflect the fact that for this particular, small, cohort, school places were relatively abundant, making it easy for parents to get their chosen school. On the other hand, parents may apply only to schools they think their child will get into. Others may rationalise the situation they find themselves in, and say that the child's current school was first choice when, in fact, it was not.

The criteria MCS parents think are most important in selecting a primary school are characteristics other than exam performance – these include: good impression of the school; good school (other than results); strong anti-bullying policy; small class sizes; caters for special needs; offers specialist curriculum; good facilities; offers childcare; religious grounds; ethnic mix; teaches in language other than English; and single-sex. Having friends and siblings at a school also scored highly as a reason for their choice as did being the closest school. Exam performance was mentioned by fewer parents than these other reasons.

Whether parents applied to, or requested, a school appeared to matter little to the criteria for choosing that they identified as most important. Moreover, this chapter suggests that it also matters little for child enjoyment and parent satisfaction with the school. With the exception of parental satisfaction in Scotland, the differences proved to be statistically insignificant between those who applied for/requested a school and those who did not.

7. Foundation Stage Profile and Devolved Administration Teacher Survey

A child's academic achievement, even when young, has been found to be a good predictor of future academic and employment outcomes. This chapter looks at achievement at age 5 as measured by the teacher in the Foundation Stage Profile (FSP) in England or the equivalent Devolved Administration Teacher Survey (DATS) in Wales, Scotland and Northern Ireland. This was produced by the Centre for Longitudinal Studies to replicate the information collected by the FSP and carried out as part of the Millennium Cohort Study.

Results show the FSP and DATS achievement scores across child and family characteristics from the survey. Though no causality can be inferred from these averages, it is clear that the FSP and DATS scores do vary across social, ethnic and economic characteristics.

For all countries, the older children within the school year tended to be rated higher than younger ones, confirming the existence of differences by month of birth that the full year cohort was designed to pick up. Scores could be analysed by ethnicity for England only, as there were few non-white cohort members in the other countries. White children were rated higher than Pakistani or Bangladeshi and black children. For all countries, children with two parents were rated higher than children with lone parents. Total scores were higher for children who had two working parents, either parent with higher qualification levels, and who

were from households with incomes above poverty level. These differentials in teacher rating are along similar lines to the assessments made in the survey and reported in Chapter 8.

8. Child cognition and behaviour

Social inequalities in children's behaviour and development are of concern for policy-makers and social scientists. Children growing up in disadvantaged circumstances are at greater risk of developing cognitive and behavioural adjustment problems during childhood, which in turn influences later outcomes regarding education, employment, health and social integration. This chapter examines the cognitive and behavioural adjustment of five-year-old children. It assesses cognitive differences on a combination of three cognitive assessments from the British Ability Scales and behavioural adjustment on the Total Difficulties scale of the Strengths and Difficulties Questionnaire. The scores are analysed by different demographic and family background characteristics to gain some insight into social and ethnic variation in developmental outcomes at school entry.

The results do show a marked difference in children from relatively advantaged versus disadvantaged backgrounds. Children with highly educated parents, and from families with two working parents, display higher cognitive ability and appear to have fewer behaviour problems. There also appear to be substantial differences in adjustment by gender. Girls generally achieve higher cognitive scores and have fewer behaviour problems than boys, although there are substantial overlaps in all these distributions, with children doing well in disadvantaged groups and vice versa.

The average differences between groups on the three cognitive scores are greater for naming vocabulary than the other two, and can amount to over a year's delay behind the average for the most disadvantaged groups. On picture similarities and pattern construction, the other two cognitive assessments, the average delay for children in poor families, those whose parents had no qualification or no employment was 3-5 months. In this first large-scale survey of ethnic minority children Bangladeshi and Pakistani children appear to have the lowest average levels of cognitive ability at school entry, and their mothers report more behaviour problems. However, a range of factors have to be taken into account when interpreting the findings on minority groups, to allow for the influences of language in the home, parental education and age, length of residence in the UK and economic circumstances, and the relatively high sampling error around data on these groups. Children from Welsh-speaking bi-lingual homes do not show the disadvantages associated with homes where other non-English languages are spoken.

The findings also suggest consistency of cognitive and behavioural adjustment between ages 3 and 5. Children showing good cognitive skills and few behaviour problems at age 3 are likely to be in the same position two years later. Yet, the level of association, especially regarding cognitive ability and pro-social behaviour, suggests considerable variability in adjustment during the early childhood years. Previous studies have shown that high ability in early life is not a sufficient buffer against the effects of childhood disadvantage (such as poor housing and low levels of economic resources), and that children from relatively disadvantaged backgrounds with initially good adjustment are often unable to build on their good start as they grew older. It remains to be seen if this will apply to minority ethnic groups especially, as they go through the school system.

9. Child health

At age 5 the majority of MCS children are in good health, but this chapter also confirms the well-established pattern of socio-economic inequalities in children's health. Poor children fare substantially worse than others in terms of both their reported level of general health,

and specific conditions. Of the conditions examined, eczema and bedwetting are the only ones which are actually *less* likely to affect poor children. As well as the obvious implications for well-being, inequalities in child health are likely to be further implicated in the intergenerational transmission of disadvantage, as health and developmental problems affect children's schooling.

There initially appear to be stark ethnic differentials in health: white children are more than twice as likely as Bangladeshi and Pakistani children to be reported to be in excellent health. However, Asian children are actually less likely than whites to be reported as having a longstanding health condition. This may be because their mothers were less likely to smoke while pregnant and were more likely to breastfeed them.

Boys fared worse than girls in terms of many health outcomes, and the gap was widest on variables such as speech problems and bedwetting, which reflect failure to achieve developmental milestones. Girls were more likely to be overweight or obese than boys at age 5, as they had also been at age 3.

Our exploration of overweight and obesity suggests that BMI (Body Mass Index) is more weakly associated with economic inequality than many other health outcomes, as there is only a slight gap between poor children and others in the risk of obesity. This suggests that economic pressures, such as the inability to afford healthy food, for example, are not necessarily key issues driving weight gain. There are strong ethnic differentials, with Asian children relatively unlikely to be rated as overweight or obese, and a strong association with maternal obesity.

10. Parental health

This chapter examines the health of the MCS cohort's parents. Reported fair/poor health declined with age until around age 39, but increased thereafter. There were wide social variations. Poor general health seemed to be a particular problem of the non-employed, those with no qualifications and some minority ethnic groups.

Overall, mothers were more likely than fathers to have normal-range BMIs. Obesity appeared to be particularly prevalent in some minority ethnic groups, parents with lower education attainment and mothers in non-employed couples. The prevalence of overweight (including obesity) among the adults as a whole (41 per cent for mothers and 65 per cent for fathers) is substantially higher than the equivalent rate for their five-year-old children (22% girls and 18% boys).

Smoking prevalence and heavy smoking remained particularly high among the non-employed, the unqualified, lone mothers and younger parents. While smoking prevalence was similar for men and women overall, there were strong differences by ethnicity. Bangladeshi fathers, for example, were the most likely to smoke, while Bangladeshi mothers were the least likely.

Alcohol use was associated with higher qualifications and being employed. More than one in five fathers and 13 per cent of mothers with the highest qualifications were drinking above recommended weekly frequencies. Prevalence of alcohol use increased with age, around one in five fathers over 40 drank above the recommended frequency limit. More fathers than mothers reported drug use in the previous year. It was associated with lower education levels and lack of employment and being a lone mother. There was wide variation among ethnic groups.

Forty per cent of MCS mothers overall had ever received a diagnosis of depression or serious anxiety, and 8 per cent of all mothers were currently receiving treatment. Almost half

of mothers under 30 had been diagnosed with depression or serious anxiety. If diagnosis and treatment are compared with Kessler scores for psychological distress, unmet need may be an issue for mothers in some minority ethnic groups. Lone mothers and mothers in couples where both partners were not employed were more likely than not to have received a diagnosis.

Prevalence of psychological distress as measured by the Kessler scale was similar, on average, for mothers and fathers, but among mothers it declined with age. Distress seems to be a particular problem in some minority ethnic groups. There was a strong association between lack of employment and high distress scores.

Life-satisfaction scores increased with age, education level and being employed. Non-employed couples and lone mothers were at particular risk of lower life-satisfaction.

11. Parents' employment and education

This chapter examines mothers' and fathers' employment and economic activity when the cohort child is aged 5. Comparisons are also made with the employment rates of mothers and fathers who responded at earlier sweeps. A classification of MCS families is then provided which combines mothers' and their partners' employment statuses. Working at atypical times and use of employers' flexible working arrangements are described for mothers employed at MCS 3. Reasons for not working are also examined. Changes in families' combined employment status from earlier sweeps are described, which also show changes in partnership status. We also document parents' acquisition of new qualifications since MCS 2.

Key findings are that mothers at MCS 3 were slightly more likely to be employed by the time the cohort child reached the age of 5 (58 per cent) than in earlier years, but most were working part-time. The employment gap between partnered and lone mothers had narrowed due to larger growth in lone mothers' employment rates by age 5. However, there was still a sizeable gap between employment rates for the two groups of mothers at this time. Among fathers, the high unemployment rates and high rates of part-time hours among Bangladeshi and Pakistani fathers were very striking.

12. Income and poverty

This chapter takes a preliminary look at income data, as reported in bands, at this and previous sweeps. We attempt to compare the MCS income data with the Government's official data on child poverty published in the Households Below Average Income Statistics (HBAI) although there are limitations to doing so. We take from the 2005-6 HBAI, a poverty line representing 60 per cent of the national median, adjusted for family composition, before housing costs. For this report we have made an effort to reduce the bias that may result from relying on the midpoint of grouped data when assigning cases to the poverty group. We have also sought to reduce biases due to the non-random nature of families who did not answer income questions and who did not respond to the whole survey. We have not fully investigated the possibility that some sources of income may be under-reported.

Armed with data adjusted thus far, we have found wide gaps between the top and bottom income groups. Those in the top fifth had an average net income, adjusted for family composition, which was six times higher than for those in the bottom 20 per cent. The bottom 30 per cent had incomes below the income poverty line described above.

A large minority (3 in 10) of the cohort children appear to have reached age 5 in poverty (as defined here). Poverty rates for this cohort do not appear to have declined since 2001. Over

and above the 30 per cent, a further group (around 1 in 10) were in families that had experienced poverty-level income in at least one of the two earlier surveys. Lone parents, workless couples, some, but not all, ethnic minority families, young mothers and tenants in social housing were at particularly high risk of reporting poverty-level incomes, in MCS, as in the official Family Resources Survey. On the whole, mothers in the low income families were more likely than those with the highest incomes to be feeling financial stress, poor health and generally lower life satisfaction, but many of them also reported good levels of coping and satisfaction.

13. Housing, neighbourhood and residential mobility

This chapter focuses on residential mobility. We look at reasons for moving home and correlates of residential mobility such as type of housing. We also look at families' perception of their area in terms of whether it is a good area for raising children and how safe they feel it is.

While residential mobility between sweeps 2 and 3 was substantially lower than mobility between sweeps 1 and 2, it still remains an important feature of the lives of families with young children. Approximately one quarter of families who participated in MCS 3 had changed address since the previous sweep two years or so earlier. There were substantial differentials in residential mobility by country of interview, with Northern Ireland having the lowest level between sweeps 1 and 2 and the highest level between sweeps 2 and 3.

Residential mobility between sweeps 2 and 3 varied for different ethnic groups. Indian, Pakistani and Bangladeshi families were less mobile than the other groups. Homeowners were less likely to move between sweeps 2 and 3 than tenants. Families living in houses were much less likely to move than those in other types of accommodation. Lone parents and couples where both partners were not in work were much more likely to move between sweeps than couples where one or both partners were in work. There were small differences in whether the current area of residence was perceived as a poor or very poor area or fairly unsafe or very unsafe area for raising children by UK country of interview. Few respondents reported their current areas as poor ones for raising children or unsafe. However, these perceptions varied by ethnicity and whether someone in the family was in work. Parents in Northern Ireland and Scotland assess their neighbourhoods as better and safer places to bring up children than those in England and Wales. Earlier analyses of MCS 2 suggest this is likely to be related to living in rural as opposed to urban areas.

14. Social capital and ethnicity

'Race' or ethnicity, nationality and religion are distinct yet intertwined. This chapter examines the significance of these factors in the lives of the mothers of the MCS children, focusing on indicators of social capital in their families, neighbourhoods and wider social participation.

The Millennium Cohort is part of a generation which is far more ethnically diverse than preceding cohorts born in Britain. The social resources that the cohort members' families have access to are likely to affect the opportunities available to the children themselves. These differences in social capital may help us to understand ethnic differentials in educational and other outcomes for the cohort members.

Results show that Asian mothers (Bangladeshi, Pakistani and Indian) had some characteristics in common. There were also some strong differences within these South Asian groups, such as Indians' greater economic prosperity and diverse religious composition. These Asian mothers tended to have high levels of 'bonding' social capital within their families. They were relatively likely to be married, and their partnerships were

typically with husbands from their own ethnic group. They were also relatively more likely to be sharing accommodation with a grandparent of the cohort child. Compared with black mothers, they were more likely to cluster in neighbourhoods with others in their ethnic group, to have friends and family living locally, and to feel safe in their local area, and less likely to believe that racist insults and attacks were common in their area. Black Caribbean and black African mothers were also more likely to believe that they had been treated unfairly as a result of their race during the previous 12 months.

Both voting and political interest were strongly associated with social class. Nevertheless, Asian mothers were more likely to vote than other ethnic groups, despite the relatively low average socio-economic status of Bangladeshis and Pakistanis in the study. Black Caribbean mothers, in contrast, were relatively unlikely to vote, despite claiming to have higher levels of political interest than Bangladeshi or Pakistani women.

Religious affiliation and attendance were very strongly associated with socio-economic status, and this is, of course, part of the reason why schools which use faith-based admissions are more socially selective. Religious participation for Muslim women was low, which is unsurprising as many mosques do not allow or encourage women's attendance.

Three quarters of British-born ethnic-minority respondents, and nearly half of those who were born overseas, said that they thought of themselves as British. Even higher percentages regarded the cohort child as British. Support for integrated schooling (not minding the cohort child going to a school where 50 per cent of children were from another race) was high overall. The least 'tolerant' group on this measure was the white majority. Support for gender equality was also high overall. However, Bangladeshi and Pakistani mothers were more likely to agree that 'sons in families should be given more encouragement than daughters to do well at school. It will be fascinating to track any effects of these maternal attitudes on the children's gendered trajectories through the school system.

15. Cross UK Round-up and potential for longitudinal research

The UK coverage of the survey has been able to show that in most respects differences between the four countries are small, even when statistically significant. One thread running through is that respondents in Northern Ireland seem to be reporting a better quality of family life, despite their lower prosperity, But one should also bear in mind that this is also the country where there has been most drop-out. Scotland does not stand out as very different from the rest of the UK on many indicators, but it does have more children and adults with a normal Body Mass Index. A distinguishing characteristic of Wales is its two official languages. Around 12 per cent of cohort children in Wales came from homes where Welsh was spoken and around the same proportion were attending a Welsh medium primary school.

The material presented in this report is largely a cross-sectional snapshot of the circumstances reached by the cohort at age 5. It is intended to stimulate research joining up across the three existing sweeps and the across the many domains upon which it touches. It is also intended to add to the edifice of evidence on early life against which future outcomes may be investigated.

Chapter 1

INTRODUCTION

Kirstine Hansen and Heather Joshi

The third survey of the Millennium Cohort Study (MCS) collected information from 15,246 families of children born in 2000-02 across the United Kingdom. This was done when the children were aged 5, between 2005 and 2006. This dataset offers a chance to look at the situation of the Millennium Cohort children as they reach school age and link their outcomes at age 5 to previous experiences. These previous experiences were recorded when the children were 9 months old (MCS 1) and 3 years old (MCS 2), and although not part of the analyses here, all three sweeps can be used longitudinally to explore the lives and situations of the Millennium Cohort children as they grow from infancy to school age.

This report offers a first look at the data collected at MCS sweep 3 (MCS 3). It is intended to provide an introduction to potential users of the survey and to stimulate further analysis. It should be read with the documentation on the MCS Sampling and Response rates (Plewis, 2007; Plewis and Ketende, 2006), the Derived Variable Guide and the MCS First, Second and Third Surveys: Guide to the Datasets (Hansen ed, 2008), all of which are available from the CLS website (www.cls.ioe.ac.uk) and from the Data Archive at Essex University along with technical documentation from the fieldwork agency NatCen. A similar cross-sectional account of the first two surveys can be found in the reports edited by Dex and Joshi (2004) and Hansen and Joshi (2007).

The study design

It may help the reader of this report to bear in mind that this cohort study, unlike its predecessors, is based on a sample of births across a whole year, with a disproportionately stratified and clustered design. The sample for the first sweep included babies born between September 1, 2000 and August 31, 2001 in England and Wales, who would form an academic-year cohort. In Scotland and Northern Ireland, the start date of the birthdays was delayed to November 23, 2000 to avoid an overlap with an infant feeding survey. In the event, the sampled cohort was extended to 59 weeks of births to make up for a shortfall in numbers that became apparent during fieldwork. The last eligible birth date in these countries was January 11, 2002. Children with sample birth dates were eligible for the survey if they lived in one of 398 selected electoral wards across the UK when aged 9 months.

The objective of the disproportionately stratified design of the survey was to ensure adequate representation of:

- All four UK countries.
- Areas in England with higher minority ethnic populations (more than 30 per cent black or Asian in the ward at the 1991 Census).
- Disadvantaged areas (electoral wards whose value on the Child Poverty Index in 1998-9 was above 38.4 per cent). This represents the cut-off threshold for the top 25 per cent of disadvantaged wards in England and Wales, and encompasses a slightly greater fraction in Scotland and Northern Ireland.

Further details can be found in the Millennium Cohort Study: Technical Report on Sampling (Plewis ed, 2007).

The selection of wards labelled 'disadvantaged' was made after the choosing of wards with high minority ethnic populations. All the wards selected in the 'ethnic' stratum had values of the Child Poverty Index above or close to the cut-off threshold, so they too can be thought of as 'disadvantaged' by this definition. The third, under-represented, stratum is the rest, non-disadvantaged, although, in this Report, it is often called 'advantaged' as shorthand.
The sampling weights associated with these strata will never change as they are fixed on entry to the cohort.

Sampling and response at MCS 3

There were 15,246 families giving at least some information at the third survey, when the cohort children were age 5. As explained in greater detail in Chapter 2, this represents a response rate of 79.2 per cent out of the families eligible for this survey.

Families were treated as 'productive' if they provided the survey with some new information on at least one of five data collection instruments, i.e., other than what was carried forward from previous sweeps. The five data collection instruments were: main interview, partner interview, proxy partner interview, cognitive assessments and physical measurements. As shown in Table 1.1, in 15,210 out of the 15,246 families there was interview information from a parent. The majority of main respondent interviews were given by the natural mother, although there were more male respondents to the main interview (396) than at previous sweeps. All but two of these were natural fathers (See the MCS First Second and Third Surveys, Guide to the Data). Of the 12,225 'productive' families where someone was eligible for interview as the partner of the main respondent, 88 per cent gave some information (if only by proxy in 287 cases). All but a few of the partners were natural fathers (see Chapter 3).

Table 1.1 MCS 3
Parent Interview response by sex of respondent and relationship to cohort member

			Female		Male	
	Frequency	Per cent	Natural mother	Other	Natural father	Other
1 Main respondent in person (no-one eligible for partner)	3,021	19.82	2,930	19	72	0
2 Main and partner respondent in person	10,475	68.71	10,193	25	255	2
3 Main in person, partner by proxy	287	1.88	267	6	14	0
4 Main in person, partner eligible but no response	1,408	9.24	1,352	7	49	0
5 No main interview, partner interviewed in person	19	0.12	18	0	1	0
7 No parent interviews	36	0.24	32	1	3	0
	15,246	100	14,792	58	394	2

Content of the MCS 3 Survey

The structure of the data collection is set out in Table 1.2. Each of the main informants gave a computer-assisted personal interview (CAPI), during which they also completed a confidential questionnaire in computer-assisted self-interview mode (CASI). The topics covered in each part of the instrument are also shown in Table 1.2. In addition to the information collected from adults, there was direct contact with the children for cognitive assessments and anthropometric measurements. In some families (in England), older siblings aged 10-15 completed a paper questionnaire. For the cohort children there was

information from teachers. This was gathered through an administrative route, making use of the Foundation Stage Profile routinely reported by teachers to their local education authorities at the end of the first year of primary school in England. In Scotland, Wales and Northern Ireland, analogous information was collected in a postal survey

Table 1.2
Structure of the MCS 3 Instrument

Respondent	Mode	Summary of content
Mother/Father	Interview	Module HD: Household demographics
Mother		Module FC: Family context
(or other main		Module ES: Early education, schooling and childcare
respondent)		Module AB: Child and family activities and child behaviour
		Module PA: Parenting activities
		Module CH: Child health
		Module PH: Parental health
		Module EI: Employment, education and income
		Module HA: Housing and local area
		Module OM: Other matters
	Self-completion	Module SC: Self-completion
		- Child's temperament and behaviour
		- Child's relationship with siblings
		- Parenting and parent-child relationship
		- Mental health and drug-taking
		- Relationship with partner
		- Previous relationships, children living elsewhere, non-resident parents
		- Attitudes and ethnic identity
		- Racial harassment and discrimination
		- Work-life balance and life satisfaction
		- Older siblings' temperament and behaviour
	Interview	Module OS: Older siblings
		Module Z: Consents and contact information
Father/Partner	Interview	Module FC: Family context
		Module ES: Early education, schooling and childcare (some)
		Module PA: Parenting activities
		Module PH: Parental health
		Module EI: Employment, education and income
		Module OM: Other matters
	Self-completion	Module SC: Self-completion
		- Parenting and parent-child relationship
		- Mental health and drug-taking
		- Relationship with partner

Table 1.2 (continued)
Structure of the MCS 3 Instrument

Respondent	Mode	Summary of content
		- Attitudes and ethnic identity
		- Racial harassment and discrimination
		- Work-life balance and life satisfaction
	Interview	Module Z: Consents and contact information
Interviewer	Observations	Cognitive assessment
Child	Assessments	Story of Sally and Anne
		British Ability Scales: Picture Similarities
		British Ability Scales: Naming Vocabulary
		British Ability Scales: Pattern Construction
	Measurements	Height, weight and waist circumference
Older sibling	Self-completion**	
Teacher	Self-completion***	Questions equivalent to Foundation Stage Profile in England

* In the majority of cases the main interview was undertaken by the mother/mother figure and the partner interview was undertaken by the father/father figure.

** England only

*** Wales, Scotland and Northern Ireland only

. The data from and about older siblings was originally designed to contribute to the National Evaluation of the Children's Fund. This project ended without providing funds for the analysis of these datasets. These were not available in time to be included in this report, but they are available for further research.

Fieldwork for MCS 3

The fieldwork timetable for MCS 3 was driven by the requirement to interview the family during the child's first year of compulsory schooling (Reception Class in England and Wales and Primary 1 in Scotland and Northern Ireland). As a result, fieldwork was compressed into school years. In England and Wales, the cohort's birth dates span a single school year. However, in Scotland and Northern Ireland they are spread over more than one school year. In England, Wales and Northern Ireland, school year is normally determined by date of birth. In Scotland, school year is determined by parental preference in addition to date of birth. For this reason, school year was known with less certainty in advance in Scotland. During the first wave of fieldwork in Scotland, interviewers were asked to find out, before conducting the interview, whether the child had started school. If the child had not yet started school, the interview was deferred until the second wave of fieldwork. In each country the sample was issued in two waves, at dates set out in Table 1.3. The postal survey of teachers in Wales, Scotland and Northern Ireland was spread over the period September 2006 to June 2007, as shown in Table 1.4.

Table 1.3
Fieldwork timetable for MCS 3: Main Survey

Wave	Country	Dates of birth	Fieldwork
E1	England	1st September 2000 – 28th February 2001	January – May 2006
E2	England	1st March 2001 – 11th January 2002	April – July 2006
W1	Wales	1st September 2000 – 28th February 2001	January – May 2006
W2	Wales	1st March 2001 – 11th January 2002	April – July 2006
S1	Scotland	1st September 2000- 28th February 2001 (starting school in August 2005)	April – July 2006
S2	Scotland	1st September 2000- 28th February 2001 (starting school in August 2006) and 1st March 2001 – 11th January 2002	August – December 2006
N1	Northern Ireland	24th November 2000 – 1st July 2001	April – July 2006
N2	Northern Ireland	2nd July 2001 – 11th January 2002	September – December 2006

Table 1.4
Fieldwork timetable for MCS 3: Teacher Survey in Wales, Scotland and Northern Ireland

Teacher Wave	Country	Main Fieldwork Wave	Teacher Fieldwork
T1	Wales, Scotland and Northern Ireland	W1 & W2, S1 and N1	September 2006- January 2007
T1 – mop-up	Wales, Scotland and Northern Ireland	W1 & W2, S1 and N1	January – May 2007
T2	Wales, Scotland and Northern Ireland	W2, S1 & S2 and N1 & N2	March – June 2007

Weighting

Sample weights

The disproportionate feature of the sampling design outlined above means that weighting is necessary. Where analysis is confined to data relating to a single country the sampling weight is **weight 1.** Where analysis covers all countries of the UK, the sampling weight is **weight 2.** Both weights are included in the deposited datasets. All analyses in this report allow for at least these weights using STATA 'survey' commands. The 'survey' commands also allow for the data being clustered by ward of initial residence. If individuals living in specific areas are more similar than individuals living elsewhere, the data will be correlated. This means a straightforward estimate of standard errors will be incorrect and the significance tests invalid. To ensure this does not occur the correlation needs to be taken into account in the model chosen.

There are several ways to do this:
1) use STATA's 'survey' commands
2) use clustered robust standard errors in standard analysis
3) use a multi-level (hierarchical) model.

Due to the fact that in the MCS the correlation is produced as a direct result of the survey design the most appropriate method of dealing with the data is to use STATA's 'survey' commands to run analyses
(STATA library**:** https://www.ats.ucla.edu/stat/stata/library/cpsu.htm).

Weighting to include adjustment for non-response

As the study becomes more longitudinal, the inevitable attrition may lead to a biased picture of the original cohort if the loss from the survey is not random. One way to adjust for this bias is to augment the weights used to allow for differential propensities to drop out of the survey. Preliminary analysis of longitudinal response patterns from the first three sweeps indicates that about 72 per cent of the cohort has taken part in all sweeps, 8.5 per cent took part in the first two sweeps and not the third, 7.5 per cent in the first and third sweep but not the second and about 11.5 per cent in the first sweep only. A significant number of families (1,444) exhibited non-monotonic attrition by taking part in the third sweep despite their non-participation in the second sweep.

Weighting methods to compensate for attrition are available for monotone patterns of non-response.

- Two additional weights b**ovwt1** and b**ovwt2** have been provided to adjust for non-response up to MCS2.

Some chapters in this report (10 to 13 inclusive), the ones which we think may be particularly associated with differential attrition, use these weights, as an interim measure pending the development of a more sophisticated treatment which allows for the more complex patterns of attrition which we have in the MCS 3 data. Work on this problem is under way. See MCS First, Second and Third Surveys: Guide to Datasets (p 71-72).

Guide to this report

This report provides a quick tour of the different substantive areas in the third sweep of the Millennium Cohort Study. It is not intended to explore any topic in depth, nor does it do justice to the possibilities for longitudinal or cross-domain analysis, let alone comparison with other datasets. However, where appropriate, chapters draw on evidence from these other sources. It aims to point the way to those who would wish to do such work, and for whom the dataset has been constructed.

The reader will find that many tabulations are confined to cases where the main informant is the child's mother. This is for the sake of simplicity. Detailed attention to unusual cases is possible but outside the scope of this report. Likewise, those where the partner interview was not with a father figure are generally excluded. This makes it clearer that we are talking about responses from mothers and fathers respectively. The evidence from other cases is not rejected for all time, but it needs to be used with greater care. Similarly, in many tabulations about the children we have set aside the approximately 1 or 2 per cent of the cohort (1 per cent of families) where the children are twins or triplets, leaving the possibility for future analysis of these special cases. For some analyses requiring the fathers to have provided data, we do not include those two-parent families where the resident father did not complete an interview.

Plan of the chapters

Chapter 2 examines the MCS 3 response and location by country in more detail. Chapters 2 and 3 look at family demographics and parenting. Chapters 5 to 7 examine different aspects

of early education – Chapter 5 looks at childcare, 6 at school choice and 7 at school outcomes. Child development is the focus of Chapter 8 while child health and parental health are surveyed in Chapters 9 and 10. Chapters 11 to 14 look in more detail at the children's parents and the environments in which the children are being brought up. Parental health and lifestyle are examined in Chapter 10; their education and employment in Chapter 11; and their income in Chapter 12. Residential mobility is examined in Chapter 13, while social capital is the focus of Chapter 14.

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Chapter 2

MCS 3 DATA

Sosthenes C. Ketende

Introduction

Sweep 3 of the Millennium Cohort Study (MCS 3) enabled us to finalise the identification of a baseline sample for the analysis of follow-up. This longitudinal MCS sample includes all those who will be potentially eligible for follow-up in future sweeps. It discards cases which were eligible for the first sample but never interviewed. It includes the new families interviewed at sweep 2, as well as all the families who were 'productive' (see definition below) at MCS 1, i.e.18,552, plus the 692 families who joined MCS at sweep 2 and were productive, 19,244 in total. Cases which were living in the selected wards but not issued to CLS by the Department for Work and Pensions at sweep 1, as well as those whose addresses were issued to fieldwork at sweep 1 but who were not 'productive', are not included in this total (Table 2.1).

At each following sweep child deaths and emigrations are excluded from the eligible population. After further exclusions of families who were judged to have refused permanently and some cases of sensitive family circumstances, the sample issued for fieldwork at sweep 3 was 18,528 families (see Ketende, 2008, and Hansen, 2008, for more details).

The number of families that will be used as a basis for response-rate estimations will be the 19,244 reported above - not the 25,000 or so ever issued by DWP (24,000 issued at sweep 1, 1,000 issued at sweep 2) who were ever invited by CLS to take part in the study.

MCS 3 response

There were 15,246 productive families at sweep 3. This was 344 fewer than at sweep 2. This relatively small difference was because of a productive response from 1,444 families who had been unproductive at sweep 2. This has kept the sweep 3 sample size at virtually the same level as sweep 2.

Response rate

The following definitions are used in tables and text throughout this chapter:

- ***Productive***
  The families with some data from at least one of the data collection instruments other than data carried forward from previous sweeps.
- ***Ineligible***
  Emigrations and child deaths.
- ***Uncertain eligibility***
  Families who were away temporarily and those whose eligibility was uncertain, including untraced movers.
- ***Unproductive***
  Refusals (whether or not 'permanent'), non-contacts, other non-responses including language problems, ill/incapacitated, deleted/lost data (files lost in fieldwork).

Table 2.1
MCS 3 response

Outcome code	N	(%)
Productive	15246	79.2
Refusal	2798	14.5
Other unproductive	290	1.5
Untraced movers	547	2.8
Ineligible (deaths, permanent emigrants)	300	1.6
Non-contact	63	0.3
Total	19244	100.0

Notes: deaths (n=18), permanent emigrants (n=282) Percentages unweighted

Table 2.1 shows that 79 per cent of all sweep 3 families (including those not issued) were productive. If we exclude those not issued, we get 82 per cent (15,246/18,526) as the field response rate. The number of cohort children who died (18) is a cumulative sum since the beginning of MCS.

These response rates have not been fully adjusted. An allowance for a refined estimate of eligibility will be incorporated in the forthcoming edition of the MCS Technical Report on Sampling.

MCS 3 response by UK country and ward type at entry to the sample

Table 2.2 below shows that about 84 per cent of non-disadvantaged families and 73 per cent of families in areas of high minority ethnic populations in England were productive, providing the highest and lowest stratum-specific response at MCS 3. Families in the non-disadvantaged stratum had an achieved response rate of at least 80 per cent in each UK country. The refusal rates varied from about 10 per cent in the 'England non-disadvantaged' stratum to 14 per cent in disadvantaged wards in both Scotland and Northern Ireland.

Table 2.2
MCS 3 response by UK country and ward type at entry sample

UK country	Productive %(n)	Refusal %(n)	Other unproductive %(n)	Untraced movers %(n)	Ineligible %(n)	No contact %(n)	Total %(n)	Country total (n)
England								
Non-disadvantaged	84.28 (4069)	9.65 (466)	0.79 (38)	2.32 (112)	1.49 (72)	1.47 (71)	100 (4828)	12,225
Disadvantaged	78.21 (3759)	11.74 (564)	1.73 (83)	1.08 (52)	3.33 (160)	3.91 (188)	100 (4806)	
Ethnic minority	72.91 (1889)	13.86 (359)	3.01 (78)	1.08 (28)	5.21 (135)	3.94 (102)	100 (2591)	
Wales								
Non-disadvantaged	80.41 (669)	13.22 (110)	0.72 (6)	1.32 (11)	1.32 (11)	3 (25)	100 (832)	2,760
Disadvantaged	78.42 (1512)	12.91 (249)	1.24 (24)	0.93 (18)	2.75 (53)	3.73 (72)	100 (1928)	
Scotland								
Non-disadvantaged	80.09 (917)	12.05 (138)	0.79 (9)	3.41 (39)	2.62 (30)	1.05 (12)	100 (1145)	2,336
Disadvantaged	75.31 (897)	14.11 (168)	1.85 (22)	1.68 (20)	3.53 (42)	3.53 (42)	100 (1191)	
Northern Ireland								
Non-disadvantaged	82.16 (594)	12.86 (93)	0.97 (7)	1.66 (12)	1.52 (11)	0.83 (6)	100 (723)	1,923
Disadvantaged	78.33 (940)	14 (168)	1.92 (23)	0.67 (8)	2.75 (33)	2.33 (28)	100 (1200)	
Total (N)	15246	2315	290	547	300	546	19244	

Notes: Unweighted percentages (unweighted sample numbers)

Response by ethnicity

Table 2.3
MCS 3 response by cohort child's ethnicity (UK)

Ethnic group of the cohort child	Productive %(n)	Refusal %(n)	Other unproductive %(n)	Untraced movers %(n)	Ineligible %(n)	No contact %(n)	Total %(n)
White	80.5 (12704)	11.9 (1805)	1.18 (191)	2.17 (360)	1.74 (260)	2.51 (418)	100 (15738)
Mixed	75.8 (443)	9.17 (57)	2.01 (13)	6.23 (41)	4.01 (20)	2.74 (20)	100 (594)
Indian	77.3 (382)	15 (71)	1.02 (9)	4.4 (20)	0.34 (3)	2.02 (12)	100 (497)
Pakistani and Bangladeshi	73.3 (987)	15.8 (219)	2.49 (41)	4.54 (53)	0.131 (3)	3.75 (47)	100 (1350)
Black	71.3 (515)	14.3 (105)	2.82 (23)	5.99 (43)	0.46 (4)	5.18 (39)	100 (729)
Other ethnic group	68.5 (212)	13.6 (42)	2.55 (10)	10.2 (26)	3.54 (9)	1.6 (4)	100 (303)
Total	79.8 (15243)	12.0 (2299)	1.3 (287)	2.57 (543)	1.72 (299)	2.61 (540)	100 (19211)

Notes: Weighted percentages, using overall weights including MCS 2 attrition, (unweighted sample numbers), ethnicity missing for 33 families.
Black covers black/black British-Caribbean; black/black British-African; and other black background.

Table 2.3 above shows MCS 3 response by the ethnic group of the cohort child using six-category Census classifications (UK). Families with white cohort children had the highest

response rate (80%) while families in the 'other' (this includes Chinese and other Asian) ethnic-group category had the lowest (68%). Refusal was highest among families with Pakistani and Bangladeshi children (16%) and lowest (9%) among families with a child of mixed ethnicity. It should be noted that the ethnic group of the cohort child is a very close approximate of the main respondent's ethnicity except for cohort children of mixed ethnicity. The relatively high rates of attrition for Pakistani, Bangladeshi and black groups means that most authors have chosen to combine the original groups in the chapters that follow.

Number of children in MCS 3 productive sample

Because some families had multiple births, there were 15,460 cohort children in the MCS 3 productive sample. Table 2.4 below shows the distribution of cohort children in the MCS 3 productive sample by MCS 1 stratum and whether the child surviving at sweep 3 was a singleton or multiple at birth. There were 10 families with triplets, 194 with twins and 15,042 with singleton children in the productive sample.

Table 2.4
Number of children in MCS 3 productive sample by MCS1 strata

MCS1 UK country and ward type	Number of singletons	Number of twins	Number of triplets	Total number of cohort children	Total number of productive families
England					
Non disadvantaged	4013	108	6	4127	4069
Disadvantaged	3704	106	6	3816	3759
Ethnic minority	1872	32	3	1907	1889
Wales					
Non-disadvantaged	660	18	0	678	669
Disadvantaged	1496	28	6	1530	1512
Scotland					
Non-disadvantaged	901	32	0	933	917
Disadvantaged	889	12	6	907	897
Northern Ireland					
Non disadvantaged	584	18	3	605	594
Disadvantaged	924	32	0	956	940
Total	15043	386	30	15459	15246

Notes: Unweighted sample numbers
The number of cohort children per family exceeds 1 to the extent that each ethnic group includes twins or triplets (last but one column of Table 2.5). This is highest among families with a black child at 1.0175, and lowest among families whose child is in the 'other' ethnic group, where the ratio is 1 and no families with multiple births were recruited into the study.

Table 2.5
Number of children in MCS 3 productive sample by UK ethnic group of the cohort child

Ethnic group of cohort child	Single -tons	Twins	Triplets	Total number of cohort children in productive families (a)	Row sum of twins and triplets (b)	Total number of productive families (c)	Number of cohort children per family i.e {(a)/(c)}	Number of multiple births per 100 families i.e. [(b)/(c)]*100
White	12524	342	27	12893	369	12704	1.0149	2.9046
Mixed	437	12	0	449	12	443	1.0135	2.7088
Indian	379	6	0	385	6	382	1.0079	1.5707
Pakistani and Bangladeshi	982	8	3	993	11	987	1.0061	1.1145
Black	506	18	0	524	18	515	1.0175	3.4951
Other ethnic group	212	0	0	212	0	212	1.0000	0.0000
Total	15040	386	30	15456	416	15243	1.0140	2.7291

Notes: Unweighted sample numbers, ethnicity missing for 33 families-- all with singleton cohort children

MCS longitudinal sample

The MCS longitudinal participation is presented in Table 2.6, which shows that 13,802 families (13,234 from sweep 1 and 568 who joined MCS at sweep 2) have participated in all sweeps that they were eligible for. This is about 72 per cent of the 19,244 MCS families.

Table 2.6
Longitudinal perspective of the MCS productive sample

Response Description	MCS sweep response pattern			MCS sample	Breakdown by country at MCS1			
	Sweep 1	Sweep 2	Sweep 3		England	Wales	Scotland	N. Ireland
Productive at all sweeps	Y	Y	Y	13234	8314	2002	1596	1322
Productive at sweeps 1 and 2 but not 3	Y	Y	X	1664	1044	259	218	143
Productive at sweeps 1 and 3 but not 2	Y	X	Y	1444	835	179	218	212
Productive at sweep 1 only	Y	X	X	2210	1340	320	304	246
New families: Productive at sweeps 2 and 3	X	Y	Y	568	568	NA	NA	NA
New families: Productive at sweep 2 only	X	Y	X	124	124	NA	NA	NA
MCS cohort (MCS 1 productive+ productive new families)	18552	15590	15246	19244	12225	2760	2336	1923

Notes: Productive families are families with some data from at least one survey instrument at either sweep. Y=productive, X=un-productive, NA=not applicable

Table 2.7
Movements between UK countries among families productive at MCS 3

Country sampled at MCS 1	Country of MCS 3 interview				Gross moves		Net moves
	England	Wales	Scotland	Northern Ireland	Moves out	Moves in	
England	9639	35	29	13	77	120	43
Wales	69	2105	3	0	72	38	-34
Scotland	40	3	1768	3	46	36	-10
Northern Ireland	11	0	4	1519	15	16	1
All MCS 3 families	9759	2143	1804	1535	210	210	0

Notes: Unweighted sample numbers; country of interview was missing in 5 cases: one was in England and four were in Wales at sweep 1

In most of the rest of this report the UK countries are broken down by the families' location at the sweep 3 interview. This was not necessarily the same as for previous surveys, as some families had moved. Table 2.7 shows that the numbers involved are small, comparing country at the age 5 interview with that in which the family was sampled for sweep 1. A total of 15,031 of the 15,241 cases were in their original country. A small number of families (210) moved from one UK country to another between sweeps 1 and 3. The largest flows were in and out of England, which had the largest net gain of families productive at sweep 3 (n=43). Wales had the largest net loss of 34 families, mostly moving to England.

Conclusion

There are no statistically significant differences by UK country in productive response. The productive sample has remained virtually the same between sweeps 2 and 3, which is a remarkable achievement for the fieldwork team, the CLS tracing team and the cohort families themselves. However, there are some differences in refusal and productive responses by stratum and ethnicity of the cohort child. Ethnic minorities were more likely to refuse than white families. Families from the non-disadvantaged stratum were more likely to be productive than those from other strata. This difference was consistently present in all the UK countries.

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Chapter 3

FAMILY DEMOGRAPHICS

Lisa Calderwood

Introduction

Family life in the UK has changed significantly over the last 30 years. Although the majority of children still live with both of their natural parents, it has become increasingly common for children to live apart from their natural father. This is partly because of rising rates of partnership dissolution among families and partly because increasing proportions of children are being born outside marital or cohabiting unions (Kiernan, 2004). Almost all children who live apart from their natural father live with their natural mother, either in a lone parent family or in a two-parent family with a step-father. Overall, the proportion of children living in lone parent families in Great Britain increased from 7 per cent in 1972 to 24 per cent in 2006. About 9 in 10 lone parent families are headed by mothers. In 2005, about 10 per cent of all families with dependent children in Great Britain were step-parent families (Office for National Statistics, 2007). These family changes have also led to an increase in the proportion of children living with half-siblings or step-siblings. Family size has also reduced over the last 30 years. The proportion of children living in families containing three or more children fell from 44 per cent in 1972 to 29 per cent in 2006. Almost half (46%) of the country's children lived in families with two children in 2006 (ONS, 2007). This chapter provides new evidence from MCS about family life in the UK at the beginning of the 21st century.

The changing nature of family life and its impact on the well-being of children has been a major concern for social policy since the 1980s. The rise in the proportion of children living with lone parent families, combined with their low levels of labour-market participation and correspondingly high rates of dependency on state benefits among these families, was one of the main reasons that the proportion of children growing up in poverty increased dramatically in the 1980s and 1990s. In 1998/9, 3.4 million children were living in poverty (Department for Work and Pensions, 2007).

The main policy response in the late 1980s was the creation of the Child Support Agency through the 1991 Child Support Act. The objective of this agency was to enforce payment of child maintenance by non-resident parents who were primarily fathers. The change of UK government in 1997 led to a change of strategy in this area. The aim of reducing poverty among lone parent families was to be met through increasing lone mothers' participation in the labour market through schemes such as the New Deal for Lone Parents and the National Childcare Strategy. In addition, state financial support to families with children was increased and re-designed through rises in child benefit and the introduction of tax credits.

The changes in family life have also led to a debate about the reasons for, and broader impact of, the decline of the 'traditional' nuclear family and whether government policy should promote certain types of family forms. The current Labour Government has tended to focus on the well-being of children and has been neutral between different family forms. For example, the longstanding married couple's tax allowance was abolished in 1999.

This chapter provides evidence on the overall prevalence of different family types in which the cohort children live and how this has changed over the first five years of their lives. It also provides evidence on differences between countries and some of the demographic factors associated with different family types and family change, including the marital status of the parents.

This chapter also looks at the number and type of siblings living with the cohort child and some of the factors associated with this. Finally, this chapter will provide evidence on contact with, and financial support from, non-resident fathers and how this is related to other demographic factors, including the current relationship status of both mothers and non-resident fathers.

The sample for the analysis of family type and siblings in this chapter is all families. The data are taken from the household grid which includes information on household composition and relationships between household members. The sample for the analysis of non-resident fathers in this chapter is lone natural mother families and natural mother and step-father families. The data on contact with, and maintenance payments from, non-resident fathers are taken from the face-to-face interview with the mother and the data on the relationship status of mothers and non-resident fathers are taken from the household grid in combination with information provided by the mother in the self-completion part of the interview. All of the analysis in this chapter is at family-level rather than child-level. For this reason, references to the proportion of children are based on counting only one child per family in those families with multiple cohort children i.e. twins and triplets.

Family type

The proportion of children living with both of their natural parents is highest at around the time of the child's birth. As children get older they are increasingly likely to be living apart from their natural father because their parents have separated. Children are also increasingly likely to be living with a step-parent with the passage of time. Most commonly, this will be a step-father as their natural mother forms a new co-residential partnership. Therefore, as children get older, it is expected that higher proportions of them will be living in families with a lone mother or a natural mother and step-father.

However, it is also possible for the natural parents of children who are not already living together to form new co-residential partnerships with each other as children get older. So, some children who were not living with their natural father at around the time of their birth may subsequently do so.

Table 3.1 shows the overall prevalence of family type at MCS 1 when the children were nine months old and MCS 3 when they were five years old. The proportion of children living with both of their natural parents fell from 86 per cent at MCS 1 to 77 per cent at MCS 3. This decline is explained almost entirely by a reduction in the proportion of children living with cohabiting natural parents from one in four (24%) to one in seven (14%). Living with married natural parents was the most common family situation at both sweeps. The proportion of children in this family type increased slightly from 61 per cent at MCS 1 to 63 per cent at MCS 3.

The proportion of children in lone natural mother families increased from 14 per cent at MCS 1 to 17 per cent at MCS 3. This increase, along with the decline in cohabiting families, meant that lone natural mother families had overtaken cohabiting natural parents as the second most common family type by age 5. The overall proportion of all dependent children living in lone parent families in 2006 was 24 per cent (ONS, 2007). As explained above, the proportion of children living in lone parent families is expected to rise as children get older, so it is unsurprising that a slightly higher proportion of cohort children were in lone mother families at age 5 than at 9 months. For the same reason, it is expected that the proportion of five-year-olds living in lone parent families is lower than the proportion of all dependent children in this family situation. In addition, the national statistic also includes lone father

families. This family type is not reported separately for MCS 3 as it is very uncommon for five-year-olds to be living in lone father families[1]. They are included in the 'other' family type which, as shown in Table 3.1, has increased from less than half a per cent at 9 months to 2 per cent at 5 years.

There has been a marked increase in the proportion of natural mother and step-father families between MCS 1 and MCS 3. Almost 1 in 25 (4%) children was living in this family type at age 5 compared with fewer than 1 in 500 (0.2%) at 9 months. For the reasons discussed above, the proportion of five-year-olds living in this family type is, as expected, lower than the overall proportion of children living in step-parent families (10%) (ONS, 2007). Step-mother families are included in the 'other' family type[2].

Table 3.1 also shows the prevalence of different family types at MCS 1 and MCS 3 by country. Scotland and Northern Ireland had the highest proportion of children living with both natural parents at MCS 3 (79%) and Wales had the lowest (76%). Northern Ireland had the highest proportion of children living with married natural parents at MCS 3 (69% compared with 63% in England and Scotland and 60% in Wales) and, correspondingly, the lowest proportion of children living with cohabiting natural parents (10% compared with 16% in Wales and Scotland and 14% in England). Northern Ireland also had the highest proportion of lone natural mother families (18% compared with 17% in Wales, Scotland and England) and the lowest proportion of lone natural mother and step-father families (2% compared with 3% in Scotland, 4% in England and 5% in Wales). Northern Ireland is the only country in which cohabiting families were less common than lone natural mother families at MCS 1 as well as MCS 3.

In England and Scotland, the increase in the proportion of lone natural mother families from MCS 1 to MCS 3 was bigger than in Northern Ireland (4% and 3% respectively compared with 1%). In Wales, there was a slight decline in the proportion of lone mother families from MCS 1 to MCS 3 (from 18% to 17%).

[1] There were 73 lone father families at MCS 3.
[2] There were 30 step-mother families at MCS 3 (22 comprised a step-mother and natural father and 8 comprised step-mother and natural mother).

Table 3.1
Family type by country at MCS 1 and MCS 3

	Country at MCS 1					Country at MCS 3				
Family type	England	Wales	Scotland	Northern Ireland	UK	England	Wales	Scotland	Northern Ireland	UK
Both natural parents	9639 (86.2)	2157 (81.8)	1954 (85.3)	1546 (83.2)	15296 (85.8)	7329 (76.8)	1550 (76.2)	1388 (78.7)	1176 (78.9)	11443 (77.0)
- Married	6946 (*61.6*)	1407 (*57.1*)	1334 (*60.0*)	1233 (*68.3*)	10920 (*61.4*)	*5954 (62.5)*	*1169 (60.3)*	*1085 (62.9*)	1000 (*68.9*)	9208 (*62.5*)
- Cohabiting	2646 (*24.3*)	737 (*24.3*)	607 (*24.8*)	293 (*14.0*)	4283 (*24.0*)	*1339 (14.0)*	*379 (15.7)*	*300 (15.7*)	171 (*9.7*)	2189 (*14.2*)
- Other or unknown relationship	47 (*0.4*)	13 (*0.5*)	13 (*0.6*)	20 (*0.9*)	93 (*0.4*)	*36 (0.3)*	*2 (0.1)*	*3 (0.2*)	5 (*0.3*)	46 (*0.3*)
Natural mother and step-father	22 (0.2)	11 (0.4)	4 (0.2)	0 (-)	37 (0.2)	352 (3.8)	116 (4.8)	*63 (*3.2)	30 (1.8)	561 (3.7)
Lone natural mother	1838 (13.3)	586 (17.6)	373 (14.3)	375 (16.7)	3172 (13.7)	1868 (17.2)	433 (17.0)	*324 (*16.6)	309 (18.1)	2934 (17.2)
Other family type	33 (0.3)	6 (0.1)	6 (0.2)	2 (0.1)	47 (0.3)	210 (2.2)	44 (2.1)	*29 (*1.5)	20 (1.1)	303 (2.1)
Total observations	11532 *9877.6*	2760 *2726.5*	2337 *2302.9*	1923 *1931.4*	18552 *18391.6*	9759 *8549.3*	2143 *2122.8*	1804 *1782.1*	1535 *1552.6*	15241 *15571.4*
Sign. (excluding marital status)					P=0.000					P=0.001
Sign. (including marital status)					P=0.000					P=0.000

Notes: Sample: All families. Five observations are excluded from MCS 3 sub-table due to missing data on country. Table displays unweighted observations and weighted percentages (country totals using weight1 and UK totals using weight2). Weighted total observations are in italics.

Table 3.2 shows that family type at MCS 3 was strongly related to the age of the main respondent[3]. Lone parenthood, cohabitation and families containing step-fathers were most common in younger age groups and, correspondingly, families containing married natural parents were least common in younger age groups. The vast majority of children who were living with main respondents aged 30 and over were living with married natural parents. By contrast, only a minority of children in families in which the main respondent was under 30 were living with married natural parents. In the 18 to 24 age group, living with married natural parents was the least common of the major family types with only around one in 10 children (12%) in this family situation. In the 25 to 29 age group, although married natural parents was the most common family type, this situation only accounted for just over a third of children (36%). Notably, in the 18 to 24 age group living with married natural parents was less common than living with a natural mother and a step-father (12% compared with 14%). In the 25 to 29 age group, about one in twelve children (8%) was living with a natural mother and a step-father. Almost half of children (48%) with main respondents aged 18 to 24, and over a quarter (29%) with main respondents aged 25 to 29, were in lone mother families.

Table 3.2
Family type by main respondent's age at MCS 3

Family type	18-24	25-29	30-34	35-39	40 plus	Total
Both natural parents	380 (35.4)	1614 (59.4)	3217 (78.6)	3926 (86.1)	2307 (85.3)	11444 (77.0)
- Married	125 (*11.7*)	1013 (*36.2*)	2631 (*64.1*)	3447 (*75.7*)	1993 (*73.3*)	9209 (*62.5*)
- Cohabiting	251 (*23.3*)	587 (*22.8*)	572 (*14.2*)	470 (*10.2*)	309 (*11.8*)	2189 (*14.2*)
- Other or unknown relationship	4 (*0.4*)	14 (*0.4*)	14 (*0.3*)	9 (*0.2*)	5 (*0.2*)	46 (*0.3*)
Natural mother and step-father	143 (14.0)	193 (8.4)	121 (3.2)	74 (1.6)	30 (1.2)	561 (3.7)
Lone natural mother	528 (47.6)	772 (28.9)	738 (16.6)	562 (11.2)	338 (10.3)	2938 (17.3)
Other family type	31 (3.0)	67 (3.3)	62 (1.6)	53 (1.1)	90 (3.2)	303 (2.1)
Total Observations	1082 *952.5*	2646 *2260.4*	4138 *4141.6*	4615 *5117.3*	2765 *3103.2*	15246 *15575.1*
Sign. (excluding marital status)						P=0.000
Sign. (including marital status)						P=0.000

Notes: Sample: All families. Table displays unweighted observations and weighted percentages (using weight2). Weighted total observations are in italics.

Table 3.3 shows that family type was also strongly related to the cohort child's ethnic group. Over nine in ten Indian and Bangladeshi children (92% and 94% respectively) were living with both natural parents and their parents were almost always married to each other (91% and 90% respectively). A slightly lower proportion of Pakistani children were living with both natural parents (86%) and lone parenthood was also more common among Pakistani children than Indian and Bangladeshi children (13% compared with 6% and 4% respectively).

[3] 97% of main respondents at MCS 3 were natural mothers of the cohort child.

For black Caribbean children, living with a lone mother was the most common family type (48%). Less than a third of children in this ethnic group were living with married natural parents (30%) and about one in seven was living with cohabiting natural parents (16%). Lone parenthood was also fairly common among black African children (41%) but married natural parents was still the most common family type for children in this ethnic group (50%). In addition, cohabitation was much less common for black African children than black Caribbean children with only 7 per cent in this situation. Despite relatively low proportions of children living with both natural parents (47% and 57% respectively), living with a natural mother and a step-father was still very uncommon for black Caribbean and black African children (0.2% of black African and 1% of black Caribbean).

Table 3.3
Family type by cohort member's ethnic group

Family type	White	Mixed	Indian	Pakistani	Bangladeshi	Black Caribbean	Black African	Other ethnic group	Total
Both natural parents	9527 (77.3)	251 (62.2)	349 (91.8)	594 (85.6)	273 (93.6)	75 (46.7)	169 (56.8)	203 (79.1)	11441 (76.9)
- Married	7459 (*61.9*)	176 (*45.9*)	346 (*91.4*)	576 (*83.1*)	266 (*89.5*)	47 (*30.3*)	147 (*49.8*)	189 (*74.1*)	9206 (*62.5*)
- Cohabiting	2041 (*15.2*)	75 (*16.2*)	3 (*0.4*)	6 (*0.9*)	3 (*1.8*)	27 (*15.6*)	21 (*6.5*)	13 (*4.7*)	2189 (*14.2*)
- Other or unknown relationship	27 (*0.2*)	0 (-)	0 (-)	12 (*1.6*)	4 (*2.2*)	1 (*0.8*)	1 (*0.5*)	1 (*0.2*)	46 (*0.3*)
Natural mother and step-father	533 (4.0)	15 (3.5)	3 (0.7)	3 (0.4)	3 (1.2)	2 (1.1)	1 (0.2)	1 (1.1)	561 (3.7)
Lone natural mother	2372 (16.6)	167 (31.9)	28 (6.4)	92 (12.8)	13 (4.4)	91 (48.0)	133 (41.4)	42 (19.7)	2938 (17.3)
Other family type	272 (2.2)	10 (2.4)	2 (1.1)	6 (1.1)	3 (0.8)	6 (4.1)	3 (1.7)	1 (0.1)	303 (2.1)
Total observations	12704 *13764.8*	443 *469.3*	382 *272.3*	695 *410.5*	292 *138.4*	174 *128.7*	306 *208.9*	247 *178.0*	15243 *15570.8*
Sign. (excluding marital status)									P=0.000
Sign. (including marital status)									P=0.000

Notes: Sample: All families. Three observations are excluded because of missing data on cohort member's ethnic group. Table displays unweighted observations and weighted percentages (using weight2). Weighted total observations are in italics.

This section has shown that although, overall, the vast majority of five-year-olds are living with both of their natural parents this is not true for certain types of families. These families are those with younger main respondents (under 30) and black Caribbean children. In addition, a substantial minority of black African children are not living with both of their natural parents. Most children who are not living with both of their natural parents are living with lone natural mothers. However, a notable proportion of children, particularly in families with main respondents under 30, are living with a step-father, as well as with their natural mother.

The comparison with family type at 9 months, in particular the marked decline in the proportion of children living with cohabiting natural parents and increase in the proportions of children living with lone natural mothers and with natural mothers and step-fathers, is indicative of the kinds of transitions experienced by children within certain types of families in the first five years of their lives. The next section explores this in more detail.

Changes in family type

The previous section described how the overall prevalence of different family types had changed between MCS 1 and MCS 3. This section will provide more detail on the different kinds of transitions which lie behind the overall net change in family type between 9 months and 5 years. For example, the net increase in the proportion of lone natural mother families from MCS 1 to MCS 3 described in the previous section is likely to be due primarily to some families with two natural parents at MCS 1 splitting up and becoming lone natural mother families by MCS 3. This section will provide evidence on the proportion of children making the transition from living with both natural parents at 9 months to living with a lone natural mother at 5 years. But, of course, not all lone natural mother families at MCS 1 will still be lone natural mother families at MCS 3. Some lone natural mothers at MCS 1 may have acquired a co-resident partner at MCS 3 and this partner may be the natural father of the child or a step-father. This section will also provide evidence on the proportion of children making the transition from living with a lone natural mother at 9 months to living with both natural parents or a natural mother and a step-father at 5 years.

In principle, the net increase in lone natural mother families between 9 months and 5 years represents the difference between children moving from living with both natural parents to a lone mother and those originally living with a lone mother who was joined by a partner. However, in practice this will not be the case as not all families took part in both surveys and in order to look at the nature of the transition made by children, the sample for the analysis in this section is restricted to families who took part in both MCS 1 and MCS 3. This excludes all 'new' families as they did not join the study until MCS 2. In addition, for simplicity and ease of interpretation, the analysis of family change in this section is confined to families containing either both natural parents or a lone natural mother at MCS 1. However, as Table 3.1 in the previous section shows, only half a per cent of children were in other family types at 9 months, so this restriction excludes very few families who took part in MCS1 from the analysis.

This section does not present analysis of family change by ethnic group. This is primarily because restricting the sample to families who took part in each sweep reduces the number of families in each group.

As Table 3.4 shows, the vast majority of children were living with the same parent or parents at 5 years as they were at 9 months. Overall, 85 per cent of children were in the same family type at MCS 3 as at MCS 1. This percentage is comprised of 77 per cent living with both natural parents at both MCS 1 and MCS 3 and 8 per cent living with their natural mother in a lone parent family at both surveys.

A significant minority of children (15%) were living in a different family type at MCS 3 than at MCS 1. This indicates that their household had either gained a parent between 9 months and 5 years (if they were a lone natural mother family at MCS 1) or lost one between 9 months and 5 years (if they were living with both natural parents at MCS 1). This is a conservative estimate of the proportion of children who experienced family change between 9 months and 5 years. This is in part because of the restrictions on the analysis sample explained above but also because some children who were in the same family type at MCS 3 as at MCS 1 may have experienced family change at some point between the 9 months and 5 years surveys. For example, the natural parents may have split up at some point after the 9 months interview and the child may have experienced a period of living in a lone parent family, but they may have got back together by age 5. In this case the family type at MCS 3 would be the same as at MCS 1.

As Table 3.4 shows, there is little variation by country in the proportion of children living in a different family type at MCS 3 than at MCS 1. The proportion is slightly lower in Northern Ireland (14%) and slightly higher in Wales (16%).

Table 3.4
Any change in family type between MCS1 and MCS 3 by country

Family type	England	Wales	Scotland	Northern Ireland	UK
Both natural parents at MCS 1 and MCS 3	6735 (77.5)	1461 (74.6)	1324 (77.0)	1096 (75.6)	10616 (77.2)
Lone natural mother at MCS1 and MCS3	864 (7.9)	246 (9.4)	158 (8.0)	189 (10.9)	1457 (8.1)
Different family type	1397 (14.7)	384 (16.0)	288 (15.0)	228 (13.5)	2297 (14.7)
Total observations	8996 *7933.4*	2091 *2071.5*	1770 *1751.2*	1513 *1532.8*	14370 *14582.9*
					P=0.037

Notes: Sample: All families responding at both MCS 1 and MCS 3 where family type at MCS 1 was either both natural parents or lone natural mother. Five observations are excluded due to missing data on country. Table displays unweighted observations and weighted percentages (country totals using weight1 and UK total using weight2). Weighted total observations are in italics.

Table 3.5
Type of change in family type between MCS 1 and MCS 3 by country

Family type at MCS 1	Family type at MCS 3	England	Wales	Scotland	Northern Ireland	UK
Both natural parents	Both natural parents	6735 (87.4)	1461 (88.0)	1324 (88.4)	1096 (90.0)	10616 (87.6)
	Lone natural mother	838 (10.2)	182 (9.2)	165 (10.1)	120 (8.9)	1305 (10.2)
	Natural mother and step-father	173 (2.4)	53 (2.8)	25 (1.5)	13 (1.1)	264 (2.2)
Total observations		7746 *7030.5*	1696 *1755.0*	1514 *1524.7*	1229 *1288.5*	12185 *12846.3*
Sign.						P=0.026
Lone natural mother	Lone natural mother	864 (69.1)	246 (61.7)	158 (61.9)	189 (68.3)	1457 (67.9)
	Both natural parents	255 (18.6)	88 (22.2)	62 (23.7)	79 (26.4)	484 (19.7)
	- Married	109 (*6.6*)	23 (*6.1*)	14 (*5.2*)	35 (*11.4*)	181 (*6.6*)
	- Cohabiting	143 (*11.7*)	64 (*15.5*)	48 (*18.4*)	44 (*15.0*)	299 (*12.9*)
	- Other or unknown relationship	3 (*0.2*)	1 (*0.6*)	0 (-)	0 (-)	4 (*0.2*)
	Natural mother and step-father	131 (12.3)	61 (16.1)	36 (14.4)	16 (5.2)	244 (12.4)
Total observations		1250 *902.9*	395 *316.5*	256 *226.5*	284 *244.3*	2185 *1736.6*
Sign. (excluding marital status)						P=0.000
Sign. (including marital status)						P=0.001

Notes: Sample: All families responding at both MCS 1 and MCS 3 where family type at MCS 1 was either both natural parents or lone natural mother. Five observations are excluded due to missing data on country. Table displays unweighted observations and weighted percentages (country totals using weight1 and UK total using weight2). Weighted total observations are in italics.

As shown in Table 3.5, children who were living with both natural parents at MCS 1 were less likely to have experienced family change than those who were living with a lone natural mother at MCS 1 (12% compared with 32%). This table gives a detailed breakdown of the prevalence of different types of transitions between MCS 1 and MCS 3 by family type at MCS 1. Table 3.6 shows, for families with both natural parents at MCS 1, how these transitions were related to marital status at MCS 1. The prevalence of different types of transitions from living with both natural parents at MCS 1 are discussed first (Table 3.5 and Table 3.6) followed by the prevalence of different types of transitions from living with a lone natural mother at MCS 1 (Table 3.5).

Overall, 88 per cent of children who were living with both natural parents at 9 months were still living with both natural parents at 5 years. One in ten children (10%) living with both natural parents at 9 months was living with a lone natural mother at 5 years. The remaining children (2%) had made the transition between living with both natural parents at 9 months to living with a natural mother and a step-father at 5 years.

There was little variation by country in the prevalence of different types of transitions. In Northern Ireland, children living with both of their natural parents at 9 months were slightly more likely than children in other countries to still be living with both natural parents at 5 years (90%). Correspondingly, they were slightly less likely to have experienced the transition from living with both natural parents to living with a lone natural mother (9%) or from living with both natural parents to living with a natural mother and a step-father (1%). In Wales, children were also slightly less likely to have experienced the transition from living with both natural parents to living with a lone natural mother (9%) but this was because they were slightly more likely to have made the transition from living with both natural parents to living with a natural mother and a step-father (3%).

Table 3.6 shows that children living with both of their natural parents at 9 months were much more likely still to be in the same family group at 5 years if their parents were married to each other at MCS 1. Over 9 in 10 (92%) of children living with married natural parents at 9 months were still living with both of them at 5 years compared with three quarters (76%) of children living with cohabiting natural parents at 9 months. This table is not split by country as there was no statistically significant country variation.

In relation to transitions from living with lone natural mothers at MCS 1, Table 3.5 shows that just over two thirds (68%) of children living with lone natural mothers at 9 months were still living in a lone parent family with their natural mother at 5 years. A third of children living with lone natural mothers at 9 months (32%) had gained a co-resident parent by 5 years and, for two thirds of these children, this co-resident parent was their natural father. So, overall, one in five (20%) children living with a lone natural mother at 9 months was living with both of their natural parents at age 5. Furthermore, over one in twenty (7%) children living with their lone natural mother at 9 months was living with both of their natural parents who were married to each other by MCS 3. A much lower proportion of children who were living with a lone natural mother at 9 months were living with their natural mother and a step-father at 5 years (12%).

As Table 3.5 shows, the same pattern of transitions from lone (natural) mother families was observed in all countries. However, there was some slight variation by country. In both Wales and Scotland, a lower proportion of children living with their lone mother at 9 months were still living with their lone mother at 5 years than in England and Northern Ireland (62% in Wales and Scotland compared with 69% in England and 68% in Northern Ireland). The table also shows transitions from living with a lone mother at 9 months to living with both natural parents at age 5. This occurred to more than one in four lone mother families in Northern Ireland (26%) where the proportion of such recently united couples who were married was also highest.

Children in Wales and Scotland were also more likely than those in England to have made the transition from living with their lone natural mother at 9 months to living with her and a step-father at 5 years (16% and 14% respectively compared with 12%). However, again the most notable difference between countries was that in Northern Ireland the proportion of children who were living with lone natural mothers at 9 months and natural mother and a step-father at 5 years was much lower than in all other countries (5%).

Table 3.6
Type of change in family type between MCS 1 and MCS 3 by marital status of natural parents at MCS1

Family type at MCS 1	Family type at MCS 3	Married at MCS 1	Cohabiting at MCS 1	Total
Both natural parents	Both natural parents	8152 (92.0)	2427 (76.1)	10579 (87.8)
	Lone natural mother	606 (6.7)	675 (19.4)	1281 (10.0)
	Natural mother and step-father	107 (1.4)	150 (4.5)	257 (2.2)
Total observations		8865 *9381.4*	3252 *3406.4*	12117 *12787.7*
Sign.				P=0.000

Notes: Sample: All families responding at both MCS 1 and MCS 3 where family type at MCS 1 was both natural parents and their marital status was not other or unknown. Table displays unweighted observations and weighted percentages (using weight2). Weighted total observations are in italics.

Table 3.7 shows that the stability of family life (or otherwise) is strongly related to the age of the main respondent. In particular, children of younger main respondents were the most likely to be living in a different family type at age 5 than at 9 months. Almost four in ten (39%) children of main respondents aged 18 to 24 and almost three in ten (28%) children of main respondents aged 25 to 29 were living in a different family situation at 5 years than at 9 months. This compares with one in seven (15%) in the 30 to 34 age group and less than one in ten in the 35 to 39 and 40 plus age group (9% and 8% respectively).

Table 3.7
Any change in family type between MCS 1 and MCS 3 by main respondent's age at MCS 3

Family type	18-24	25-29	30-34	35-39	40 plus	Total
Both natural parents at MCS 1 and MCS 3	265 (29.7)	1386 (57.4)	3014 (78.4)	3766 (86.4)	2186 (87.2)	10617 (77.2)
Lone natural mother at MCS1 and MCS3	326 (31.7)	413 (14.9)	323 (7.1)	244 (4.2)	151 (4.5)	1457 (8.1)
Change in family type	367 (38.6)	653 (27.7)	603 (14.6)	430 (9.4)	248 (8.2)	2301 (14.8)
Total observations	958 *816.6*	2452 *2048.2*	3940 *3922.0*	4440 *4906.5*	2585 *2893.3*	14375 *14586.6*
Sign.						P=0.000

Sample: All families responding at both MCS 1 and MCS 3 where family type at MCS 1 was either both natural parents or lone natural mother. Table displays unweighted observations and weighted percentages (using weight2). Weighted total observations are in italics.

Table 3.8 gives a detailed breakdown of the prevalence of different types of transitions between MCS 1 and MCS 3 by family type at MCS 1 and main respondent's age at MCS 3. Table 3.9 shows, for families with both natural parents at MCS 1, how these transitions were related to marital status at MCS 1 and main respondent's age at MCS 3. Variations by age in the prevalence of different types of transitions from living with both natural parents at MCS 1 are discussed first (Table 3.8 and Table 3.9) followed by age-related patterns in the

prevalence of different types of transitions from living with a lone natural mother at MCS 1 (Table 3.8).

Table 3.8 shows that the type of family change between 9 months and 5 years is also related to the main respondent's age. Fewer than six in ten children (58%) who were living with both natural parents at 9 months were living with both natural parents at age 5 if the main respondent was 18 to 24, compared with almost nine in ten overall (88%). Correspondingly, one in three children living with both natural parents at 9 months was living with a lone natural mother at age 5 when the main respondent was 18 to 24 compared with one in ten overall, and one in ten was living with their natural mother and a step-father at 5 years, compared with one in fifty overall.

Table 3.8
Type of change in family type between MCS 1 and MCS 3 by main respondent's age at MCS 3

Family type at MCS 1	Family type at MCS 3	18-24	25-29	30-34	35-39	40 plus	Total
Both natural parents	Both natural parents	265 (57.6)	1386 (75.3)	3014 (87.1)	3766 (91.7)	2186 (92.9)	10617 (87.6)
	Lone natural mother	152 (32.5)	317 (19.3)	379 (10.5)	292 (7.2)	169 (6.2)	1309 (10.2)
	Natural mother and step-father	43 (9.9)	87 (5.4)	72 (2.4)	43 (1.1)	19 (0.9)	264 (2.2)
Total observations		460 *421.6*	1790 *1560.2*	3465 *3529.2*	4101 *4623.3*	2374 *2715.6*	12190 *12850.0*
Sign.							P=0.000
Lone natural mother	Lone natural mother	326 (65.5)	413 (62.6)	323 (70.4)	244 (73.2)	151 (73.9)	1457 (67.9)
	Both natural parents	90 (16.3)	166 (22.8)	111 (20.8)	67 (17.5)	50 (19.7)	484 (19.7)
	- Married	18 (*3.8*)	62 (*7.0*)	43 (*7.0*)	33 (*8.2*)	25 (*8.2*)	181 (*6.6*)
	- Cohabiting	70 (*12.0*)	104 (*15.8*)	67 (*13.6*)	33 (*9.1*)	25 (*11.5*)	299 (*12.9*)
	- Other or unknown relationship	2 (*0.6*)	0 (-)	1 (*0.3*)	1 (*0.2*)	0 (-)	4 (*0.2*)
	Natural mother and step-father	82 (18.1)	83 (14.6)	41 (8.7)	28 (9.4)	10 (6.4)	244 (12.4)
Total observations		498 *395.0*	662 *487.9*	475 *392.8*	339 *283.2*	211 *177.7*	2185 *1736.6*
Sign. (excluding marital status)							P=0.000
Sign. (including marital status)							P=0.001

Notes: Sample: All families responding at both MCS 1 and MCS 3 where family type at MCS 1 was either both natural parents or lone natural mother. Table displays unweighted observations and weighted percentages (using weight2). Weighted total observations are in italics

Table 3.9 shows that, in all age groups, children living with both their natural parents at 9 months were more much likely to still be living with both natural parents at 5 years if their natural parents were married to each other at 9 months rather than cohabiting. However, the gap between cohabiting and married parents was smaller in older age groups. For example, in the 30 to 34 age group, the gap between married and cohabiting couples was 11 percentage points (79% of cohabiting parents and 90% cent of married parents were together at both sweeps) and in the 25 to 29 age group the equivalent gap was 16 percentage points (68% of cohabiting parents and 84% of married parents). However, although overall 24 per cent of cohabiting parents at MCS 1 were no longer living together at MCS 3, it was also true that almost the same proportion (22%) had got married to each other

by MCS 3. The proportion of cohabiting couples who got married also varied by age and peaked in the 30 to 34 age group (26%).

Table 3.8 shows that although younger lone mothers were less likely still to be on their own at MCS 3 they were also less likely to be living with the child's natural father and much more likely to have partnered with someone else. In fact, in the 18 to 24 age group, a lone mother was more likely to have partnered with a step-father than with the child's natural father: 16 per cent had partnered with natural father, 18 per cent had partnered with a step-father and 66 per cent had remained a lone parent. By contrast, in the 30 to 34 age group, 21 per cent of lone mothers had partnered with the child's natural father, 9 per cent had partnered with a step-father and 70 per cent had remained a lone parent. Lone mothers marrying the child's natural father was also less common in younger age groups: 4 per cent in the 18 to 24 group compared with 7 or 8 per cent in all other age groups.

Table 3.9
Type of change in family type between MCS 1 and MCS 3 by marital status of natural parents at MCS 1 and main respondent's age at MCS 3

Family type at MCS 1	Family type at MCS 3	18-24	25-29	30-34	35-39	40 plus	Total
Both natural parents – married	Both natural parents	67 (71.3)	765 (84.2)	2305 (90.2)	3192 (93.5)	1823 (94.7)	8152 (92.0)
	Lone natural mother	18 (21.5)	99 (12.4)	209 (8.2)	181 (5.5)	99 (4.5)	606 (6.7)
	Natural mother and step-father	7 (7.2)	25 (3.4)	33 (1.6)	29 (1.0)	13 (0.8)	107 (1.4)
Total observations		92 *72.9*	889 *715.6*	2547 *2553.9*	3402 *3844.1*	1935 *2194.9*	8865 *9381.4*
Sign.							P=0.000
Both natural parents – cohabiting	Both natural parents	190 (55.8)	612 (68.2)	702 (79.3)	566 (82.8)	357 (86.1)	2427 (76.1)
	- Married	32 (*10.5*)	162 (*19.1*)	221 (*26.4*)	158 (*23.6*)	92 (*21.9*)	665 (*21.8*)
	- Cohabiting	157 (*45.0*)	445 (*48.5*)	478 (*52.4*)	407 (*59.2*)	264 (*63.8*)	1751 (*54.0*)
	- Other or unknown relationship	1 (*0.3*)	5 (*0.6*)	3 (*0.5*)	1 (*0.0*)	1 (*0.4*)	11 (*0.4*)
	Lone natural mother	122 (34.1)	212 (24.8)	167 (16.2)	109 (15.7)	65 (12.7)	675 (19.4)
	Natural mother and step-father	34 (10.1)	60 (7.0)	37 (4.5)	13 (1.5)	6 (1.3)	150 (4.5)
Total observations		346 *330.8*	884 *827.0*	906 *965.5*	688 *772.0*	428 *511.1*	3252 *3406.4*
Sign. (excluding marital status)							P=0.000
Sign. (including marital status)							P=0.000

Notes: Sample: All families responding at both MCS 1 and MCS 3 where family type at MCS 1 was both natural parents and their marital status was not 'other' or unknown. Table displays unweighted observations and weighted percentages (using weight2). Weighted total observations are in italics.

This section has shown that although overall a minority of children (1 in 7) were living in a different family type at 5 years than at 9 months, some groups of children were much more likely to be in a different family situation. These are the children of younger main respondents and those living with lone natural mothers or cohabiting natural parents at 9 months.

There is clear evidence that whether or not their parents were living together at 9 months and whether or not their parents were married to each other at this stage affects children's

likelihood of experiencing family change in their first 5 years of life. Children living with married natural parents at 9 months were much less likely to have experienced family change than children living with cohabiting natural parents at 9 months or children who were living with a lone natural mother at 9 months (fewer than 1 in 10 compared with 1 in 4 and 1 in 3 respectively). However, there was also evidence of 'strengthening ties' between natural parents between MCS 1 and MCS 3. In particular, one in four natural parent couples who were cohabiting at 9 months had married each other by MCS 3 and one in five lone natural mothers at 9 months was living with the child's natural father by the time the cohort child was five. Overall, lone natural mothers were more likely to have formed a co-residential partnership with the child's natural father than with a step-father.

However, for children living with younger main respondents, the picture of family life between 9 months and 5 years is quite different. This is particularly true for families in which the main respondent is under 25 at MCS 3 and who was therefore a teenager when the cohort child was born. A much higher proportion (4 in 10) had experienced family change and there was less evidence of strengthening ties between children's natural parents and more evidence of mothers forming new partnerships leading to their children living with a step-father. In this age group, one in three children who was living with both natural parents at 9 months was living with a lone natural parent at 5 years and a further one in ten was living with a step-father at 5 years. Lone natural mothers in this age group were more likely to have formed a co-residential partnership with a step-father than with the child's natural father (18% compared with 16%).

For some children, the introduction of a step-father may have been associated with another family change. Their natural mother may have had another baby with her new partner and the cohort child may now have a younger half-brother or sister. It is also possible that the step-father may have brought his children from previous relationships into the household and the cohort child may now have a step-brother or sister. The next two sections will broaden the picture of our families to include their co-resident brothers and sisters. The final section will look in more detail at the child's relationship with their natural father in the minority of families in which the natural father is not living with them at 5 years.

Number of siblings

Although, overall, the average number of children per family has declined over the last 30 years, the increasing proportion of children living in step-families means that is it now more likely for children to be living with half- or step-brothers and sisters. Step-families also tend to be larger; 27 per cent have three or more children, compared with 18 per cent of non step-families (ONS, 2007).

This section provides evidence on the overall number of siblings per family and the next section looks at the prevalence of different types of siblings. This information comes from the household grid which collects data on everyone present in the cohort member's household and the relationships between household members. Both sections examine the net change since MCS 1 and explore how number of siblings and the presence of different types of siblings vary by country, age of the main respondent, ethnic group of the cohort child and family type. This section includes a few families where one or both respondents were not natural parents, who as 'parent figures' are included in the term 'parents'.

The definition of sibling used in this section includes other kinds of siblings as well as natural siblings such as step, half, foster and adopted but excludes siblings who are part of a multiple birth. The definition of sibling that is used excludes siblings living elsewhere and includes co-residential siblings of any age (even adults).

Table 3.10
Number of siblings by country at MCS 1 and MCS 3

	Country at MCS 1					Country at MCS 3				
Number of siblings	England	Wales	Scotland	Northern Ireland	UK	England	Wales	Scotland	Northern Ireland	UK
None	4820 (42.7)	1184 (42.5)	1066 (45.3)	747 (39.1)	7817 (42.8)	1578 (16.5)	406 (17.8)	346 (18.5)	229 (14.8)	2559 (16.7)
One	3981 (36.2)	969 (36.8)	827 (35.7)	613 (32.6)	6390 (36.0)	4529 (49.4)	1016 (49.5)	898 (50.2)	611 (41.0)	7054 (49.2)
Two	1754 (14.5)	405 (14.3)	327 (14.1)	350 (18.0)	2836 (14.6)	2319 (23.1)	478 (22.5)	403 (22.5)	415 (27.1)	3615 (23.1)
Three or more	977 (6.6)	202 (6.5)	117 (4.9)	213 (10.3)	1509 (6.6)	1333 (11.0)	243 (10.2)	157 (8.8)	280 (17.1)	2013 (11.0)
Total observations	11532 *9877.6*	2760 *2726.5*	2337 *2302.9*	1923 *1931.4*	18552 *18391.6*	9759 *8549.3*	2143 *2122.8*	1804 *1782.1*	1535 *1552.6*	15241 *15571.4*
Sign.					P=0.000					P=0.000

Notes: Sample: All families. Five observations are excluded from MCS 3 sub-table due to missing data on country. Table displays unweighted observations and weighted percentages (country totals using weight1 and UK totals using weight2). Weighted total observations are in italics.

As Table 3.10 shows, over eight in ten five-year-olds (83%) had at least one sibling. This had increased from just less than six in ten (57%) at 9 months. Most five-year-olds who had a sibling had only one (49%), so the most common number of children per family was two. A quarter (23%) of children had two siblings and only in one in ten (11%) had three or more. According to ONS (2007), 46 per cent of all children nationally are living in families with two children. This is very similar to the MCS 3 statistic (49%). Interestingly, a higher proportion of children in MCS 3 were in families with three or more children (two or more siblings) than in the national statistics: 33 per cent compared with 29 per cent.

The number of siblings varied with country. Families in Northern Ireland were larger than those in England, Wales and Scotland. In Northern Ireland, a lower proportion of children had no siblings (15% compared with 17% in England, 18% in Wales and 19% in Scotland) and a higher proportion had three or more (17% compared with 11% in England, 10% in Wales and 9% in Scotland). The number of siblings in the household also varied with the main respondent's age (Table 3.11). In general, in the older age groups, the children were more likely to have brothers and sisters and children were more likely to have multiple brothers and sisters.

Table 3.11
Number of siblings by main respondent's age

Number of siblings	18-24	25-29	30-34	35-39	40 plus	Total
None	418	573	592	529	449	2561
	(37.5)	(21.8)	(15.1)	(11.9)	(16.7)	(16.7)
One	458	1216	2012	2225	1146	7057
	(42.2)	(47.6)	(51.9)	(52.0)	(44.3)	(49.2)
Two	167	587	980	1167	714	3615
	(17.0)	(21.0)	(22.4)	(24.6)	(25.2)	(23.1)
Three or more	39	270	554	694	456	2013
	(3.3)	(9.6)	(10.6)	(11.6)	(13.9)	(11.0)
Total observations	1082	2646	4138	4615	2765	15246
	952.5	*2260.4*	*4141.6*	*5117.3*	*3103.2*	*15575.1*
Sign.						P=0.000

Notes: Sample: All families. Table displays unweighted observations and weighted percentages (using weight2). Weighted total observations are in italics.

As Table 3.12 shows, the number of siblings varies with the cohort child's ethnic group. In most ethnic groups the most common number of siblings was one. The exceptions were for Pakistani and black African children for whom two was the most common number of brothers or sisters (33% and 30% respectively compared with an average of 23%) and for Bangladeshi children, many of whom had three or more brothers or sisters (38% compared with an average of 11%). Black Caribbean children and children of mixed ethnic group were the most likely not to have any brothers and sisters (23% and 26% compared with an average of 17%).

Table 3.12
Number of siblings by cohort member's ethnic group

Number of siblings	White	Mixed	Indian	Pakistani	Bangladeshi	Black Caribbean	Black African	Other ethnic group	Total
None	2209 (16.7)	108 (25.8)	51 (14.6)	48 (7.6)	23 (7.7)	41 (23.9)	44 (18.1)	36 (16.8)	2560 (16.7)
One	6176 (50.9)	171 (37.4)	185 (50.6)	190 (27.6)	79 (27.5)	66 (43.4)	84 (27.6)	105 (43.0)	7056 (49.2)
Two	2906 (22.4)	115 (27.7)	118 (29.5)	208 (32.7)	84 (26.8)	40 (19.8)	88 (30.4)	56 (25.2)	3615 (23.1)
Three or more	1413 (10.0)	49 (9.0)	28 (5.2)	249 (32.1)	106 (38.0)	27 (13.0)	90 (23.9)	50 (14.9)	2012 (11.0)
Total observations	12704 *13764.8*	443 *469.3*	382 *272.3*	695 *410.5*	292 *138.4*	174 *128.7*	306 *208.9*	247 *178.0*	15243 *15570.8*
Sign.									P=0.000

Notes: Sample: All families. Three observations are excluded because of missing data on cohort member's ethnic group. Table displays unweighted observations and weighted percentages (using weight2). Weighted total observations are in italics.

Table 3.13 shows how the number of siblings varies with family type. Children in lone natural mother families and families with a natural mother and a step-father were both much more likely than children in families with married natural parents or cohabiting natural parents to have no siblings (33% and 23% respectively compared with 11% and 19% respectively). They were also more likely to have three or more siblings (12% and 15% compared with 11 %). However, one sibling was still the most common experience for children in all of the major family types.

Table 3.13
Number of siblings by family type

Number of siblings	Married natural parents	Cohabiting natural parents	Natural parents (other/unknown)	Natural mother and step-father	Lone natural mother	Other family type	Total
None	964 (10.6)	409 (18.6)	3 (6.5)	127 (23.2)	946 (33.2)	112 (39.7)	2561 (16.7)
One	4617 (53.7)	1058 (49.5)	17 (45.4)	209 (37.0)	1057 (37.1)	99 (32.7)	7057 (49.2)
Two	2385 (25.1)	472 (21.4)	12 (14.6)	140 (24.6)	552 (18.1)	54 (15.4)	3615 (23.1)
Three or more	1243 (10.6)	250 (10.5)	14 (33.4)	85 (15.2)	383 (11.6)	38 (12.2)	2013 (11.0)
Total observations	9209 *9733.8*	2189 *2212.6*	46 *39.0*	561 *576.0*	2938 *2688.4*	303 *325.2*	15246 *15575.1*
Sign.							P=0.000

Notes: Sample: All families. Table displays unweighted observations and weighted percentages (using weight2). Weighted total observations are in italics.

This section has shown that most children have only one brother or sister but that having more (or fewer) siblings is more common for some types of families. In particular, Pakistani, Bangladeshi and black African children and children of older mothers have more brothers and sisters. By contrast, children of younger mothers are more likely to have no siblings as well as children in lone natural mother families and children living with a natural mother and a step-father. Interestingly, children living with lone natural mothers and a natural mother and step-father are also more likely to have three or more siblings. This polarisation of the number of siblings in these family types may be related to the prevalence of half-siblings and step-siblings. The next section looks into this in more detail.

Types of siblings

This section provides evidence on the different types of siblings living with the cohort child. A natural sibling is one with whom the cohort child shares both biological parents and a half-sibling is one with whom the cohort child shares one biological parent. No biological parents are shared between step-siblings, foster or adoptive siblings. However, unlike foster or adoptive siblings, one of the biological parents of a step-sibling usually still lives with them and is a step-parent to the cohort child.

The shared natural parent of half-siblings may be either their natural mother or their natural father. The definition used in this section uses only the relationship to the cohort member so does not distinguish which parent is the shared parent. However, as most children continue to live with their natural mother when their parents live apart, in most families these half-siblings will be the natural child of the cohort member's mother with a new partner (if they are a younger half-sibling) or previous partner (if they are an older half-sibling). Similarly, step-siblings can be the biological child of either a step-father or a step-mother.

Table 3.14 shows that the most common type of sibling is a natural sibling. At age 5, over three quarters (76%) of children had at least one natural sibling. This has increased from half (50%) at age 9 months. The proportion of children living with a half-sibling also increased from 9 per cent at MCS 1 to 12 per cent at MCS 3.

Unsurprisingly, at age 9 months, virtually none of the cohort children had a younger natural sibling (0.1%) or a younger half-sibling (less than 0.1%). However, by age 5 almost four in ten children (39%) had at least one younger natural sibling and around one in fifty children (2%) had at least one younger half-sibling. The arrival of a younger brother or sister was by far the most common type of family change experienced by the cohort children in their first five years of life.

Other types of siblings were extremely uncommon. Only 1 per cent of five-year-olds were living with step-sibling(s) and virtually none (0.2%) had a foster or adoptive sibling.

There was some variation by country in the proportion of children who had natural and half-siblings. Children in Northern Ireland were least likely to be living with a half-sibling at age 5 (6 per cent) and children in Wales were most likely to be living with a half-sibling (13 per cent). Children in Northern Ireland were more likely than children in all other countries to have natural siblings (82% compared with 75%-76% in other UK countries). This was true of both older natural siblings (56% compared with 48%-49% in all other countries) and younger natural siblings (42% compared with 36%-39% all other countries).

Table 3.14: Type of siblings by country and sweep

	Country at MCS 1					Country at MCS 3				
Type of siblings	England	Wales	Scotland	Northern Ireland	UK	England	Wales	Scotland	Northern Ireland	UK
Any natural sibling	5899 (49.9)	1317 (49.1)	1106 (47.7)	1085 (56.8)	9407 (49.8)	7502 (76.4)	1556 (74.5)	1341 (75.3)	1246 (81.7)	11645 (76.4)
Older natural sibling	5892 (49.8)	1316 (49.0)	1104 (47.6)	1085 (56.8)	9397 (49.8)	4886 (48.9)	1008 (48.5)	845 (47.5)	864 (56.1)	7603 (49.0)
Younger natural sibling	13 (0.1)	1 (0.0)	3 (0.2)	0 (-)	17 (0.1)	3911 (38.9)	754 (35.8)	678 (38.1)	647 (42.8)	5990 (38.8)
Any half-sibling	1035 (9.4)	339 (11.2)	200 (8.4)	124 (5.6)	1698 (9.3)	1173 (12.2)	320 (13.2)	192 (10.4)	106 (6.0)	1791 (11.9)
Older half-sibling	1035 (9.4)	338 (11.2)	200 (8.4)	124 (5.6)	1697 (9.3)	971 (10.2)	266 (11.3)	168 (9.1)	86 (4.7)	1491 (10.0)
Younger half-sibling	0 (-)	1 (0.1)	0 (-)	0 (-)	1 (0.0)	247 (2.5)	64 (2.4)	29 (1.5)	23 (1.5)	363 (2.4)
Any step-sibling	103 (0.8)	25 (0.7)	21 (0.9)	7 (0.3)	156 (0.8)	106 (1.1)	33 (1.2)	29 (1.7)	13 (0.8)	181 (1.1)
Older step-sibling	102 (0.8)	25 (0.7)	21 (0.9)	7 (0.3)	155 (0.8)	93 (1.0)	30 (1.1)	25 (1.4)	10 (0.6)	158 (1.0)
Younger step-sibling	0 (-)	0 (-)	0 (-)	0 (-)	0 (-)	16 (0.2)	6 (0.2)	4 (0.3)	3 (0.2)	29 (0.2)
Any foster or adoptive sibling	7 (0.1)	2 (0.1)	2 (0.1)	2 (0.1)	13 (0.1)	20 (0.2)	3 (0.1)	2 (0.1)	5 (0.3)	30 (0.2)
Total observations	11532 *9877.6*	2760 *2726.5*	2337 *2302.9*	1923 *1931.4*	18552 *18391.6*	9759 *8549.3*	2143 *2122.8*	1804 *1782.1*	1535 *1552.6*	15241 *15571.4*
Sign. (Any natural sibling)					P=0.000					P=0.000
Sign. (Older natural sibling)					P=0.000					P=0.000
Sign. (Younger natural sibling)					P=0.072					P=0.002
Sign. (Any half-sibling)					P=0.000					P=0.000
Sign. (Older half-sibling)					P=0.000					P=0.000
Sign. (Younger half-sibling)					P=0.629					P=0.022
Sign. (Any step-sibling)					P=0.170					P=0.192
Sign. (Older step-sibling)					P=0.175					P=0.189
Sign. (Younger step-sibling)					Not applicable					P=0.673
Sign. (Any foster or adoptive sibling)					P=0.742					P=0.3944

Notes: Sample: All families. Five observations are excluded from MCS 3 sub-table because of missing data on country. Table displays unweighted observations and weighted percentages (country totals using weight1 and UK totals using weight2). Weighted total observations are in italics.

Table 3.15
Type of siblings by main respondent's age

Type of siblings	18-24	25-29	30-34	35-39	40 plus	Total
Any natural sibling	546 (49.9)	1897 (71.1)	3283 (78.8)	3825 (82.6)	2097 (75.2)	11648 (76.4)
Older natural sibling	103 (8.9)	1015 (37.6)	2006 (45.3)	2721 (56.3)	1760 (62.3)	7605 (48.9)
Younger natural sibling	488 (44.8)	1289 (47.7)	1891 (45.9)	1765 (38.9)	558 (20.9)	5991 (38.8)
Any half-sibling	148 (15.6)	322 (13.6)	472 (11.3)	488 (10.1)	361 (13.3)	1791 (11.9)
Older half-sibling	32 (3.9)	209 (8.7)	429 (10.1)	465 (9.7)	356 (13.1)	1491 (10.0)
Younger half- sibling	121 (12.3)	131 (5.8)	61 (1.6)	41 (0.8)	9 (0.3)	363 (2.4)
Any step-sibling	15 (1.5)	28 (1.1)	52 (1.3)	43 (0.8)	43 (1.3)	181 (1.1)
Older step-sibling	9 (1.1)	20 (0.7)	47 (1.1)	39 (0.7)	43 (1.3)	158 (1.0)
Younger step-sibling	7 (0.4)	10 (0.5)	7 (0.2)	5 (0.0)	0 (-)	29 (0.2)
Any foster or adoptive sibling	0 (-)	1 (0.0)	5 (0.1)	8 (0.1)	16 (0.6)	30 (0.2)
Total observations	1082 *952.5*	2646 *2260.4*	4138 *4141.6*	4615 *5117.3*	2765 *3103.2*	15246 *15575.1*
Sign. (Any natural sibling)						P=0.000
Sign. (Older natural sibling)						P=0.000
Sign. (Younger natural sibling)						P=0.000
Sign. (Any half-sibling)						P=0.000
Sign. (Older half-sibling)						P=0.000
Sign. (Younger half-sibling)						P=0.000
Sign. (Any step- sibling)						P=0.150
Sign. (Older step-sibling)						P=0.139
Sign. (Younger step-sibling)						P=0.000
Sign. (Any foster or adoptive sibling)						P=0.000

Notes: Sample: All families. Table displays unweighted observations and weighted percentages (using weight2). Weighted total observations are in italics.

Table 3.15 shows how the prevalence of different types of siblings varied with the age of the main respondent. Overall, children with younger main respondents (18 to 24-year-olds) were less likely to have natural siblings. Half of children with main respondents aged 18 to 24 had natural siblings compared with around seven or eight in ten children with main respondents in all other age groups. Children with older parents were more likely to have older natural siblings and children with younger parents were more likely to have younger natural siblings. Fewer than one in ten (9%) children with main respondents aged 18 to 24 had an older brother or sister compared with between four in ten and six in ten children with main respondents in older age groups. Correspondingly, around two in ten (21%) children with main respondents aged 40 and over had a younger brother or sister, compared with around four in ten or five in ten children with main respondents in younger age groups.

The cohort child was more likely to be living with a half-sibling where the main respondent was at either end of the age range. Sixteen per cent of children in families where the main respondent was aged 18 to 24, 14 per cent where the main respondent was 25 to 29 and 13 per cent where the main respondent was 40 and over were living with a half-sibling compared with 10 or 11 per cent in the other age groups.

Table 3.16
Type of sibling by cohort member's ethnic group

Type of siblings	White	Mixed	Indian	Pakistani	Bangladeshi	Black Caribbean	Black African	Other Ethnic group	Total
Any natural sibling	9555 (76.1)	289 (65.4)	330 (85.3)	641 (91.5)	267 (91.8)	107 (60.9)	250 (78.1)	207 (81.5)	11646 (76.4)
Older natural sibling	6121 (48.0)	194 (44.7)	212 (56.3)	449 (64.4)	211 (72.0)	84 (46.9)	198 (63.3)	136 (55.4)	7605 (49.0)
Younger natural sibling	4829 (38.4)	149 (34.2)	152 (36.8)	404 (56.3)	158 (53.6)	42 (23.0)	136 (38.9)	119 (42.7)	5989 (38.8)
Any half-sibling	1627 (12.6)	72 (13.9)	1 (0.1)	15 (1.7)	4 (1.3)	38 (21.4)	29 (9.8)	5 (1.8)	1791 (11.9)
Older half-sibling	1346 (10.5)	64 (12.4)	1 (0.1)	11 (1.2)	4 (1.3)	37 (21.2)	25 (9.1)	3 (1.4)	1491 (10.0)
Younger half-sibling	338 (2.5)	10 (1.9)	0 (-)	4 (0.5)	0 (-)	4 (1.7)	5 (0.9)	2 (0.3)	363 (2.4)
Any step-sibling	162 (1.2)	3 (0.4)	2 (0.3)	3 (0.4)	3 (1.2)	1 (0.8)	4 (1.7)	3 (0.6)	181 (1.1)
Older step-sibling	142 (1.0)	2 (0.3)	2 (0.3)	3 (0.4)	2 (0.4)	1 (0.8)	3 (1.2)	3 (0.6)	158 (1.0)
Younger step- sibling	26 (0.2)	1 (0.1)	0 (-)	0 (-)	1 (0.8)	0 (-)	1 (0.5)	0 (-)	29 (0.2)
Any foster or adoptive sibling	22 (0.2)	1 (0.2)	1 (0.1)	0 (-)	1 (0.3)	4 (2.3)	0 (-)	1 (0.6)	30 (0.2)
Total observations	12704 *13764.8*	443 *469.3*	382 *272.3*	695 *410.5*	292 *138.4*	174 *128.7*	306 *208.9*	247 *178.0*	15243 *15570.8*
Sign. (Any natural sibling)									P=0.000
Sign. (Older natural sibling)									P=0.000
Sign. (Younger natural sibling)									P=0.000
Sign. (Any half-sibling)									P=0.000
Sign. (Older half-sibling)									P=0.000
Sign. (Younger half-sibling)									P=0.201
Sign. (Any step-sibling)									P=0.150
Sign. (Older step-sibling)									P=0.201
Sign. (Younger step-sibling)									P=0.853
Sign. (Any foster or adoptive sibling)									P=0.1749

Notes: Sample: All families. Three observations are excluded due to missing data on cohort member's ethnic group. Table displays unweighted observations and weighted percentages (using weight2). Weighted total observations are in italics.

Table 3.16 shows how the proportion of children living with different types of sibling varied with the child's ethnic group. Indian (85%), Pakistani (92%) and Bangladeshi (92%) children were most likely to have natural siblings and black Caribbean children were least likely to have natural siblings (61%). Correspondingly, half-siblings were least common for Indian, Pakistani (less than half a per cent in both groups) and Bangladeshi (1%) children and most common for black Caribbean children (21%).

Table 3.17 shows how living with different types of siblings varied with family type. Children living with married natural parents (86%) or cohabiting natural parents (71%) were more likely to have natural siblings than children living with a lone natural mother (54%) or a natural mother and a step-father (48%). Children in these family types were also more likely to have experienced the arrival of a younger natural sibling: 44 per cent for those living with married natural parents and 46 per cent for those living with cohabiting natural parents, compared with 22 per cent for children living with lone natural mothers and 17 per cent for those living with a natural mother and a step-father.

Half-siblings were by far the most common in families containing a natural mother and a step-father. Almost half (44%) of children in this family situation had a half-sibling. This was the only family type in which a higher proportion of children had a younger half-sibling (35%) than an older half-sibling (14%). About 1 in 5 children living with cohabiting natural parents (18%) and with lone natural mothers (20%) was living with a half-sibling. Half-siblings were least common in married natural parent families (6%). The half-siblings of children living with both of their natural parents (either married or cohabiting) were almost exclusively older half-siblings. In lone mother families, 16 per cent of children had older half-siblings and 5 per cent had younger half-siblings.

Table 3.17
Type of siblings by family type

Type of siblings	Married natural parents	Cohabiting natural parents	Natural parents (other/unknown)	Natural mother and step-father	Lone natural mother	Other family type	Total
Any natural sibling	7979 (86.3)	1568 (71.1)	42 (88.3)	270 (47.8)	1637 (54.3)	152 (48.7)	11648 (76.4)
Older natural sibling	5252 (55.4)	828 (37.2)	25 (50.5)	196 (37.3)	1185 (39.0)	119 (37.1)	7605 (48.9)
Younger natural sibling	4098 (43.7)	999 (45.5)	27 (56.9)	112 (16.9)	699 (22.2)	56 (19.1)	5991 (38.8)
Any half-sibling	562 (6.4)	382 (17.7)	4 (11.4)	246 (44.3)	554 (20.0)	43 (13.6)	1791 (11.9)
Older half-sibling	560 (6.4)	378 (17.5)	4 (11.4)	80 (13.8)	440 (16.1)	29 (9.3)	1491 (10.0)
Younger half-sibling	3 (0.0)	4 (0.2)	0 (-)	189 (34.6)	148 (5.1)	19 (6.1)	363 (2.4)
Any step-sibling	74 (0.7)	20 (0.9)	0 (-)	43 (7.7)	28 (0.9)	16 (3.8)	181 (1.1)
Older step-sibling	70 (0.7)	20 (0.9)	0 (-)	32 (5.6)	23 (0.7)	13 (3.0)	158 (1.0)
Younger step-sibling	4 (0.0)	0 (-)	0 (-)	15 (2.6)	5 (0.2)	5 (1.2)	29 (0.2)
Any foster or adoptive sibling	14 (0.1)	3 (0.1)	0 (-)	0 (-)	3 (0.1)	10 (3.7)	30 (0.2)
Total observations	9209 *9733.8*	2189 *2212.6*	46 *39.0*	561 *576.0*	2938 *2688.4*	303 *325.2*	15246 *15575.1*
Sign. (Any natural sibling)							P=0.000
Sign. (Older natural sibling)							P=0.000
Sign. (Younger natural sibling)							P=0.000
Sign. (Any half-sibling)							P=0.000
Sign. (Older half-sibling)							P=0.000
Sign. (Younger half-sibling)							P=0.000
Sign. (Any step-sibling)							P=0.000
Sign. (Older step-sibling)							P=0.000
Sign. (Younger step-sibling)							P=0.000
Sign. (Any foster or adoptive sibling)							P=0.000

Notes: Sample: All families. Table displays unweighted observations and weighted percentages (using weight2). Weighted total observations are in italics.

This section has shown that natural siblings are by far the most common type of sibling and that around three quarters of five-year-olds are living with a natural sibling. About four in ten children experienced the arrival of a younger natural brother and sister in their first five years of life. Children of younger main respondents and children living with both of their natural

parents (either married or cohabiting) were most likely to have a younger natural brother or sister. Although, overall, the arrival of a younger half-sibling was extremely uncommon (2%), around one in three children living with a natural mother and step-father and one in ten children living with a main respondent aged 18 to 24 had this experience.

Children of older parents, those living with cohabiting natural parents, a natural mother and a step-father or a lone parent were most likely to have older half-siblings. These older half-siblings are likely to be from a previous relationship of their mother's, though they may also be the child of their natural father from a prior relationship (in families in which the natural father is present).

The earlier section on family type showed that living with a natural mother and a step-father was much more common in families with younger parents, especially those aged under 25 at MCS 3. This implies that a relatively high proportion of mothers in families containing a step-father at age 5 were teenagers at the birth of the cohort child. For about a third of these young mothers, their new relationship has resulted in a younger half brother or sister for the cohort child.

Half-siblings were also relatively common for black Caribbean children (1 in 5) despite the fact that living with a step-parent was very uncommon for these children. In these families, the half-siblings are almost all older than the cohort child and so likely to be from a prior relationship of their natural mother.

Non-resident fathers

The earlier section on family type showed that about one in five children was living either with their lone natural mother or their natural mother and a step-father at five years. In these families, the child's natural father was not living with them. For a small minority of these families, the child's natural father may have died but in most families he is likely to be living elsewhere. This section provides evidence on frequency of contact with, and the regularity of maintenance payments from, the non-resident natural father.

There is limited but growing body of quantitative evidence in the UK about children's contact with their non-resident fathers and child support. A survey of around 600 non-resident fathers in the UK in 1995-6 found that around 57 per cent reported that they were currently paying child support and 68 per cent reported seeing their child at least one a month, with nearly half seeing their child at least one a week (Bradshaw et al., 1999). These figures are much higher than the equivalent figures reported by lone mothers (Bradshaw and Millar, 1991), and there is some uncertainty about the validity of the findings due to a relatively poor response rate (38%). Work using the 1991 Sweep of the National Child Development Study (1958 cohort) reported that seven in ten fathers who did not live with their children had contact with them (Clarke and Burghes, 1997). More recent work using a small sub-sample of families drawn from the Avon Longitudinal Study of Parents and Children found that eight in ten children had some contact with their non-resident fathers and among those in contact a third saw their children at least weekly (Dunn, 2003). A school-based survey reported that 43 per cent of non-resident fathers had face-to-face contact at least once a week with their child (Welsh et al., 2004). Evidence from the Millennium Cohort Study showed that about half of non-resident fathers were in contact with their nine-month-old children at least once a week and a similar proportion were paying child support (Calderwood et al., 2005).

The sample used in this section is lone natural mother families and families with a natural mother and a step-father in which the natural father is non-resident. The information on contact and maintenance payments is reported by the natural mother as part of the main interview. Frequent contact was defined as seeing the child three or more times a week. Less frequent contact was defined as seeing the child once or twice a week or less often.

This category also includes non-resident parents who are in contact with the child but never see them in person. At MCS 3 the questions about maintenance payments were asked regardless of whether or not the non-resident natural father was in contact. At previous sweeps of the study, this question was only asked if the non-resident father was in contact with the child.

At age 5, one in five (21%) non-resident fathers was in frequent contact, over half (51%) were in less frequent contact and over a quarter (28%) were not in any contact (Table 3.18). Over half (55%) of non-resident fathers did not make any maintenance payments, over a third (37%) paid maintenance regularly and about 1 in 10 (9%) made irregular maintenance payments.

Table 3.18 also shows that there was some variation by country in contact and maintenance payments. In England, Wales and Scotland, contact followed broadly the same pattern. In Wales and Scotland non-resident fathers were slightly more likely to be in frequent contact than in England (23% and 22% respectively compared with 20%) and slightly more likely to be in no contact at all (32% compared with 28%). The pattern in Northern Ireland was slightly different with roughly a third of non-resident fathers in each category: 30 per cent in frequent contact, 37 per cent in less frequent contact and 33 per cent in no contact. Regular maintenance payments were made by around third of non-resident father in all countries though there were some minor differences between countries. Non-resident fathers in England were the most likely to make regular maintenance payments (38%), followed by Scotland (35%), Wales (31%) and Northern Ireland (30%).

Table 3.18
Contact and maintenance payments by non-resident natural father by country

Contact and maintenance payments by non-resident natural father	England	Wales	Scotland	Northern Ireland	UK
Contact					
Frequent (three or more times a week)	442 (20.3)	122 (22.9)	83 (22.1)	98 (30.0)	745 (21.1)
Less frequent (weekly or less often)	1033 (52.4)	218 (45.0)	163 (46.3)	112 (36.9)	1526 (50.9)
None	598 (27.3)	167 (32.1)	120 (31.5)	111 (33.1)	996 (28.0)
Maintenance payments					
Regular	690 (37.7)	141 (30.9)	126 (35.3)	90 (29.9)	1047 (36.6)
Irregular	188 (9.0)	37 (8.2)	23 (6.6)	28 (8.4)	276 (8.9)
None	1195 (53.3)	329 (61.0)	217 (58.1)	203 (61.7)	1944 (54.5)
Total observations	2073 *1677.4*	507 *427.9*	366 *333.0*	321 *291.9*	3267 *3046.0*
Sign. (contact)					P=0.000
Sign. (maintenance)					P=0.037

Notes: Sample: Lone natural mother families and lone natural mother and step-father families. Five observations are excluded because of missing data on country. 228 observations are excluded because of missing data on contact and/or maintenance. Table displays unweighted observations and weighted percentages (country totals using weight1 and UK total using weight2). Weighted total observations are in italics.

Table 3.19
Maintenance payments by non-resident natural father by contact with non-resident natural father

Maintenance payments by non-resident natural father	Frequent (three or more times a week)	Less frequent (weekly or less often)	None	Total
Regular	369 (51.8)	591 (44.4)	90 (11.3)	1050 (36.7)
Irregular	85 (11.1)	161 (10.8)	30 (3.8)	276 (8.9)
None	292 (37.2)	777 (44.8)	876 (84.9)	1945 (54.4)
Total observations	746 *643.3*	1529 *1552.9*	996 *852.9*	3271 *3049.1*
Sign.				P=0.000

Notes: Sample: Lone natural mother families and lone natural mother and step-father families. 228 observations are excluded because of missing data on contact and/or maintenance. Table displays unweighted observations and weighted percentages (using weight2). Weighted total observations are in italics.

Table 3.19 shows that contact patterns and maintenance payments were related to each other. Around 15 per cent of non-resident fathers who were not in any contact with their child still made regular or irregular maintenance payments. Over half (52%) of non-resident fathers who were in frequent contact paid regular maintenance and almost half (44%) of non-resident fathers who were in less frequent contact also paid regular maintenance.

Table 3.20 shows how contact with and maintenance payments from non-resident fathers varied with the age of the natural mother[4]. Around a third of children with mothers aged 18 to 24 and 25 to 29 were not in any contact with their non-resident natural father (38% and 33% respectively) compared with around one in five in other age groups (22% in the 30 to 34 age group, 23% in the 35-39 group and 20% in the 40-plus group). There was also some variation by mother's age in whether contact was frequent or less frequent. Children with mothers aged 30 to 34 and 40 plus were most likely to be in frequent contact with their non-resident father: one in four (25%) compared with one in five (21%) overall.

Around two thirds of children with mothers aged 18 to 24 and 25 to 29 did not receive maintenance payments from their non-resident natural father (66% and 63% respectively) compared with around half in other age groups (45% in the 30 to 34 age group, 46% in the 35-39 age group and 51% in the 40-plus group).

[4] In the sample of families analysed in this section all main respondents were natural mothers.

Table 3.20
Contact and maintenance payments by non-resident natural father by natural mother's age

Contact and maintenance payments by non-resident natural father	18-24	25-29	30-34	35-39	40 plus	Total
Contact						
Frequent (three or more times a week)	141 (20.0)	173 (16.6)	208 (24.8)	136 (21.3)	88 (24.7)	746 (21.1)
Less frequent (weekly or less often)	228 (41.6)	420 (50.0)	410 (52.9)	301 (55.8)	170 (55.3)	1529 (50.9)
None	260 (38.4)	306 (33.4)	199 (22.4)	156 (22.9)	75 (20.1)	996 (28.0)
Maintenance payments						
Regular	163 (27.7)	230 (26.0)	319 (46.4)	231 (46.1)	107 (36.9)	1050 (36.7)
Irregular	37 (6.6)	85 (10.6)	78 (8.4)	44 (7.9)	32 (11.8)	276 (8.9)
None	429 (65.6)	584 (63.4)	420 (45.3)	318 (46.0)	194 (51.3)	1945 (54.4)
Total observations	629 *552.9*	899 *781.0*	817 *779.4*	593 *609.5*	333 *326.3*	3271 *3049.1*
Sign. (contact)						P=0.000
Sign. (maintenance)						P=0.000

Notes: Sample: Lone natural mother families and lone natural mother and step-father families. 228 observations are excluded because of missing data on contact and/or maintenance. Table displays unweighted observations and weighted percentages (using weight2). Weighted total observations are in italics.

Table 3.21 shows that frequent contact with the child was extremely common if the non-resident natural father was in a relationship with the natural mother (80%) and extremely uncommon (6%) if the natural mother had re-partnered and was living with a step-father. If the natural mother was in a non-cohabiting relationship with someone other than the non-resident natural father, frequent contact was slightly less likely than if the natural mother was not in a relationship with anyone (17% compared with 21%).

Almost two thirds (62%) of non-resident natural fathers who were in a relationship with the natural mother made either regular (45%) or irregular (18%) maintenance payments, compared with less than half for other relationship statuses, although a relatively high proportion of this maintenance was irregular. Maintenance payments from a non-resident father were much less dependent than frequency of contact on whether or not the natural mother had a new partner (either co-residential or not co-residential).

Table 3.21
Contact and maintenance payments by non-resident natural father by natural mother's relationship status

Contact and maintenance payments by non-resident natural father	Living with step-father	Lone mother, in a relationship with non-resident natural father	Lone mother, in a relationship	Lone mother, not in a relationship	Lone mother, relationship status not known	Total
Contact						
Frequent (three or more times a week)	39 (6.2)	131 (79.5)	123 (17.4)	357 (21.3)	96 (31.8)	746 (21.1)
Less frequent (weekly or less often)	264 (54.3)	26 (20.5)	371 (53.8)	747 (52.3)	121 (43.3)	1529 (50.9)
None	214 (39.5)	0 (-)	238 (28.8)	459 (26.5)	85 (24.9)	996 (28.0)
Maintenance payments						
Regular	185 (40.8)	69 (44.5)	226 (36.4)	492 (35.2)	78 (33.0)	1050 (36.7)
Irregular	35 (7.8)	25 (17.8)	60 (8.5)	123 (8.4)	33 (10.9)	276 (8.9)
None	297 (51.4)	63 (37.7)	446 (55.1)	948 (56.4)	191 (56.2)	1945 (54.4)
Total observations	517 *530.6*	157 *135.0*	732 *694.5*	1563 *1473.2*	302 *215.9*	3271 *3049.1*
Sign. (contact)						P=0.000
Sign. (maintenance)						P=0.002

Notes: Sample: Lone natural mother families and lone natural mother and step-father families. 228 observations are excluded due to missing data on contact and/or maintenance. Table displays unweighted observations and weighted percentages (using weight2). Weighted total observations are in italics.

As Table 3.22 shows, frequent contact with the child was also less common if the non-resident natural father was in a relationship with someone other than the natural mother (15%) and extremely common (80%) if the non-resident natural father was in a relationship with the natural mother. Just over a third of natural fathers who were not in a relationship were in frequent contact (38%). Maintenance payments by the non-resident father were much less dependent than frequency of contact on whether or not he had a new partner. In fact, non-resident fathers who were in a relationship with someone other than the natural mother were slightly more likely than non-resident fathers who were not in a relationship to pay maintenance: 61 per cent compared with 58 per cent. Non-resident fathers who were in a relationship with the natural mother were the most likely to pay maintenance (62%) but overall there was very little difference between the different groups.

Table 3.22
Contact and maintenance payments by non-resident natural father by non-resident natural father's relationship status

Contact and maintenance payments by non-resident natural father	In a relationship with lone natural mother	In a relationship	Not in a relationship	Relationship status not known	Total
Contact					
Frequent (three or more times a week)	131 (79.5)	134 (15.0)	337 (37.9)	144 (8.7)	746 (21.1)
Less frequent (weekly or less often)	26 (20.5)	738 (85.0)	462 (62.1)	303 (21.8)	1529 (50.9)
None	0 (-)	0 (-)	0 (-)	996 (69.6)	996 (28.0)
Maintenance payments					
Regular	69 (44.5)	404 (50.8)	349 (47.6)	228 (18.5)	1050 (36.7)
Irregular	25 (17.8)	88 (10.0)	81 (10.6)	82 (5.9)	276 (8.9)
None	63 (37.7)	380 (39.1)	369 (41.8)	1133 (75.6)	1945 (54.4)
Total observations	157 *135.0*	872 *915.7*	799 *772.6*	1443 *1225.8*	3271 *3049.1*
Sign. (contact)					P=0.000
Sign. (maintenance)					P=0.000

Notes: Sample: Lone natural mother families and lone natural mother and step-father families. 228 observations are excluded because of missing data on contact and/or maintenance. Table displays unweighted observations and weighted percentages (using weight2). Weighted total observations are in italics.

This section has shown that, overall, seven in ten non-resident fathers were in contact with their child, with a significant minority (1 in 5) in contact three or more times a week. Just less than half of non-resident parents paid child maintenance, including one in seven non-resident fathers who were not in contact with their child. Children of younger mothers (under 30) were the least likely to be in contact with their non-resident natural father and the least likely to receive maintenance payments. However, the relationship status of the child's natural parents seemed to have a larger impact on whether or not they were in contact, and to a lesser extent, received maintenance payments than their mother's age. In particular, if the lone natural mother and non-resident natural father were in a relationship with each other, the non-resident natural father was most likely to be in frequent contact with the child and to make maintenance payments. Conversely, if the natural mother or the non-resident natural father was in a new partnership, the non-resident natural father was least likely to be in frequent contact with the child. The payment of maintenance was not as strongly influenced as frequency of contact by re-partnering by either the natural mother or natural father.

There is clear evidence of continuing relationships between non-resident fathers and their five-year-old children and some evidence of continuing relationships between lone natural mothers and non-resident natural fathers.

Conclusion

Overall, this chapter presents a picture of family life between 9 months and 5 years which is characterised by stability and which is dominated by natural parents. Evidence from MCS 3 showed that over three quarters (77%) of five-year-olds were living with both of their natural parents and that the most common family type, in which over six in ten (63%) children lived,

was married natural parents. A minority of five-year-olds were living with either a lone natural mother (17%) or a natural mother and a step-father (4%).

Longitudinal analysis of family change between MCS 1 and MCS 3 showed that the most common change the children had experienced was the arrival, in four cases out of 10, of a new sibling. As for the parental situation, the vast majority of children (85%) have been in stable family situations in their first five years of life but that a minority have either gained a parent in their household or lost a parent. The parents that children have lost from their households since 9 months are primarily their natural fathers. Children were more likely to have lost their natural father from their household if their parents were living together without being married at 9 months than if their parents were living together and were married to each other at 9 months. Interestingly, most of the parents that children have gained in their household since 9 months were also their natural fathers. A minority of children had gained a step-father but, overall, it was still very uncommon for five-year-olds to be living with a step-father, with only I in 20 in this family situation.

However, for a minority of children their first five years of family life has been characterised by change in their family situation, which has often involved gaining a step-father in their household and perhaps also gaining a younger half-sibling as a result of their mother's new relationship. It is primarily children born to teenage mothers who have experienced these kinds of family changes. Of children with mothers in this age group, only one in ten (12%) was living with married natural parents at age 5, almost half (48%) were living with a lone natural mother and one in seven (14%) was living with a natural mother and a step-parent. Almost four in ten (38%) had experienced family change since they were 9 months old. One in seven (16%) was living with at least one half-sibling, usually younger than them.

There is evidence that child poverty is associated with living in lone mother families and that the experience of family change or living apart from natural fathers can be associated with negative outcomes for children. As these experiences are particularly concentrated among children of young mothers, these findings provide support for policies to encourage young women to delay childbearing and reduce the teenage pregnancy rate in the UK. They also imply that families with young mothers may benefit from further additional targeted support from government policy.

This chapter also provides evidence of the continuing relationships between five-year-olds and their non-resident natural fathers. In relation to implications for policy towards non-resident fathers, these results show that in the majority of families continuing contact is taking place and it is often very frequent but that a much lower proportion of non-resident fathers pay child maintenance. However, this finding should be interpreted with caution as there is no evidence here about the reasons for non-payment of maintenance or the ability of non-resident fathers to do so. In addition, it should be noted that the evidence presented here is the mother's report of receiving child maintenance, which may be different from the father's report.

Finally, it should be noted that the relationships described in this chapter are all bivariate and as such should be interpreted with caution. This evidence does not take account of the relationships between the different factors considered in this chapter nor does it consider the influence of other factors.

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Chapter 4

PARENTING

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Introduction

The Millennium Cohort Study includes data on various aspects of parenting: discipline practices, beliefs and activities. Parenting is of great interest to those in research and policy because of its potential to have strong and lasting effects and because it mediates or moderates external influences on children.

Many aspects of parenting are known to be related to child outcomes, both during childhood and later in life. Parenting and disciplinary style have been found to be associated with child and adolescent behaviour (Amato and Fowler, 2002; Sandstrom, 2007; Simons and Conger, 2007) and school grades (Amato and Fowler, 2002; Dornbusch, Ritter, Leiderman, Roberts and Fraleigh, 1987).

Parental literacy-related beliefs and activities (such as shared book reading) have been found to be related to children's early literacy development (Bennett, Weigel, and Martin, 2002; Bingham, 2007, and Richman and Colombo, 2007). Bingham (2007) found that mothers' education and beliefs about literacy development were related to the emotional and instructional quality of their book-reading interactions with their children.

Though research has found associations between parenting behaviours and values and child outcomes, it is important to note that the causality of these relationships is not clear and that it is very difficult to untangle the effects of a given parental variable from the effects of other, co-related parental and family variables.

This chapter describes the parenting items in MCS 3 and presents the responses to the questions. Main and partner respondents were asked about their discipline approaches, activities with the cohort child, feelings about time spent with the child, and parenting attitudes. Answers are reported separately for main and partner respondents. Responses to questions are shown for main respondents who are natural, adoptive, foster, or step-mothers of the cohort children. Responses to questions to the partner respondents are reported for those who are natural, adoptive, foster, or step-fathers of the cohort children.

All the tables are to be found at the end of the chapter.

Time spent with child

Main and partner respondents were asked how they felt about the amount of time they had to spend with their children. Overall, mothers were more likely to be satisfied with the time available (44%) or to feel they spent more than enough or too much time with their children (24%) than were fathers (32% and 9%).

Table 4.1 shows mothers' responses to this question. Mothers in Northern Ireland were more likely to say they spend more than enough time with their children than were mothers in other countries. Pakistani and Bangladeshi mothers reported the highest levels of satisfaction with the time they had with their children. Employed mothers were less satisfied in this respect than were mothers who were not working. There was a trend for mothers with higher qualifications to be less satisfied with the amount of time they had with their children;

this could be partly because they are more likely to be employed. Lone mothers were more satisfied with the amount of time they had with their children; this may initially seem surprising, but lone mothers were less likely to be employed than were mothers with partners.

Fathers' responses to the question about satisfaction with the amount of time they had to spend with their children are shown in Table 4.2. Their responses are similar to the pattern for mothers.

Family activities

Main and partner respondents were asked how often they engaged in a number of activities with their children. A selection of their responses is shown in Tables 4.3 to 4.10. A full list of the activities that both main and partner respondents were asked about were reading to their child; telling stories not from a book; doing musical activities; drawing, painting, or making things; playing sports or physically active games; playing with toys or games indoors; and going to a park or outdoor playground with their children.

The extent to which parents engage in such activities may be influenced by a number of factors including whether or not they work, how much time they have at home to spend with their children, how many other children they have, and what resources are available to them. The list of activities included in questions is not exhaustive and parents may spend time with their children in activities that were not asked about. There may specifically be culture-specific activities that were not included in the questionnaire.

Mothers reported engaging in all activities more often than did fathers, with the exception of playing sports or physically active games. Mothers reported reading to their children more frequently than any of the other activities.

Similar patterns can be seen across the various activities and for both mothers and fathers. Parents in England tended to engage in the activities less frequently than those in other countries, with parents in Scotland and Northern Ireland engaging in many activities more frequently than did parents in England and Wales. Pakistani and Bangladeshi parents tended to engage in activities less frequently than other parents and black parents also reported slightly lower frequency of involvement.

Differences by parental employment status were not consistent. Parents who were not working were more likely to be clustered at each end of the response options; for most activities, a higher percentage of parents who were not working reported engaging in the activity every day and a higher percentage also reported never engaging in the activity. Other than this, there were few consistent differences. Mothers who were employed reported more frequently engaging in sports and physically active games but less frequently reading to their children. Employed fathers read to their children more frequently, but were less often engaged in story-telling and musical activities.

Differences across qualification levels were, however, highly consistent. For almost every activity, parents with higher qualification levels reported engaging in the activity more frequently than did parents with lower qualification levels. The exceptions were musical activities and visits to a park or playground.

For both mothers and fathers, rates of employment rise in step with increasing levels of qualification. This may account for some of the inconsistent patterns seen for employment status. Parents who were not working were more likely to have low qualifications. Because those with lower qualification levels engaged less frequently in activities with their children, it could be predicted that non-working parents would similarly engage in these activities less

frequently. At the same time, parents who are not working may be expected to engage in activities more frequently with their children because they may have more free time. These contradictory expectations may explain why higher rates both of engaging in activities every day and of never engaging in them were seen for parents who were not working.

Lone mothers tended to report engaging in activities more frequently than did mothers who had partners. This is consistent with lone mothers having greater reported satisfaction with the amount of time they had to spend with their children and with their having lower rates of employment.

Two questions were asked only of partners: how often they put their children to bed and how often they looked after their children on their own. Responses are shown in Tables 4.11 and 4.12. In most cases, the patterns were the same as those described above for the other activities. It is interesting that employed fathers put their children to bed more frequently but less frequently watched them on their own. Fathers who work are most likely to take advantage of the opportunity to spend time with their children after work, at which point the children would be likely to be getting ready for bed. Fathers who do not work and are able to spend time with their children at other times of the day are probably less likely to focus on them at this point of the day.

Discipline

In the self-completion element of the survey, mothers were asked how frequently they used specific methods of discipline when their children were naughty. This included ignoring them, smacking them, shouting at them, sending them to their room or the naughty chair, taking treats away, telling them off, and bribing them (e.g., with treats or sweets). A selection of responses appears in Tables 4.13 to 4.16.

Unsurprisingly, mothers used a variety of methods and some more frequently than others. What was perhaps surprising was that, overall, there was little systematic variation in the frequency that mothers used these different methods, depending on their different characteristics. Where differences did emerge, they were most frequently between older and younger mothers and between those with higher qualifications and those with few or no qualifications. As there is a strong relationship between age and qualification level, these are likely to be the same mothers.

Ignoring child when naughty

Mothers were asked how often they ignored their children when they were naughty (Table 4.13). It is very hard to know exactly how this question was interpreted, as ignoring bad behaviour can be seen as both a negative and positive discipline reaction. In some popular television programmes offering parenting advice (such as *Supernanny*), ignoring bad behaviour has been suggested as a tool to combat a situation where a child seeks any attention (even negative). Around half of all mothers did this rarely or never and about a third ignored bad behaviour only sometimes. Older mothers (40 or over) were less likely to use this form of discipline frequently than younger mothers, particularly those under 30. Around 14 per cent of mothers over 40 said they ignored bad behaviour often or daily compared to 23 per cent of those under 30.

There was also a small variation between how frequently mothers with tertiary qualification level ignored behaviour compared to mothers with fewer qualifications. Around 16 per cent of mothers with NVQ5 said they ignored bad behaviour often or daily compared to 21 per cent of those with NVQ1.

Smacking child

Smacking was not a common form of punishment (Table 4.14). However, mothers in Northern Ireland were a little more likely to smack than mothers in the other UK countries. Thirty-five per cent of mothers in Northern Ireland said they never smacked their child compared to 49 per cent of mothers in Wales.

Shouting at child

Very few mothers reported that they never shouted at their child when they were naughty (3%). While most mothers reported that they used shouting as a form of discipline it was fairly evenly spread in frequency with around 25 per cent of mothers doing so rarely, 36 per cent sometimes and 31 per cent often (Table not shown).

There was very little variation between mothers in different circumstances. However, even though the difference was small, mothers under 30 were twice as likely as those over 40 to report using this form of discipline every day (7% compared to 3%).

Working mothers were also slightly more likely to say that they sometimes used this form of discipline (38% compared to 33% of those not working).

Lone mothers were somewhat more likely to report that they rarely or never shouted at their child than were those in two-parent families (34% compared to 26%).

Sending child to their bedroom or naughty chair

Sending a child to their bedroom or the naughty chair was another form of discipline commonly used by mothers, with nearly two thirds of them (64%) reporting using this form at least sometimes. Younger mothers were much more likely than older others to report sending their children to their bedroom or using a naughty chair often or daily. Twice as many mothers under 30 (35%) did this often or daily compared to those over 40 (15%). (Table not shown.)

Mothers with no qualifications were a little less likely to say they never or rarely sent their child to their room; 40 per cent of those with no qualifications said they never or rarely did this compared to 32 per cent of mothers with NVQ3.

Lone mothers were slightly more likely to use this form of punishment more frequently than mothers with a partner (30% and 24%, respectively).

Taking treats away

Taking treats away was another tactic that most mothers used at least sometimes (65%), but there was quite a lot of variation in how often different-aged mothers did so (Table not shown). Mothers under 30 were much more likely to take treats away in response to naughty behaviour than were mothers over 40. Mothers with no qualifications were more likely than higher qualified mothers to report never or rarely taking treats away.

Telling child off/ Reasoning with a naughty child

Nearly all mothers reported telling their child off when they were naughty and nearly 60 per cent did this often or daily (Table 4.15). Once again there were some differences between how frequently older and younger mothers used this form of discipline. Mothers aged over 40 were half as likely as those under 30 to never or rarely tell their child off (8% compared

with 15%). Conversely, the youngest mothers were the most likely to tell children off for bad behaviour every day (15%).

There was a large variation between how often higher qualified mothers, and those with few or no qualifications, told their child off. Over half (52%) of mothers with NVQ4 or 5 reported telling their child off often compared to a third (33%) of those with no qualifications.

Two thirds of mothers said that they usually reasoned with their child when he or she was naughty (more often than 'sometimes').There were differentials by education of mother, with nearly three quarters of the graduates (NVQ 4 and 5) giving this response and half (51 per cent) of those with no qualifications (Table not shown).

Bribing child

While two thirds of mothers reported that they never or rarely resorted to bribing children when they were naughty, mothers with higher qualifications (NVQ 3 or above) were more likely than those with few or none to use bribes (Table not shown).

Parenting competence

Mothers and fathers were asked to rate how they felt about being a parent. The majority of both mothers and fathers thought they were better than average or very good parents, particularly the fathers.

Responses for mothers are shown in Table 4.16. Younger mothers (under 30) felt a little less confident than did older parents in their parenting competence. Fifty-four per cent of those under 30 felt they were better than average or very good compared to over 60 per cent of those over 30. If confidence increases with age, it would be expected that these small differences will all but have disappeared by the time the children are aged seven. However, it may also be that more competent men and women waited until they were older to have children. Pakistani, Bangladeshi and black mothers were more likely to feel they were very good parents than were white mothers.

Mothers with the highest qualifications (NVQ 4 or higher) were more likely to feel they were better than average or very good parents than were those with fewer qualifications. Over two thirds of the highest-qualified mothers rated themselves positively as a parent compared to around a half of mothers with NVQ1.

There was almost no variation between fathers of different ages in how they felt they were doing as a parent (Table 4.17). But, as with mothers, there was some difference between how fathers from different ethnicities rated their parenting competence. A greater proportion of black and Asian fathers regarded themselves as better than average or very good parents than did white fathers (77% of black, 74% of Indian and 72% of Pakistani or Bangladeshi fathers compared to 68% of white fathers).

Although generally a greater proportion of fathers with higher qualifications (NVQ3 or higher) felt they were a better-than-average or very good parent, over 40 per cent of fathers with no qualifications felt they were a very good parent compared to just over 30 per cent of those with NVQ 5.

Schedule regularity

Main respondents were asked whether their children went to bed and ate meals at regular times (see Tables 4.18 for bedtime). Overall, 91 per cent reported that their children went to

bed at a regular time and 94 per cent said that they ate meals at a regular time usually or always.

Mothers in Wales reported less regularity in bedtime than did mothers in England. Mothers in both England and Wales reported less regularity in mealtimes than did mothers in Scotland and Northern Ireland. Pakistani and Bangladeshi, black, and other ethnicity mothers reported less mealtime regularity than did white, Indian, and mothers of mixed ethnicity.

For both bedtimes and mealtimes, mothers with higher qualifications reported greater regularity than did mothers with lower qualifications and mothers with partners reported greater regularity than did lone mothers.

Conclusion

This chapter has provided a description of the MCS 3 parenting data, which cover a variety of aspects of behaviour and attitudes. These were found to vary with some parental characteristics, including country of residence, employment, ethnicity and qualification level.

The finding that parents with lower qualification levels engaged in education activities (such as reading to their children) less frequently than do parents with higher qualification levels is consistent with family literacy ideas that hold that parents with higher literacy skills will pass these on to their children and that children of parents with lower literacy skills are therefore disadvantaged (Hannon, 1999). Such views and findings are often used to support programmes to improve adult literacy and other skills.

A note of caution about causality and the difficulty of untangling co-related family and parenting variables is, however, important here. For example, does reading to children itself improve children's literacy skills? Or do other factors both make reading to children more likely and lead to better literacy skills? The answer to this first question is important to policy; if the answer is yes, programmes to improve adult literacy skills and promote parental reading to children will have an effect on child literacy skills. If the answer is no, such programmes will have little or no effect. Similar questions can be applied to other parenting behaviours and styles and other child outcomes. One of the important features of the MCS data is the scope to look at the behaviours of parents within the same families, which would add enormously to the untangling of parenting behaviours.

This chapter contains only descriptive data and cannot address these issues. It does provide a description of the rich data on parenting activities, beliefs, and styles that, when linked to data on child outcomes, can be used to help address these questions. We have not attempted to link the earlier data from age 9 months and age 3, which would help to answer some of these questions. The fact that the data are longitudinal also will allow for the analysis of how parenting at different child ages relates to outcomes.

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Table 4.1
How do you feel about the amount of time you have available to spend with your child?
Mothers

	Weighted Percentage (Unweighted Observations)					
	Too Much	More than Enough	Just Enough	Not Quite Enough	Nowhere Near Enough	Total Obs
All Responding Mothers	2.1 (410)	21.6 (3571)	44.4 (6406)	25.9 (3512)	6.0 (811)	14710
Country						
England	2.0 (282)	20.9 (2156)	44.8 (4115)	26.2 (2242)	6.1 (500)	9295
Wales	2.2 (54)	22.8 (525)	41.9 (880)	26.6 (536)	6.5 (137)	2132
Scotland	2.0 (39)	24.4 (434)	43.1 (757)	25.6 (453)	5.1 (94)	1777
Northern Ireland	2.1 (35)	29.3 (456)	44.0 (654)	19.3 (281)	5.4 (80)	1506
					p=0.000	
Mother's Age						
20 to 29	3.3 (142)	27.8 (1088)	40.8 (1480)	23.2 (753)	4.9 (161)	3624
30 to 39	1.8 (203)	20.0 (1903)	45.7 (3805)	26.3 (2091)	6.2 (492)	8494
40 and above	1.6 (65)	19.7 (578)	44.4 (1120)	27.9 (668)	6.4 (156)	2587
					p=0.000	
Mother's Ethnicity						
White	1.6 (259)	20.9 (2923)	44.5 (5513)	26.7 (3187)	6.2 (752)	12634
Mixed	3.3 (8)	28.6 (42)	38.9 (51)	24.3 (28)	4.8 (8)	137
Indian	7.4 (33)	25.7 (105)	40.0 (141)	23.0 (78)	3.9 (9)	366
Pakistani or Bangladeshi	6.3 (52)	35.5 (324)	47.8 (383)	9.2 (71)	1.3 (9)	839
Black	7.1 (39)	23.2 (122)	39.9 (217)	22.4 (99)	7.4 (25)	502
Other	5.8 (19)	21.8 (54)	47.4 (98)	21.4 (47)	3.7 (8)	226
					p=0.000	
Mother's Employment Status						
Not employed	4.0 (328)	31.5 (2223)	45.9 (2822)	15.6 (873)	3.0 (170)	6416
Employed	0.8 (82)	15.0 (1348)	43.5 (3583)	32.8 (2639)	7.9 (641)	8293
					p=0.000	
Mother's Highest Qualification						
No qualifications	7.1 (132)	32.9 (662)	43.2 (778)	13.0 (213)	3.8 (53)	1838
NVQ1	3.1 (48)	27.6 (327)	43.8 (478)	22.3 (215)	3.2 (40)	1108
NVQ2	1.9 (100)	23.1 (1032)	43.9 (1736)	24.7 (927)	6.5 (238)	4033
NVQ3	1.0 (37)	23.1 (535)	43.0 (918)	25.9 (551)	7.0 (139)	2180
NVQ4	1.0 (51)	16.1 (705)	47.2 (1837)	29.6 (1138)	6.1 (252)	3983
NVQ5	0.8 (13)	13.1 (154)	40.4 (464)	38.0 (413)	7.8 (78)	1122
					p=0.000	
Family Type						
Two-parent	1.5 (258)	20.5 (2702)	45.5 (5265)	26.7 (2930)	5.8 (643)	11798
Lone parent	4.5 (152)	26.8 (869)	39.6 (1141)	22.4 (582)	6.8 (168)	2912
					p=0.000	

Notes: Sample includes all mothers responding to question. 16 responses of 'not sure' have been excluded. Table displays unweighted observations and weighted percentages (country means using weight1, UK means using weight2).

Table 4.2
How do you feel about the amount of time you have available to spend with your child?
Fathers

	Weighted Percentage (Unweighted Observations)					
	Too Much	More than Enough	Just Enough	Not Quite Enough	Nowhere Near Enough	Total Obs
All Responding Fathers	0.6 (75)	8.0 (943)	32.4 (3419)	40.8 (3984)	18.1 (1686)	10107
Country						
England	0.7 (54)	7.8 (587)	32.3 (2157)	40.7 (2491)	18.6 (1094)	6383
Wales	0.7 (10)	8.2 (131)	33.4 (478)	39.1 (557)	18.5 (287)	1463
Scotland	0.6 (8)	9.9 (129)	31.2 (395)	42.7 (530)	15.6 (192)	1254
Northern Ireland	0.2 (3)	8.7 (96)	37.5 (389)	41.7 (406)	12.0 (113)	1007
					p=0.000	
Father's Age						
20 to 29	1.2 (13)	11.2 (128)	36.2 (390)	37.7 (372)	13.6 (143)	1046
30 to 39	0.6 (38)	7.0 (466)	30.8 (1790)	42.1 (2305)	19.6 (995)	5594
40 and above	0.6 (24)	8.9 (348)	33.9 (1235)	39.7 (1305)	16.9 (546)	3458
					p=0.000	
Father's Ethnicity						
White	0.5 (49)	7.6 (740)	31.9 (2866)	41.4 (3554)	18.6 (1555)	8764
Mixed	0.0 (0)	10.0 (10)	29.0 (23)	33.6 (29)	27.4 (15)	77
Indian	1.4 (4)	12.9 (44)	29.6 (92)	39.6 (103)	16.5 (34)	277
Pakistani or Bangladeshi	3.3 (16)	17.2 (99)	41.7 (249)	29.1 (145)	8.7 (33)	542
Black	0.2 (1)	8.9 (24)	45.9 (107)	34.3 (68)	10.7 (22)	222
Other	2.5 (4)	8.9 (22)	36.6 (57)	41.2 (55)	10.8 (14)	152
					p=0.000	
Father's Employment Status						
Not employed	5.4 (47)	31.7 (311)	44.4 (424)	15.3 (114)	3.2 (28)	924
Employed	0.3 (28)	6.2 (632)	31.5 (2994)	42.8 (3870)	19.3 (1658)	9182
					p=0.000	
Father's Highest Qualification						
No qualifications	1.9 (23)	17.9 (206)	38.6 (434)	30.8 (281)	10.8 (90)	1034
NVQ1	1.3 (10)	10.0 (66)	33.8 (214)	38.1 (203)	16.7 (91)	584
NVQ2	0.6 (16)	8.8 (234)	31.8 (844)	38.7 (972)	20.2 (472)	2538
NVQ3	0.2 (5)	7.6 (127)	30.8 (469)	40.8 (603)	20.6 (288)	1492
NVQ4	0.3 (6)	5.8 (158)	32.0 (836)	44.4 (1174)	17.5 (454)	2628
NVQ5	0.4 (3)	4.6 (71)	30.7 (362)	46.4 (525)	18.0 (193)	1154
					p=0.000	

Notes: Sample includes all fathers responding to question. 18 responses of 'not sure' have been excluded. Table displays unweighted observations and weighted percentages (country means using weight1, UK means using weight2).

Table 4.3
How often do you read to your child? Mothers

	Weighted Percentage (Unweighted Observations)						
	Every Day	Several Times a Week	One or Two Times a Week	One or Two Times a Month	Less Often	Not at All	Total Obs
All Responding Mothers	52.5 (7571)	29.0 (4182)	13.8 (2158)	2.4 (381)	1.3 (222)	1.0 (230)	14744
Country							
England	52.0 (4665)	29.5 (2726)	13.8 (1384)	2.4 (233)	1.3 (138)	1.0 (172)	9318
Wales	49.9 (1016)	28.2 (621)	16.3 (366)	2.6 (66)	1.9 (42)	1.0 (27)	2138
Scotland	55.9 (980)	27.1 (485)	12.5 (230)	2.4 (45)	1.4 (26)	0.7 (14)	1780
Northern Ireland	60.9 (910)	23.8 (350)	11.3 (178)	2.2 (37)	0.9 (16)	1.0 (17)	1508
						p=0.000	
Mother's Age							
20 to 29	47.5 (1730)	30.6 (1061)	16.2 (613)	2.9 (111)	1.9 (71)	0.9 (53)	3639
30 to 39	53.2 (4423)	28.9 (2425)	13.4 (1195)	2.3 (214)	1.2 (114)	1.0 (134)	8505
40 and above	55.9 (1415)	27.7 (695)	12.2 (350)	2.2 (55)	1.1 (37)	1.0 (43)	2595
						p=0.000	
Mother's Ethnicity							
White	53.4 (6685)	29.1 (3599)	13.2 (1751)	2.5 (332)	1.2 (169)	0.7 (117)	12536
Mixed	48.3 (64)	31.8 (44)	16.2 (22)	1.9 (3)	1.4 (3)	0.3 (2)	138
Indian	47.3 (170)	30.6 (106)	17.2 (68)	1.2 (7)	2.5 (8)	1.2 (7)	366
Pakistani or Bangladeshi	41.3 (329)	25.9 (226)	20.2 (173)	2.4 (22)	3.2 (25)	7.1 (70)	845
Black	41.9 (209)	30.7 (148)	20.5 (107)	2.1 (10)	2.1 (13)	2.6 (20)	507
Other	52.5 (111)	23.5 (57)	15.7 (36)	3.2 (7)	1.2 (4)	4.0 (14)	229
						p=0.000	
Mother's Employment Status							
Not employed	52.9 (3209)	26.5 (1706)	14.8 (1028)	2.5 (179)	1.8 (133)	1.7 (177)	6432
Employed	52.3 (4359)	30.7 (2475)	13.1 (1128)	2.4 (202)	1.0 (89)	0.5 (52)	8305
						p=0.000	
Mother's Highest Qualification							
No qualifications	40.2 (715)	25.6 (456)	21.5 (397)	2.8 (63)	4.4 (83)	5.4 (136)	1850
NVQ1	43.5 (484)	30.3 (329)	20.2 (224)	3.0 (34)	2.4 (26)	0.8 (12)	1109
NVQ2	48.3 (1936)	30.1 (1206)	16.3 (682)	3.5 (134)	1.2 (48)	0.6 (35)	4041
NVQ3	54.0 (1151)	30.3 (659)	11.6 (270)	2.5 (62)	1.1 (24)	0.5 (16)	2182
NVQ4	60.2 (2401)	28.3 (1109)	9.5 (395)	1.3 (53)	0.5 (20)	0.2 (7)	3985
NVQ5	60.1 (689)	28.0 (301)	9.1 (103)	1.9 (22)	0.3 (4)	0.6 (6)	1125
						p=0.000	
Family Type							
Two-parent	53.1 (6150)	29.2 (3384)	13.2 (1652)	2.5 (313)	1.2 (162)	0.8 (154)	11661
Lone parent	49.9 (1421)	27.9 (798)	16.4 (506)	2.0 (68)	1.8 (60)	2.0 (76)	2929
						p=0.000	

Notes: Sample includes all mothers responding to question. Table displays unweighted observations and weighted percentages (country means using weight1, UK means using weight2).

Table 4.4
How often do you read to your child? Fathers

	Weighted Percentage (Unweighted Observations)						
	Every Day	Several Times a Week	One or Two Times a Week	One or Two Times a Month	Less Often	Not at All	Total Obs
All Responding Fathers	15.7 (1610)	34.4 (3284)	32.1 (3228)	10.0 (1050)	4.6 (554)	3.2 (403)	10129
Country							
England	15.1 (954)	34.4 (2066)	32.7 (2129)	10.0 (642)	4.6 (347)	3.2 (260)	6398
Wales	14.6 (196)	32.0 (449)	30.8 (463)	12.5 (188)	5.6 (95)	4.4 (77)	1468
Scotland	19.9 (247)	36.7 (452)	28.4 (360)	8.6 (109)	4.0 (53)	2.4 (33)	1254
Northern Ireland	21.2 (213)	32.6 (317)	27.3 (276)	10.8 (111)	5.2 (59)	3.0 (33)	1009
						p=0.000	
Father's Age							
20 to 29	13.8 (150)	24.4 (250)	36.1 (374)	12.7 (131)	7.5 (82)	5.6 (63)	1050
30 to 39	16.0 (896)	35.0 (1858)	32.2 (1790)	9.7 (567)	4.0 (277)	3.1 (214)	5602
40 and above	15.7 (562)	35.8 (1174)	31.0 (1063)	9.9 (351)	4.9 (193)	2.8 (125)	3468
						p=0.000	
Father's Ethnicity							
White	16.0 (1421)	35.0 (2924)	31.8 (2766)	10.1 (927)	4.3 (445)	2.8 (296)	8483
Mixed	8.0 (7)	40.9 (30)	36.1 (27)	9.9 (8)	2.8 (4)	2.3 (1)	77
Indian	9.4 (27)	36.1 (88)	38.8 (115)	6.5 (18)	5.4 (17)	3.8 (13)	278
Pakistani or Bangladeshi	14.9 (85)	20.2 (110)	32.6 (174)	10.1 (49)	8.4 (53)	13.8 (73)	544
Black	12.5 (36)	33.1 (74)	35.5 (73)	9.2 (23)	9.1 (16)	0.6 (3)	225
Other	15.3 (25)	23.1 (39)	27.3 (43)	12.9 (17)	11.6 (14)	9.8 (14)	152
						p=0.000	
Father's Employment Status							
Not employed	18.6 (163)	25.5 (233)	30.4 (290)	7.8 (72)	9.2 (80)	8.5 (94)	932
Employed	15.5 (1447)	35.1 (3051)	32.2 (2936)	10.2 (978)	4.3 (474)	2.8 (309)	9195
						p=0.000	
Father's Highest Qualification							
No qualifications	13.3 (144)	18.0 (189)	30.3 (315)	13.9 (136)	11.1 (115)	13.4 (140)	1039
NVQ1	11.0 (66)	28.9 (151)	37.2 (216)	10.0 (67)	6.9 (46)	6.0 (40)	586
NVQ2	14.1 (365)	28.4 (704)	36.4 (902)	12.6 (323)	6.3 (165)	2.2 (81)	2540
NVQ3	16.3 (229)	33.0 (483)	32.8 (496)	10.5 (167)	5.0 (85)	2.3 (34)	1494
NVQ4	17.5 (475)	43.6 (1105)	28.4 (757)	8.0 (210)	1.5 (56)	1.0 (27)	2630
NVQ5	18.2 (231)	43.7 (496)	28.9 (303)	5.7 (76)	1.5 (24)	2.0 (27)	1157
						p=0.000	

Notes: Sample includes all fathers responding to question. Table displays unweighted observations and weighted percentages (country means using weight1, UK means using weight2).

Table 4.5
How often do you do musical activities with your child? Mothers

	Weighted Percentage (Unweighted Observations)						
	Every Day	Several Times a Week	One or Two Times a Week	One or Two Times a Month	Less Often	Not at All	Total Obs
All Responding Mothers	37.0 (5540)	28.5 (4153)	21.5 (3062)	7.3 (988)	3.6 (569)	2.2 (429)	14741
Country							
England	36.3 (3319)	28.3 (2584)	21.9 (1993)	7.5 (673)	3.8 (408)	2.3 (338)	9315
Wales	39.5 (868)	29.6 (613)	20.0 (430)	5.9 (117)	3.8 (78)	1.3 (32)	2138
Scotland	40.6 (729)	29.0 (517)	19.4 (345)	6.9 (116)	2.5 (45)	1.5 (28)	1780
Northern Ireland	41.4 (624)	29.7 (439)	19.2 (294)	5.6 (82)	2.3 (38)	1.9 (31)	1508
						p=0.000	
Mother's Age							
20 to 29	47.0 (1681)	26.4 (944)	18.0 (655)	4.0 (151)	2.6 (118)	2.0 (90)	3639
30 to 39	36.1 (3089)	29.8 (2494)	21.6 (1790)	7.1 (569)	3.5 (322)	1.9 (238)	8502
40 and above	29.1 (767)	26.6 (714)	24.7 (617)	11.4 (267)	4.9 (129)	3.3 (101)	2595
						p=0.000	
Mother's Ethnicity							
White	37.7 (4962)	28.8 (3630)	21.6 (2638)	7.4 (841)	3.1 (389)	1.4 (191)	12460
Mixed	42.5 (61)	26.5 (35)	16.0 (22)	6.3 (10)	5.0 (5)	3.7 (5)	138
Indian	37.4 (123)	23.2 (85)	21.1 (84)	5.7 (21)	6.3 (26)	6.3 (27)	366
Pakistani or Bangladeshi	21.5 (174)	24.4 (205)	20.3 (161)	8.0 (69)	10.6 (93)	15.1 (142)	844
Black	33.3 (162)	26.7 (142)	20.4 (97)	5.5 (30)	6.9 (33)	7.3 (43)	507
Other	25.7 (55)	25.1 (55)	22.4 (58)	7.8 (17)	9.5 (23)	9.5 (21)	229
						p=0.000	
Mother's Employment Status							
Not employed	39.1 (2487)	28.3 (1757)	19.1 (1220)	6.5 (385)	3.6 (273)	3.5 (309)	6431
Employed	35.6 (3051)	28.6 (2395)	23.0 (1840)	7.9 (603)	3.7 (296)	1.3 (118)	8303
						p=0.000	
Mother's Highest Qualification							
No qualifications	38.4 (667)	25.2 (462)	18.1 (330)	6.1 (106)	5.0 (105)	7.2 (179)	1849
NVQ1	35.8 (412)	26.6 (292)	23.8 (251)	6.9 (73)	4.0 (46)	2.9 (35)	1109
NVQ2	37.0 (1556)	29.6 (1171)	21.4 (843)	6.8 (254)	3.6 (147)	1.6 (68)	4039
NVQ3	38.9 (861)	29.1 (619)	20.4 (448)	6.9 (143)	3.3 (76)	1.4 (35)	2182
NVQ4	36.4 (1471)	29.2 (1191)	21.8 (846)	8.2 (296)	3.3 (128)	1.1 (53)	3985
NVQ5	37.0 (429)	27.2 (317)	23.6 (248)	8.0 (80)	3.0 (36)	1.2 (15)	1125
						p=0.000	
Family Type							
Two-parent	34.7 (4169)	29.0 (3388)	22.6 (2576)	7.9 (860)	3.8 (473)	2.1 (347)	11466
Lone parent	47.8 (1371)	26.1 (765)	16.2 (486)	4.4 (128)	3.0 (96)	2.6 (82)	2928
						p=0.000	

Notes: Sample includes all mothers responding to question. Table displays unweighted observations and weighted percentages (country means using weight1, UK means using weight2).

Table 4.6
How often do you play sports or physically active games with your child? Mothers

	Weighted Percentage (Unweighted Observations)						
	Every Day	Several Times a Week	One or Two Times a Week	One or Two Times a Month	Less Often	Not at All	Total Obs
All Responding Mothers	6.0 (989)	17.6 (2594)	36.4 (5213)	18.5 (2546)	13.5 (2037)	7.9 (1362)	14741
Country							
England	5.9 (568)	17.4 (1560)	36.2 (3227)	18.8 (1657)	13.7 (1331)	8.1 (974)	9317
Wales	8.3 (190)	18.9 (402)	38.3 (800)	15.6 (335)	12.5 (265)	6.4 (146)	2138
Scotland	5.1 (92)	17.7 (308)	38.4 (678)	18.9 (328)	13.3 (246)	6.6 (126)	1778
Northern Ireland	8.8 (139)	22.2 (324)	33.7 (508)	15.7 (226)	12.3 (195)	7.3 (116)	1508
						p=0.000	
Mother's Age							
20 to 29	7.9 (287)	17.9 (656)	34.5 (1242)	16.3 (590)	14.7 (517)	8.6 (347)	3639
30 to 39	5.8 (555)	17.8 (1498)	37.5 (3090)	19.0 (1498)	12.7 (1116)	7.2 (745)	8502
40 and above	4.7 (147)	16.8 (439)	35.2 (881)	19.3 (457)	15.0 (404)	9.1 (267)	2595
						p=0.000	
Mother's Ethnicity							
White	6.1 (857)	17.9 (2286)	37.2 (4646)	19.0 (2273)	13.1 (1690)	6.6 (898)	11752
Mixed	7.6 (12)	16.5 (21)	35.5 (42)	13.8 (21)	15.2 (25)	11.5 (17)	138
Indian	6.7 (25)	15.0 (61)	36.9 (134)	11.6 (37)	15.1 (52)	14.7 (57)	366
Pakistani or Bangladeshi	5.0 (45)	11.9 (104)	24.1 (195)	13.7 (109)	16.5 (138)	28.8 (254)	845
Black	5.0 (36)	15.3 (80)	26.5 (127)	15.6 (72)	21.1 (98)	16.6 (94)	507
Other	4.2 (13)	19.3 (42)	26.9 (66)	17.2 (33)	17.0 (33)	15.3 (42)	229
						p=0.000	
Mother's Employment Status							
Not employed	7.0 (479)	17.5 (1104)	33.3 (2054)	15.9 (974)	15.3 (976)	11.1 (844)	6431
Employed	5.4 (509)	17.7 (1489)	38.6 (3157)	20.2 (1572)	12.4 (1060)	5.7 (516)	8303
						p=0.000	
Mother's Highest Qualification							
No qualifications	7.9 (145)	14.2 (278)	27.0 (485)	14.0 (237)	16.9 (308)	20.0 (396)	1849
NVQ1	6.4 (77)	15.9 (177)	32.1 (352)	18.7 (200)	15.9 (168)	11.0 (134)	1108
NVQ2	5.9 (269)	16.4 (661)	36.1 (1440)	18.5 (709)	15.3 (616)	7.8 (346)	4041
NVQ3	6.6 (151)	17.4 (394)	37.8 (795)	19.0 (382)	13.7 (313)	5.6 (147)	2182
NVQ4	5.4 (242)	20.0 (792)	39.2 (1550)	20.3 (775)	10.5 (433)	4.7 (192)	3984
NVQ5	5.3 (71)	19.0 (220)	42.1 (473)	17.2 (179)	11.6 (128)	4.8 (54)	1125
						p=0.000	
Family Type							
Two-parent	5.8 (760)	17.8 (2099)	36.9 (4253)	19.0 (2089)	13.3 (1599)	7.2 (1014)	10800
Lone parent	7.3 (229)	16.6 (495)	34.1 (960)	16.0 (457)	14.7 (438)	11.2 (348)	2927
						p=0.000	

Notes: Sample includes all mothers responding to question. Table displays unweighted observations and weighted percentages (country means using weight1, UK means using weight2).

Table 4.7
How often do you play sports or physically active games with your child? Fathers

	Weighted Percentage (Unweighted Observations)						
	Every Day	Several Times a Week	One or Two Times a Week	One or Two Times a Month	Less Often	Not at All	Total Obs
All Responding Fathers	12.6 (1348)	26.7 (2719)	39.4 (3832)	13.3 (1294)	5.6 (623)	2.5 (310)	10126
Country							
England	12.4 (800)	26.1 (1633)	39.7 (2481)	13.4 (846)	5.7 (418)	2.6 (217)	6395
Wales	16.8 (254)	28.3 (414)	35.9 (506)	10.6 (157)	5.9 (91)	2.6 (46)	1468
Scotland	10.8 (138)	29.2 (364)	39.5 (494)	14.3 (179)	4.4 (57)	1.8 (22)	1254
Northern Ireland	15.4 (156)	31.2 (308)	35.2 (351)	10.9 (112)	5.2 (57)	2.2 (25)	1009
						p=0.000	
Father's Age							
20 to 29	21.8 (221)	25.1 (278)	34.1 (358)	9.8 (98)	6.9 (68)	2.4 (27)	1050
30 to 39	12.8 (759)	27.6 (1521)	39.4 (2140)	13.3 (727)	4.9 (311)	2.0 (142)	5600
40 and above	10.0 (364)	25.7 (920)	40.6 (1331)	14.1 (469)	6.4 (243)	3.3 (140)	3467
						p=0.000	
Father's Ethnicity							
White	12.7 (1195)	27.2 (2411)	39.5 (3358)	13.2 (1113)	5.2 (485)	2.2 (215)	8562
Mixed	14.3 (11)	20.9 (20)	46.1 (31)	13.2 (8)	2.9 (3)	2.6 (4)	77
Indian	12.0 (34)	23.8 (73)	40.9 (102)	11.4 (37)	9.5 (24)	2.4 (8)	278
Pakistani or Bangladeshi	12.2 (63)	18.8 (107)	33.0 (174)	12.9 (72)	11.5 (65)	11.6 (62)	543
Black	7.9 (16)	18.8 (47)	40.5 (88)	18.7 (36)	10.9 (29)	3.2 (9)	225
Other	12.6 (17)	25.5 (39)	35.9 (55)	13.6 (20)	8.5 (11)	3.9 (10)	152
						p=0.000	
Father's Employment Status							
Not employed	18.7 (182)	23.7 (229)	29.7 (258)	9.8 (84)	9.1 (89)	9.0 (89)	931
Employed	12.1 (1166)	26.9 (2489)	40.1 (3573)	13.5 (1210)	5.4 (534)	2.0 (221)	9193
						,p=0.000	
Father's Highest Qualification							
No qualifications	16.8 (172)	20.8 (230)	32.5 (323)	12.4 (123)	10.0 (110)	7.6 (80)	1038
NVQ1	14.0 (80)	28.1 (157)	34.9 (209)	11.0 (66)	10.0 (56)	1.9 (18)	586
NVQ2	14.9 (388)	25.3 (675)	37.6 (927)	13.7 (329)	5.9 (150)	2.5 (71)	2540
NVQ3	12.8 (201)	29.0 (437)	38.7 (558)	12.5 (185)	5.0 (83)	1.9 (29)	1493
NVQ4	10.0 (294)	28.6 (760)	42.4 (1083)	14.0 (345)	4.0 (114)	1.0 (33)	2629
NVQ5	9.8 (117)	27.1 (315)	43.4 (487)	13.7 (159)	4.1 (52)	1.9 (27)	1157
						p=0.000	

Notes: Sample includes all fathers responding to question. Table displays unweighted observations and weighted percentages (country means using weight1, UK means using weight2).

Table 4.8
How often do you play with toys or games indoors with your child? Fathers

	Weighted Percentage (Unweighted Observations)						
	Every Day	Several Times a Week	One or Two Times a Week	One or Two Times a Month	Less Often	Not at All	Total Obs
All Responding Fathers	16.2 (1730)	33.6 (3310)	35.7 (3508)	8.8 (928)	4.3 (494)	1.3 (159)	10129
Country							
England	15.8 (1023)	33.4 (2072)	36.3 (2281)	8.8 (585)	4.4 (317)	1.3 (120)	6398
Wales	19.7 (297)	32.3 (469)	34.1 (486)	8.6 (132)	4.4 (67)	0.9 (17)	1468
Scotland	17.4 (223)	37.2 (450)	32.8 (418)	8.3 (105)	3.5 (47)	0.9 (11)	1254
Northern Ireland	18.4 (187)	32.2 (319)	32.2 (323)	10.5 (106)	5.8 (63)	1.0 (11)	1009
						P=0.005	
Father's Age							
20 to 29	21.4 (230)	34.4 (356)	31.1 (323)	7.8 (81)	4.7 (50)	0.7 (10)	1050
30 to 39	16.5 (977)	35.0 (1867)	35.4 (1940)	7.9 (475)	3.9 (259)	1.2 (84)	5602
40 and above	14.5 (520)	31.5 (1085)	37.4 (1243)	10.4 (372)	4.9 (184)	1.4 (64)	3468
						p=0.000	
Father's Ethnicity							
White	16.6 (1545)	34.2 (2954)	35.6 (3027)	8.6 (774)	4.0 (387)	0.9 (92)	8687
Mixed	15.5 (11)	34.0 (28)	32.5 (24)	12.3 (8)	4.6 (5)	1.1 (1)	77
Indian	10.3 (38)	34.1 (84)	42.7 (108)	6.3 (27)	3.5 (13)	3.1 (8)	278
Pakistani or Bangladeshi	14.4 (78)	22.3 (126)	30.8 (174)	12.9 (70)	10.7 (53)	9.0 (43)	544
Black	11.8 (24)	26.8 (59)	40.0 (92)	10.3 (25)	8.4 (18)	2.8 (7)	225
Other	7.7 (20)	23.4 (39)	43.5 (59)	9.5 (13)	13.4 (16)	2.7 (5)	152
						p=0.000	
Father's Employment Status							
Not employed	25.2 (233)	28.9 (268)	27.0 (248)	8.6 (79)	6.4 (63)	3.9 (41)	932
Employed	15.5 (1497)	34.0 (3042)	36.4 (3258)	8.8 (849)	4.2 (431)	1.0 (118)	9195
						p=0.000	
Father's Highest Qualification							
No qualifications	17.8 (180)	25.8 (263)	30.9 (328)	11.6 (124)	9.7 (92)	4.2 (52)	1039
NVQ1	20.4 (115)	35.6 (195)	25.3 (156)	10.9 (69)	6.3 (42)	1.5 (9)	586
NVQ2	16.9 (437)	32.8 (852)	36.2 (870)	8.7 (228)	4.5 (123)	1.0 (30)	2540
NVQ3	18.0 (285)	34.3 (492)	34.3 (510)	8.1 (122)	4.5 (74)	0.8 (11)	1494
NVQ4	13.9 (402)	36.3 (941)	39.0 (995)	8.3 (212)	2.1 (66)	0.4 (14)	2630
NVQ5	15.1 (186)	34.8 (396)	36.8 (416)	8.4 (100)	3.5 (42)	1.5 (17)	1157
						p=0.000	

Notes: Sample includes all fathers responding to question. Table displays unweighted observations and weighted percentages (country means using weight1, UK means using weight2).

Table 4.9
How often do you take your child to the park or an outdoor playground? Mothers

	Weighted Percentage (Unweighted Observations)						
	Every Day	Several Times a Week	One or Two Times a Week	One or Two Times a Month	Less Often	Not at All	Total Obs
All Responding Mothers	3.0 (507)	14.5 (2247)	43.3 (6425)	28.2 (3873)	8.0 (1202)	3.0 (483)	14737
Country							
England	2.7 (281)	14.1 (1380)	43.0 (4000)	28.9 (2527)	8.2 (806)	3.0 (320)	9314
Wales	3.9 (93)	15.5 (336)	44.7 (971)	25.0 (518)	8.0 (157)	3.0 (63)	2138
Scotland	4.7 (82)	16.6 (296)	46.2 (822)	24.3 (427)	5.7 (101)	2.5 (49)	1777
Northern Ireland	3.3 (51)	15.6 (235)	43.0 (632)	26.7 (401)	8.5 (138)	2.9 (51)	1508
						p=0.001	
Mother's Age							
20 to 29	3.9 (156)	16.9 (648)	44.8 (1638)	23.7 (807)	8.1 (288)	2.6 (102)	3639
30 to 39	2.7 (267)	14.0 (1227)	43.5 (3703)	29.3 (2355)	7.8 (685)	2.7 (264)	8501
40 and above	2.9 (84)	13.4 (371)	41.3 (1081)	29.5 (710)	8.8 (229)	4.2 (117)	2592
						p=0.000	
Mother's Ethnicity							
White	3.0 (431)	14.4 (1919)	43.4 (5522)	28.7 (3426)	7.6 (965)	2.9 (384)	12263
Mixed	0.4 (2)	16.0 (20)	45.0 (67)	27.3 (31)	10.2 (14)	1.1 (4)	138
Indian	2.7 (9)	11.9 (47)	41.3 (147)	26.7 (99)	14.5 (51)	2.9 (13)	366
Pakistani or Bangladeshi	3.8 (38)	15.3 (126)	42.1 (373)	23.5 (178)	10.2 (78)	5.2 (51)	844
Black	3.6 (24)	16.7 (102)	38.7 (192)	20.5 (88)	16.0 (77)	4.6 (24)	507
Other	1.0 (3)	13.2 (32)	54.1 (122)	23.4 (48)	6.3 (17)	2.1 (7)	229
						, p=0.000	
Mother's Employment Status							
Not employed	3.7 (273)	16.8 (1118)	42.3 (2713)	24.1 (1440)	8.7 (577)	4.3 (307)	6428
Employed	2.5 (232)	12.9 (1128)	44.0 (3709)	30.9 (2433)	7.5 (624)	2.1 (176)	8302
						p=0.000	
Mother's Highest Qualification							
No qualifications	4.9 (94)	15.4 (310)	40.8 (747)	21.5 (371)	10.2 (193)	7.1 (134)	1849
NVQ1	2.5 (35)	17.1 (199)	42.3 (463)	23.6 (254)	11.1 (112)	3.5 (45)	1108
NVQ2	3.0 (145)	14.4 (607)	42.5 (1739)	28.4 (1067)	8.0 (334)	3.8 (148)	4040
NVQ3	2.7 (65)	15.1 (345)	43.7 (967)	28.8 (588)	7.8 (171)	1.8 (46)	2182
NVQ4	2.6 (120)	13.4 (551)	44.2 (1785)	30.9 (1181)	7.0 (269)	1.9 (75)	3981
NVQ5	3.1 (35)	14.0 (168)	44.8 (506)	29.9 (316)	7.3 (85)	1.0 (15)	1125
						p=0.000	
Family Type							
Two-parent	2.8 (389)	13.6 (1668)	43.5 (5183)	29.1 (3241)	8.0 (952)	2.9 (376)	11433
Lone parent	3.6 (118)	18.4 (579)	42.5 (1242)	24.1 (632)	7.9 (250)	3.5 (107)	2928
						p=0.000	

Notes: Sample includes all mothers responding to question. Table displays unweighted observations and weighted percentages (country means using weight1, UK means using weight2).

Table 4.10
How often do you take your child to the park or an outdoor playground? Fathers

	Weighted Percentage (Unweighted Observations)						
	Every Day	Several Times a Week	One or Two Times a Week	One or Two Times a Month	Less Often	Not at All	Total Obs
All Responding Fathers	1.3 (156)	8.2 (904)	39.8 (4117)	35.2 (3379)	12.3 (1224)	3.3 (347)	10127
Country							
England	1.3 (97)	7.8 (532)	39.4 (2587)	35.7 (2176)	12.4 (775)	3.4 (229)	6396
Wales	1.1 (21)	9.6 (146)	40.8 (605)	33.0 (474)	11.3 (166)	4.3 (56)	1468
Scotland	1.9 (24)	10.4 (131)	43.4 (548)	32.1 (396)	10.1 (130)	2.0 (25)	1254
Northern Ireland	1.4 (14)	9.8 (95)	37.7 (377)	33.0 (333)	14.7 (153)	3.5 (37)	1009
						p=0.003	
Father's Age							
20 to 29	1.6 (15)	10.9 (118)	43.0 (477)	30.5 (303)	11.0 (109)	3.1 (27)	1049
30 to 39	1.2 (74)	8.0 (488)	41.2 (2304)	35.6 (1936)	11.1 (627)	2.9 (172)	5601
40 and above	1.4 (66)	7.7 (297)	36.8 (1331)	35.7 (1139)	14.3 (488)	4.0 (147)	3468
						p=0.000	
Father's Ethnicity							
White	1.3 (124)	8.0 (764)	39.5 (3520)	35.7 (3003)	12.2 (1068)	3.3 (299)	8479
Mixed	0.9 (2)	16.7 (11)	44.2 (35)	28.8 (22)	9.0 (6)	0.4 (1)	77
Indian	0.8 (5)	7.2 (22)	43.6 (122)	30.0 (86)	13.5 (32)	4.8 (11)	278
Pakistani or Bangladeshi	3.1 (18)	11.2 (58)	42.9 (249)	25.9 (138)	12.6 (60)	4.4 (21)	544
Black	1.9 (4)	10.0 (31)	36.0 (85)	31.2 (64)	17.4 (33)	3.5 (8)	225
Other	1.0 (2)	9.8 (14)	43.4 (74)	34.0 (41)	10.1 (16)	1.6 (4)	151
						p=0.055	
Father's Employment Status							
Not employed	4.0 (40)	12.8 (131)	38.6 (371)	23.3 (200)	14.3 (127)	7.0 (61)	930
Employed	1.1 (116)	7.8 (773)	39.8 (3745)	36.1 (3178)	12.1 (1097)	3.0 (286)	9195
						p=0.000	
Father's Highest Qualification							
No qualifications	2.9 (36)	12.8 (122)	35.2 (398)	26.4 (263)	14.2 (143)	8.6 (76)	1038
NVQ1	1.8 (8)	8.5 (55)	39.0 (231)	30.2 (173)	14.5 (83)	6.1 (36)	586
NVQ2	1.4 (38)	8.8 (233)	37.6 (976)	35.2 (872)	13.3 (333)	3.6 (88)	2540
NVQ3	0.9 (18)	6.8 (124)	43.3 (659)	34.0 (481)	12.2 (172)	2.8 (40)	1494
NVQ4	1.0 (28)	7.1 (201)	41.1 (1110)	38.7 (974)	10.5 (269)	1.7 (47)	2629
NVQ5	1.0 (12)	7.8 (98)	39.4 (463)	37.7 (416)	11.8 (138)	2.2 (30)	1157
						p=0.000	

Notes: Sample includes all fathers responding to question. Table displays unweighted observations and weighted percentages (country means using weight1, UK means using weight2).

Table 4.11
How often do you get your child ready for bed or put your child to bed? Fathers

	Weighted Percentage (Unweighted Observations)						
	Every Day	Several Times a Week	One or Two Times a Week	One or Two Times a Month	Less Often	Not at All	Total Obs
All Responding Fathers	18.9 (1893)	46.4 (4528)	22.3 (2256)	5.0 (523)	4.0 (480)	3.5 (446)	10126
Country							
England	18.8 (1173)	45.8 (2719)	22.4 (1440)	5.1 (364)	4.0 (341)	3.8 (358)	6395
Wales	22.6 (331)	45.4 (660)	21.6 (308)	4.4 (66)	4.3 (68)	1.8 (35)	1468
Scotland	18.7 (231)	52.0 (649)	20.2 (258)	4.0 (52)	3.2 (39)	1.9 (25)	1254
Northern Ireland	15.8 (158)	49.5 (500)	25.0 (250)	4.3 (41)	3.2 (32)	2.3 (28)	1009
						p=0.000	
Father's Age							
20 to 29	21.4 (226)	44.1 (440)	21.2 (226)	4.8 (50)	4.6 (61)	3.8 (47)	1050
30 to 39	20.2 (1088)	46.9 (2537)	21.5 (1223)	4.6 (281)	3.8 (255)	3.0 (217)	5601
40 and above	16.3 (576)	46.3 (1548)	23.7 (806)	5.5 (191)	4.0 (164)	4.2 (181)	3466
						p=0.000	
Father's Ethnicity							
White	19.5 (1705)	48.0 (4162)	21.8 (1927)	4.7 (410)	3.4 (323)	2.7 (250)	8527
Mixed	20.9 (19)	50.1 (35)	19.3 (14)	6.1 (4)	0.3 (1)	3.4 (4)	77
Indian	11.9 (39)	30.4 (82)	27.7 (70)	8.8 (27)	10.6 (30)	10.5 (30)	278
Pakistani or Bangladeshi	10.4 (56)	18.9 (100)	24.1 (126)	9.7 (51)	13.6 (85)	23.4 (126)	544
Black	11.3 (33)	38.7 (79)	31.2 (57)	5.7 (18)	8.0 (20)	5.2 (17)	224
Other	17.6 (30)	27.6 (40)	30.5 (41)	5.3 (10)	11.9 (17)	7.2 (14)	152
						p=0.000	
Father's Employment Status							
Not employed	24.8 (231)	33.4 (302)	18.5 (174)	4.6 (44)	8.5 (81)	10.3 (100)	932
Employed	18.4 (1662)	47.5 (4225)	22.6 (2082)	5.0 (479)	3.6 (399)	3.0 (346)	9193
						p=0.000	
Father's Highest Qualification							
No qualifications	18.5 (173)	33.5 (330)	23.4 (238)	5.3 (63)	8.3 (103)	11.0 (132)	1039
NVQ1	20.5 (120)	40.9 (234)	20.4 (128)	5.9 (33)	7.0 (46)	5.3 (25)	586
NVQ2	20.8 (496)	44.3 (1111)	21.5 (573)	6.0 (155)	4.1 (108)	3.4 (96)	2539
NVQ3	20.4 (311)	47.5 (681)	21.4 (329)	4.3 (66)	4.1 (68)	2.3 (39)	1494
NVQ4	17.7 (479)	52.0 (1356)	22.4 (569)	4.4 (118)	2.3 (70)	1.3 (38)	2630
NVQ5	15.7 (196)	51.4 (572)	23.2 (256)	4.1 (51)	3.3 (45)	2.4 (36)	1156
						p=0.000	

Notes: Sample includes all fathers responding to question. Table displays unweighted observations and weighted percentages (country means using weight1, UK means using weight2).

Table 4.12
How often do you look after your child on your own? Fathers

	Weighted Percentage (Unweighted Observations)						Total Obs
	Every Day	Several Times a Week	One or Two Times a Week	One or Two Times a Month	Less Often	Not at All	
All Responding Fathers	7.4 (847)	26.8 (2856)	36.6 (3596)	19.2 (1768)	7.8 (816)	2.2 (243)	10126
Country							
England	7.3 (528)	25.6 (1622)	36.7 (2269)	19.8 (1185)	8.3 (598)	2.4 (193)	6395
Wales	8.7 (137)	29.8 (442)	36.5 (512)	16.3 (241)	7.1 (108)	1.6 (28)	1468
Scotland	7.5 (99)	32.7 (416)	36.3 (447)	17.9 (223)	4.4 (54)	1.2 (15)	1254
Northern Ireland	7.9 (83)	36.2 (376)	38.0 (368)	12.3 (119)	5.0 (56)	0.6 (7)	1009
						p=0.000	
Father's Age							
20 to 29	9.7 (105)	28.0 (302)	35.3 (365)	13.6 (140)	9.7 (98)	3.7 (40)	1050
30 to 39	6.8 (449)	26.7 (1575)	37.0 (1996)	19.9 (1012)	7.7 (457)	1.9 (113)	5602
40 and above	7.8 (291)	26.5 (979)	36.4 (1230)	19.5 (616)	7.5 (260)	2.3 (89)	3465
						p=0.000	
Father's Ethnicity							
White	7.2 (702)	27.3 (2567)	37.1 (3184)	19.5 (1572)	7.1 (604)	1.7 (149)	8629
Mixed	10.7 (11)	21.9 (19)	36.0 (25)	17.2 (14)	13.0 (7)	1.3 (1)	77
Indian	10.1 (33)	22.5 (67)	32.2 (91)	20.0 (42)	10.2 (31)	5.0 (14)	278
Pakistani or Bangladeshi	8.0 (41)	13.8 (90)	31.5 (154)	14.8 (83)	18.2 (116)	13.8 (59)	543
Black	10.2 (32)	31.0 (65)	33.2 (74)	12.2 (23)	10.8 (23)	2.5 (7)	224
Other	13.0 (24)	19.4 (32)	22.8 (35)	17.0 (23)	21.5 (26)	6.4 (12)	152
						p=0.000	
Father's Employment Status							
Not employed	21.3 (198)	25.3 (256)	27.9 (253)	9.7 (81)	8.4 (84)	7.4 (59)	931
Employed	6.3 (649)	26.9 (2600)	37.3 (3342)	20.0 (1687)	7.8 (732)	1.8 (184)	9194
						p=0.000	
Father's Highest Qualification							
No qualifications	9.2 (102)	27.0 (288)	32.2 (318)	15.6 (149)	10.4 (122)	5.6 (59)	1038
NVQ1	8.0 (60)	27.5 (165)	34.6 (202)	16.3 (83)	9.6 (54)	4.0 (21)	585
NVQ2	8.9 (243)	27.4 (731)	36.1 (903)	17.6 (413)	7.6 (193)	2.4 (57)	2540
NVQ3	8.6 (133)	27.6 (442)	37.2 (540)	17.6 (246)	7.9 (113)	1.2 (20)	1494
NVQ4	5.3 (155)	25.9 (736)	38.7 (992)	21.8 (544)	7.1 (170)	1.2 (33)	2630
NVQ5	6.1 (80)	25.0 (296)	38.7 (443)	23.4 (237)	5.9 (84)	1.0 (16)	1156
						p=0.000	

Notes: Sample includes all fathers responding to question. Table displays unweighted observations and weighted percentages (country means using weight1, UK means using weight2).

Table 4.13
How often mother ignores child when naughty

	Weighted Percentage (Unweighted Observations)					Total Obs
	Never	Rarely	Sometimes	Often	Daily	
All Responding Mothers	19.6 (2870)	28.3 (3970)	32.3 (4369)	15.9 (2203)	2.7 (407)	13819
Country						
England	19.5 (1742)	27.8 (2396)	32.8 (2770)	16.1 (1381)	2.7 (264)	8553
Wales	21.9 (477)	27.0 (579)	32.0 (645)	15.3 (330)	2.6 (56)	2087
Scotland	17.9 (323)	33.0 (578)	29.8 (521)	15.4 (271)	2.8 (51)	1744
Northern Ireland	21.8 (328)	29.8 (417)	30.0 (433)	14.9 (221)	2.4 (36)	1435
					p=0.005	
Mother's Age						
Under 30	18.1 (661)	27.1 (940)	30.2 (1024)	18.1 (600)	4.8 (165)	3395
30 to 39	19.7 (1671)	28.2 (2290)	32.5 (2546)	16.2 (1284)	2.4 (212)	8003
40 and above	20.6 (536)	29.9 (740)	34.4 (798)	12.6 (317)	1.3 (30)	2421
					p=0.000	
Mother's Ethnicity						
White	19.3 (2511)	28.4 (3546)	32.4 (3898)	16.1 (1999)	2.6 (345)	12299
Mixed	18.0 (27)	32.2 (34)	29.9 (39)	13.3 (18)	5.0 (6)	124
Indian	23.1 (80)	24.3 (80)	37.0 (108)	11.9 (31)	2.8 (12)	311
Pakistani or Bangladeshi	20.7 (109)	28.6 (151)	30.2 (167)	13.3 (74)	5.2 (31)	548
Black	27.8 (102)	27.1 (110)	30.5 (106)	12.5 (52)	1.2 (8)	378
Other	18.8 (39)	28.1 (47)	30.6 (50)	17.6 (28)	2.9 (5)	169
					p=0.020	
Mother's Employment Status						
Not employed	20.4 (1228)	27.6 (1630)	29.7 (1662)	17.0 (960)	3.7 (234)	5714
Employed	19.0 (1642)	28.8 (2340)	34.0 (2706)	15.2 (1243)	2.1 (173)	8104
					p=0.000	
Mother's Highest Qualification						
No qualifications	24.7 (364)	26.7 (395)	25.4 (359)	14.6 (224)	5.5 (70)	1412
NVQ1	19.3 (226)	27.6 (292)	30.8 (318)	16.4 (175)	4.5 (47)	1058
NVQ2	20.8 (848)	28.7 (1127)	30.2 (1166)	16.0 (635)	3.1 (129)	3905
NVQ3	18.4 (406)	29.4 (622)	33.3 (700)	15.9 (327)	2.2 (56)	2111
NVQ4	18.2 (742)	28.2 (1136)	34.7 (1320)	16.2 (619)	1.9 (79)	3896
NVQ5	17.8 (206)	28.4 (308)	37.2 (404)	14.7 (167)	0.9 (16)	1101
					p=0.000	
Family Type						
Two-parent	19.4 (2289)	28.6 (3215)	33.0 (3594)	15.6 (1724)	2.3 (287)	11109
Lone parent	20.3 (581)	27.0 (755)	29.1 (775)	17.7 (479)	4.5 (120)	2710
						p=0.000

Notes: Sample includes all mothers completing self-completion instrument and responding to the question. 173 observations excluded because respondents answered ‘can’t say’ to question on ignoring child when naughty. Table displays unweighted observations and weighted percentages (country totals using weight 1, UK totals using weight2).

Table 4.14
How often mother smacks child when naughty

	Weighted Percentage (Unweighted Observations)					Total Obs
	Never	Rarely	Sometimes	Often	Daily	
All Responding Mothers	44.7 (6193)	43.7 (6056)	9.6 (1440)	1.2 (210)	0.1 (16)	13915
Country						
England	45.1 (3885)	43.6 (3715)	9.5 (878)	1.2 (117)	0.1 (10)	8605
Wales	49.3 (1044)	40.9 (853)	8.7 (190)	1.0 (24)	0.0 (0)	2110
Scotland	42.5 (750)	45.2 (791)	10.2 (181)	1.5 (27)	0.1 (3)	1752
Northern Ireland	34.9 (514)	48.5 (697)	13.2 (191)	2.9 (42)	0.2 (3)	1447
					p=0.000	
Mother's Age						
Under 30	45.9 (1612)	41.4 (1383)	10.0 (355)	1.7 (64)	0.2 (6)	3424
30 to 39	43.5 (3442)	44.7 (3605)	10.0 (875)	1.2 (119)	0.1 (10)	8051
40 and above	47.5 (1135)	43.1 (1068)	8.1 (210)	0.9 (27)	0.0 (0)	2440
					p=0.001	
Mother's Ethnicity						
White	45.3 (5568)	44.0 (5466)	8.9 (1184)	1.2 (182)	0.1 (13)	12413
Mixed	36.2 (45)	43.1 (54)	18.3 (21)	0.5 (2)	0.0 (0)	122
Indian	40.3 (138)	43.8 (123)	13.2 (46)	0.4 (3)	0.0 (0)	310
Pakistani or Bangladeshi	43.4 (261)	33.1 (166)	17.4 (83)	2.1 (10)	0.2 (2)	522
Black	28.6 (109)	45.2 (177)	21.4 (77)	2.7 (10)	0.0 (0)	373
Other	41.7 (69)	37.8 (67)	17.5 (29)	0.7 (3)	0.2 (1)	169
					p=0.000	
Mother's Employment Status						
Not employed	45.0 (2626)	42.6 (2402)	10.0 (627)	1.5 (97)	0.2 (14)	5766
Employed	44.6 (3567)	44.4 (3653)	9.4 (813)	1.1 (113)	0.0 (2)	8148
					p=0.013	
Mother's Highest Qualification						
No qualifications	46.7 (698)	39.8 (559)	9.8 (143)	2.2 (34)	0.3 (4)	1438
NVQ1	40.6 (441)	47.6 (502)	9.9 (107)	1.3 (18)	0.3 (3)	1071
NVQ2	40.2 (1607)	47.5 (1827)	10.2 (432)	1.3 (63)	0.0 (3)	3932
NVQ3	43.5 (930)	45.0 (938)	9.3 (213)	1.5 (33)	0.2 (4)	2118
NVQ4	47.8 (1804)	41.7 (1665)	9.1 (391)	0.9 (48)	0.0 (0)	3908
NVQ5	54.3 (573)	37.2 (427)	7.6 (96)	0.7 (10)	0.0 (1)	1107
					p=0.000	
Family Type						
Two-parent	45.0 (4978)	43.5 (4856)	9.8 (1180)	1.2 (160)	0.1 (10)	11184
Lone parent	43.5 (1215)	45.0 (1200)	8.9 (260)	1.6 (50)	0.2 (6)	2731
						p=0.000

Notes: Sample includes all mothers completing self-completion instrument and responding to the question. 93 observations excluded because respondents answered ‘can’t say’ to question on smacking child when naughty. Table displays unweighted observations and weighted percentages (country totals using weight1, UK totals using weight2).

Table 4.15
How often mother tells child off when naughty

	Weighted Percentage (Unweighted Observations)					Total Obs
	Never	Rarely	Sometimes	Often	Daily	
All Responding Mothers	0.5 (107)	10.1 (1549)	30.55 (4265)	46.7 (6310)	11.7 (1700)	13931
Country						
England	0.5 (77)	10.2 (981)	30.9 (2691)	46.6 (3851)	11.4 (1024)	8553
Wales	0.4 (10)	10.8 (242)	31.7 (659)	46.9 (966)	10.1 (233)	2087
Scotland	0.4 (8)	8.9 (162)	27.0 (473)	48.8 (848)	14.5 (261)	1744
Northern Ireland	0.7 (12)	10.7 (164)	30.7 (442)	45.2 (645)	12.3 (182)	1435
					p=0.002	
Mother's Age						
Under 30	0.5 (21)	14.7 (507)	29.4 (1012)	40.1 (1359)	14.7 (530)	3433
30 to 39	0.4 (63)	9.2 (811)	29.8 (2420)	48.4 (3813)	11.6 (951)	8058
40 and above	0.6 (23)	8.0 (230)	33.9 (831)	48.5 (1137)	8.6 (219)	2440
					p=0.000	
Mother's Ethnicity						
White	0.3 (45)	9.5 (1294)	30.3 (3740)	47.8 (5822)	11.7 (1502)	12403
Mixed	3.9 (4)	12.1 (18)	30.4 (34)	45.1 (57)	8.2 (11)	124
Indian	0.9 (6)	18.1 (56)	34.2 (111)	34.8 (99)	10.9 (40)	312
Pakistani or Bangladeshi	4.6 (28)	18.5 (88)	31.8 (180)	26.9 (146)	17.0 (98)	540
Black	1.4 (9)	14.0 (56)	38.0 (146)	34.7 (128)	10.7 (38)	377
Other	6.1 (15)	20.6 (37)	31.5 (53)	35.2 (54)	4.7 (11)	170
					p=0.000	
Mother's Employment Status						
Not employed	0.7 (65)	12.2 (775)	29.4 (1726)	43.6 (2398)	13.5 (817)	5781
Employed	0.4 (42)	8.8 (774)	31.3 (2539)	48.7 (3912)	10.5 (882)	8149
					p=0.000	
Mother's Highest Qualification						
No qualifications	1.5 (29)	21.5 (317)	30.4 (437)	32.7 (463)	13.1 (196)	1442
NVQ1	0.5 (7)	13.1 (141)	33.0 (352)s	38.1 (416)	14.9 (155)	1071
NVQ2	0.2 (17)	11.1 (480)	30.9 (1197)	45.1 (1737)	12.1 (504)	3935
NVQ3	0.4 (11)	9.4 (208)	29.5 (631)	48.5 (1000)	11.9 (272)	2122
NVQ4	0.3 (19)	6.2 (274)	30.1 (1184)	52.4 (2012)	10.8 (427)	3916
NVQ5	1.0 (12)	8.7 (88)	29.9 (342)	50.6 (561)	9.5 (105)	1108
					p=0.000	
Family Type						
Two-parent	0.5 (86)	9.3 (1150)	30.6 (3446)	47.9 (5210)	11.3 (1306)	11198
Lone parent	0.6 (21)	13.8 (399)	30.4 (819)	41.4 (1100)	13.3 (394)	2733
						p=0.000

Notes: Sample includes all mothers completing self-completion instrument and responding to the question. 77 observations excluded who responded ‘can’t say’ to question on ignoring child when naughty. Table displays unweighted observations and weighted percentages (country totals using weight1, UK totals using weight2).

Table 4.16
How mother feels as a parent

	Weighted Percentage (Unweighted Observations)					
	Not Very Good Parent	Have Some Trouble	Average Parent	Better Than Average	Very Good Parent	Total Obs
All Responding Mothers	0.4 (62)	3.2 (432)	36.0 (5025)	28.9 (3805)	30.9 (4583)	13907
Country						
England	0.4 (38)	3.3 (274)	35.9 (3039)	29.0 (2402)	30.8 (2860)	8613
Wales	0.3 (7)	2.9 (66)	36.5 (801)	25.5 (507)	34.1 (720)	2101
Scotland	0.5 (9)	3.1 (58)	36.3 (645)	30.2 (522)	29.3 (517)	1751
Northern Ireland	0.5 (8)	2.3 (34)	36.9 (540)	27.0 (374)	32.8 (486)	1442
					p=0.044	
Mother's Age						
Under 30	0.9 (28)	4.5 (149)	39.7 (1316)	21.9 (764)	32.3 (1161)	3423
30 to 39	0.2 (23)	2.9 (219)	34.7 (2823)	30.8 (2334)	30.8 (2644)	8043
40 and above	0.3 (11)	2.9 (64)	36.2 (884)	30.5 (706)	29.6 (776)	2441
					p=0.000	
Mother's Ethnicity						
White	0.4 (54)	3.2 (399)	37.0 (4675)	29.1 (3412)	29.7 (3840)	12380
Mixed	0.0 (0)	2.9 (3)	36.9 (42)	25.3 (35)	33.6 (42)	122
Indian	0.8 (1)	2.6 (7)	23.4 (71)	33.2 (91)	39.3 (142)	312
Pakistani or Bangladeshi	0.3 (3)	3.9 (12)	20.1 (106)	26.6 (141)	47.8 (279)	541
Black	0.5 (2)	3.4 (8)	25.8 (95)	19.3 (73)	50.4 (202)	380
Other	1.0 (2)	2.2 (3)	20.4 (34)	28.8 (50)	42.3 (77)	166
					p=0.000	
Mother's Employment Status						
Not employed	0.4 (62)	3.2 (432)	36.0 (5023)	28.9 (3802)	30.9 (4582)	14901
Employed	0.2 (19)	2.9 (222)	35.6 (2906)	31.7 (2478)	29.0 (2503)	8128
					p=0.000	
Mother's Highest Qualification						
No qualifications	0.8 (9)	3.7 (52)	41.3 (559)	14.8 (215)	38.7 (605)	1440
NVQ1	1.0 (11)	2.8 (29)	45.4 (485)	19.0 (191)	30.7 (349)	1065
NVQ2	0.3 (16)	3.7 (143)	39.8 (1552)	24.3 (927)	31.3 (1297)	3935
NVQ3	0.3 (7)	3.7 (69)	36.0 (755)	29.7 (622)	30.0 (668)	2121
NVQ4	0.3 (11)	2.6 (97)	30.3 (1216)	36.6 (1376)	29.7 (1204)	3904
NVQ5	0.0 (1)	3.0 (31)	30.4 (341)	38.3 (404)	27.4 (324)	1101
					p=0.000	
Family Type						
Two-parent	0.3 (46)	2.7 (281)	35.5 (3981)	30.1 (3205)	30.8 (3668)	11181
Lone parent	0.7 (16)	5.8 (151)	38.5 (1044)	22.9 (600)	31.3 (915)	2726
						p=0.000

Notes: Sample includes all mothers completing self-completion instrument and responding to the question. 102 observations excluded who responded ‘can’t say’ to question on parenting competence. Table displays unweighted observations and weighted percentages (country totals using weight1, UK totals using weight2).

Table 4.17
How father feels as a parent

	Weighted Percentage (Unweighted Observations)					
	Not Very Good Parent	Have Some Trouble	Average Parent	Better Than Average	Very Good Parent	Total Obs
All Responding Fathers	0.9 (85)	3.1 (279)	26.5 (2652)	33.7 (3100)	35.2 (3548)	9717
Country						
England	1.0 (62)	3.3 (193)	26.1 (1575)	33.9 (1952)	35.3 (2245)	6024
Wales	0.9 (13)	2.1 (34)	27.3 (410)	31.0 (422)	38.1 (555)	1434
Scotland	0.3 (4)	2.8 (35)	27.4 (347)	34.4 (415)	34.3 (428)	1229
Northern Ireland	0.6 (6)	1.9 (17)	32.6 (320)	33.0 (311)	31.5 (320)	974
					p=0.000	
Father's Age						
Under 30	1.8 (16)	3.0 (26)	30.1 (301)	28.6 (269)	35.5 (378)	990
30 to 39	0.6 (33)	2.8 (147)	26.4 (1484)	34.1 (1728)	35.7 (1979)	5371
40 and above	1.1 (36)	3.6 (105)	25.7 (862)	34.5 (1103)	34.5 (1189)	3295
					p=0.002	
Father's Ethnicity						
White	0.9 (70)	3.2 (259)	26.9 (2422)	34.4 (2839)	34.2 (3007)	8597
Mixed	2.3 (1)	3.4 (4)	21.3 (17)	35.0 (27)	36.7 (26)	75
Indian	0.9 (3)	3.6 (7)	21.4 (59)	28.9 (64)	45.2 (125)	258
Pakistani or Bangladeshi	1.5 (5)	0.7 (4)	25.4 (79)	24.2 (73)	47.7 (179)	340
Black	0.2 (1)	1.3 (2)	18.8 (33)	22.2 (46)	55.5 (112)	194
Other	1.2 (4)	1.7 (1)	18.8 (24)	26.6 (32)	51.0 (71)	132
					p=0.000	
Father's Employment Status						
Not employed	2.7 (18)	4.0 (27)	28.0 (240)	26.3 (190)	37.8 (325)	800
Employed	0.8 (67)	3.1 (252)	26.4 (2411)	34.3 (2910)	35.1 (3223)	8863
					p=0.000	
Father's Highest Qualification						
No qualifications	1.8 (15)	4.1 (26)	27.6 (258)	23.9 (183)	41.5 (364)	846
NVQ1	0.7 (6)	3.7 (16)	32.5 (185)	24.9 (137)	37.5 (209)	553
NVQ2	0.8 (20)	2.9 (68)	29.0 (720)	29.4 (703)	37.7 (960)	2471
NVQ3	0.8 (10)	2.6 (36)	26.6 (414)	34.4 (482)	35.1 (521)	1463
NVQ4	1.0 (22)	2.9 (78)	23.9 (635)	39.0 (977)	32.8 (887)	2599
NVQ5	0.5 (8)	3.9 (41)	23.0 (266)	41.0 (454)	31.0 (364)	1133
						p=0.000

Notes: Sample includes all fathers completing self-completion instrument and responding to the question. 61 observations excluded who responded ‘can’t say’ to question on parenting competence. Table displays unweighted observations and weighted percentages (country totals using weight1, UK totals using weight2).

Table 4.18
On weekdays during term time, does your child go to bed at a regular time? Mothers

	Weighted Percentage (Unweighted Observations)				
	Never or Almost Never	Sometimes	Usually	Always	Total Obs
All Responding Mothers	4.5 (741)	4.7 (824)	27.2 (4064)	63.7 (9117)	14746
Country					
England	4.4 (463)	4.5 (515)	27.0 (2521)	64.1 (5821)	9320
Wales	5.8 (141)	5.0 (110)	29.9 (632)	59.2 (1255)	2138
Scotland	3.8 (70)	5.4 (103)	27.7 (490)	63.1 (1117)	1780
Northern Ireland	4.2 (67)	6.0 (96)	28.1 (421)	61.7 (924)	1508
				p=0.012	
Mother's Age					
20 to 29	5.3 (203)	5.8 (227)	22.6 (846)	66.3 (2363)	3639
30 to 39	3.8 (376)	4.2 (446)	26.9 (2353)	65.1 (5332)	8507
40 and above	5.5 (161)	5.0 (151)	33.3 (864)	56.3 (1419)	2595
				p=0.000	
Mother's Ethnicity					
White	4.2 (615)	4.2 (616)	27.2 (3486)	64.4 (7936)	12653
Mixed	8.6 (10)	5.9 (10)	21.9 (30)	63.6 (88)	138
Indian	4.6 (15)	9.7 (42)	21.2 (85)	64.5 (224)	366
Pakistani or Bangladeshi	6.9 (51)	7.0 (65)	28.1 (246)	58.0 (484)	846
Black	7.2 (37)	12.3 (69)	31.6 (147)	48.9 (255)	508
Other	5.9 (13)	8.4 (22)	30.1 (67)	55.5 (127)	229
				p=0.000	
Mother's Employment Status					
Not employed	5.6 (404)	5.9 (447)	25.4 (1654)	63.1 (3928)	6433
Employed	3.7 (336)	3.9 (376)	28.4 (2408)	64.0 (5185)	8305
				p=0.000	
Mother's Highest Qualification					
No qualifications	11.6 (208)	10.3 (203)	23.7 (459)	54.5 (981)	1851
NVQ1	7.3 (83)	5.7 (73)	22.6 (265)	64.5 (688)	1109
NVQ2	5.0 (222)	5.2 (229)	28.0 (1120)	61.8 (2470)	4041
NVQ3	2.6 (67)	4.0 (106)	27.5 (604)	65.9 (1405)	2182
NVQ4	2.4 (103)	2.8 (128)	28.5 (1168)	66.3 (2587)	3986
NVQ5	2.5 (27)	2.9 (43)	28.1 (320)	66.6 (735)	1125
				p=0.000	
Family Type					
Two-parent	3.9 (530)	4.2 (597)	27.6 (3309)	64.3 (7380)	11816
Lone parent	6.9 (211)	7.0 (227)	25.6 (755)	60.5 (1737)	2930
				p=0.000	

Notes: Sample includes all mothers responding to question. Table displays unweighted observations and weighted percentages (country means using weight1, UK means using weight2).

Chapter 5

CHILDCARE

Elizabeth M. Jones

Introduction

The use of non-parental childcare by parents of pre-school-aged children has been increasing over recent years. Current data suggest that the majority of children, whether their mothers are working or not, experience some form of childcare before they enter school.

Brewer and Shaw (2004) reviewed childcare data from four large British surveys: the Families and Children Study (FACS; Barnes and Willitts, 2004), the Family Resources Survey (FRS, 1995/96 to 2002/03), Parents' Demand for Childcare (PDFC; Woodland, Miller, & Tipping, 2002), and the Labour Force Survey (LFS, 2001 to 2003). The types of care they included were provided by centres, out-of-school clubs, childminders, nannies and au pairs, close relatives (excluding main carer or resident partner), other relatives or friends, and 'other'. They classified care by relatives and friends as informal care, while the remaining categories were classified as formal.

Looking at data for families (lone parent or couple) in England with working mothers and at least one child under the age of 15, Brewer and Shaw (2004) found differences in average childcare-use rates between the sources, but similar patterns in types used. Informal care was used more often than formal care. Overall, childcare-use rates were 16 to 42 per cent for working lone parent families and 17 to 49 per cent for working couple families. Lone parents used formal care less than did couples, but used informal care more.

For both lone parent and couple families, childcare rates were highest for children aged 1 to 3 and showed a pronounced drop at age 5. Rates of care for centre-based arrangements showed a similar but more pronounced pattern, with a strong peak at age 3 and a drop to near zero at age 5. The average number of hours spent in childcare per week peaked around ages 1 and 2, then steadily dropped to age 5, where it levelled out. Childcare use by families with working mothers of five-year-olds ranged from 60 to 80 per cent for lone mothers and from 40 to 60 per cent for couples.

The data from the two surveys (PDFC and LFS) that included childcare data for families with non-working as well as working mothers showed that the former also used childcare, though for fewer hours than families with working mothers. Both types of families used formal care at similar rates, but non-working mothers were much less likely to use informal care.

Such statistics are useful indicators of the success of government initiatives to increase the availability and uptake of formal childcare arrangements. Though it is still the subject of investigation and debate, recent research suggests that child outcomes depend on the quality of childcare provided (Sylva, Melhuish, Sammons, Siraj-Blatchford and Taggart, 2004), that formal care tends to be associated with more positive outcomes than does informal care (Gregg, Washbrook, Propper and Burgess, 2006; Paull and Taylor, 2002), and that participation in high-quality childcare is especially beneficial for children from lower-income families (Bernal and Keane, 2005; Caughy, DiPietro and Strobino, 1994; McCartney, Dearing, Taylor and Bub, 2007; Sylva, Melhuish, Sammons, Siraj-Blatchford and Taggart, 2004). The government has made efforts to increase the availability of formal care, especially in lower-income neighbourhoods, and to raise the quality of this provision. Starting in April 2004, all three- and four-year-olds have been entitled to 12.5 hours per week of care;

these spaces are available in a variety of settings including pre-schools, playgroups, and childminders. The National Childcare Strategy aimed to increase quality of childcare, make childcare more affordable, and increase its availability. The Childcare Act of 2006 requires local authorities to ensure sufficient childcare for their community in general and lower-income families in particular. It also introduced the Early Years Foundation Stage and compulsory standards for all settings serving children under the age of 8.

This chapter looks at the childcare arrangements being used at MCS 3. The sample consists of all families who took part in MCS 3, though the number of responses to specific items varies because of missing data. Childcare questions are in the main respondent questionnaire, so results reported are based on the main respondent interview. This chapter includes reports on the types of care used and the hours per week of care at MCS 3, along with comparable information from earlier sweeps.

MCS Childcare Data

Data on childcare have been collected at all three MCS sweeps. The data are complex, with a large number of variables per topic. Respondents were asked to name all the forms of childcare used with all children. As a result, there were 20 variables containing information on type of childcare used at MCS 3, which had to be combined in a meaningful way.

Respondents were asked to indicate which types of care they used from a provided list. The categories of care in the lists differed from sweep to sweep. Table 5.1 shows the care arrangement options provided at each sweep and the categories into which they were recoded.

At MCS 3, respondents were asked two sets of questions about their childcare use. The first asked whether respondents had ever used specific types of care and the second asked about current (at the time of MCS 3) care arrangements. There were five options for the questions about care used at any time: nursery school/nursery class, playgroup, pre-school, childminder, and day nursery. This set of questions was asked primarily to collect information about past use of these forms of care, as it was felt that the previous sweeps had not adequately assessed use of these forms of care. There were eight options for the questions about current use: day nursery, childminder, nanny, au pair, grandparents, non-resident parent, other relatives, and friends/neighbours. In both sets of questions, respondents could report as many types of care arrangement as they wished and they were not asked to name their main arrangement. There were separate questions about whether the respondents' partners took charge of the cohort member and whether after-school clubs were used as a form of childcare.

To allow for comparisons among the three sweeps, the care arrangement questions were recoded into 11 categories: respondent caring for cohort member while working, partner, grandparent, other relatives (including non-resident parent), friend/neighbour/other non-relative (including nannies and au pairs), childminder, day nursery, nursery school/class, playgroup, pre-school, and other. As can be seen in Table 5.1, the MCS 1 interview did not collect information on care at nursery schools or classes, playgroups, or pre-school; the MCS 2 interview did not collect information on pre-school; and the MCS 3 interview did not collect information on the respondents' caring for their children while working.

Three overarching categories of care were created. Informal care includes self, partner, grandparent, other relative, and non-relative. Formal care includes childminder, day nursery, nursery school, playgroup, pre-school, and after-school club. Informal and formal care categories are mutually exclusive. Non-parental care includes all forms of care except for self, partner, and other; it includes both informal and formal care.

Table 5.1
Original and recoded care arrangement options

MCS 1	MCS 2	MCS 3	Recoded
Respondent his/herself	Looking after the child yourself while you were working at home or at your workplace		Self
Husband/wife/partner	Resident husband/wife/partner	Husband/wife/partner [1]	Partner
Your mother Your father Your partner's mother Your partner's father Baby's non-resident father's/mother's mother Baby's non-resident father's/mother's father	Grandparent in my home Care in grandparent's home	Grandparents [2]	Grandparent
Baby's non-resident father/mother Other relatives	Other relative (including non-resident parent) in my home Care in other relative's home (including non-resident parent)	Non-resident parent [2] Other relatives [2]	Other relative
Friends/neighbours Live-in nanny/au pair Other nanny/au pair	Non-relative elsewhere (e.g. friend, neighbour) Non-relative (including nannies and au pairs) in my home	Friends/neighbours [2] Nanny [2] Au pair [2]	Non-relative
Registered childminder Unregistered childminder	Childminder	Childminder [2,3]	Childminder
Workplace/college nursery/crèche Local authority nursery/crèche Private day nursery/crèche	Workplace/college nursery/crèche Local authority nursery Private/independent day nursery/crèche	Day nursery [2,3]	Day nursery

Table 5.1 (continued)
Original and recoded care arrangement options

MCS 1	MCS 2	MCS 3	Recoded
	Nursery school Nursery or Reception class in a primary or infants' school	Nursery school/nursery class [3]	Nursery school/class
	Playgroup	Playgroup [3]	Playgroup
		Pre-school [3]	Pre-school
Other	Other Combined child/family centre Special day school or nursery or unit for children with special educational needs	Other [2]	Other

Notes: [1] Asked in a separate question about whether or not partner regularly cared for child
[2] Asked if currently using this type of care
[3] Asked if ever used this type of care

Table 5.2 summarises the information about care 'start and stop' dates, hours in care, and cost of care collected at the three sweeps. The month and year that care arrangements started and stopped were collected at MCS 2 and MCS 3, allowing for computation of whether those arrangements were going on at specific time points.

Table 5.2
Collection of start and stop dates, hours spent in childcare, and cost of childcare at the three sweeps

	MCS 1	MCS 2	MCS 3
Start and Stop Dates	Not collected	Collected for each childcare arrangement	Collected for each individual childcare arrangement reported in questions about care ever used
Hours in Childcare	Collected for all childcare arrangements combined	Collected for each childcare arrangement	Collected for each individual childcare arrangement reported in questions about current care use
Cost of Childcare	Collected for all childcare arrangements combined	Collected for each childcare arrangement	Not collected

At MCS 3, start and stop dates were collected for the care arrangements reported in the questions about care ever used, but not those reported in the questions about current use.

Because different care types were included in the two sets of care questions, this means that start and stop dates are available for childminder, day nursery, nursery school/class, playgroup, and pre-school but are not available for partners, grandparents, other relatives, and non-relatives.

Respondents were asked how many hours the cohort members spent in each care arrangement at MCS 3, but only for those arrangements reported in the questions about current care use. This means that hours of care were not collected for nursery school/class, playgroup, and pre-school. Hours in care arrangements were collected separately for weekdays and weekends. Information about cost of care was not collected at MCS 3.

Because the childcare arrangement questions were asked of main respondents, who are overwhelmingly mothers, the chapter often refers to mothers' use of childcare. It should be remembered, however, that for two-parent families, it is both parents, not just the mothers, who actually use childcare.

Types of Childcare Arrangements at MCS 3

Table 5.3 shows the rates of use of different care arrangements by country and family characteristics. Day nursery, nursery school/class, playgroup, and pre-school use are not reported in this table as rates of their use are very low, due to nearly all (99%) cohort members having started school by MCS 3. The only formal care types at MCS 3 that were used at high enough rates to be reported were childminders and after-school clubs.

In this sample, 66 per cent of mothers used some form of childcare at MCS 3. At least one form of non-parental care was used by 36 per cent of mothers. Of the specific care arrangements, partners (52%) and grandparents (27%) were the most commonly used.

Rates of use of any care, non-parental care, and care by grandparents were lowest in England. The use of after-school clubs as childcare was higher in Scotland and Wales than in England and Northern Ireland, and the use of childminders was higher in Northern Ireland than in the other three countries. At MCS 2, the rate of use of formal arrangements such as nurseries, nursery schools and playgroups was higher in England, but at MCS 3 the use of these forms of care was near zero overall so between-country differences cannot be examined.

There are few clear patterns in childcare by ethnicity. The overall rate of childcare use was higher for Pakistani and Bangladeshi families, although this is accounted for by partner care, as their rate of non-parental care was no higher than were the rates for other groups. Black families had very low rates of use of childminders and after-school clubs, the two forms of formal care that were still being used at this age.

Though some mothers who were not working did use childcare, the rate of using childcare was much higher for mothers who were employed -- 80 per cent of working mothers used some kind of care, compared with 44 per cent of mothers who were not working. Working mothers had consistently higher rates of use of all the care types shown. In general, the more highly educated the mother the more use the family made of childcare provision by non-relatives, childminders, and after-school clubs.

The rate of any kind of care use was higher for two-parent than for lone parent families, but this is explained by the availability of care by the partner in two-parent families. For non-parental care, rates of use were similar but slightly higher for lone parents. Working lone parents were the most likely to use all of the non-parental forms of care detailed in Table 5.3.

Table 5.3
Childcare use rates at MCS 3

		Partner	Grand-parents	Other Relatives	Non-Relatives	Child-minder	After-School Club	Formal Care	Any Non-Parental Care	Any Care
All Responding Families	Observations	6593	4177	1292	971	720	1060	1969	6775	10056
	Percentage	51.6	26.8	7.8	7.4	5.0	7.9	13.4	44.5	65.7
Country										
England	Observations	3978	2301	809	646	387	610	1065	3900	6044
	Percentage	50.2	25.3	7.7	7.5	4.8	7.5	12.4	42.7	64.1
Wales	Observations	1010	759	196	129	72	199	290	1088	1544
	Percentage	58.9	35.4	8.1	6.8	3.5	12.1	15.8	52.1	73.2
Scotland	Observations	830	602	159	129	86	169	331	950	1306
	Percentage	55.5	33.2	8.6	7.8	5.1	10.4	19.2	52.9	72.5
Northern Ireland	Observations	775	515	128	67	175	82	283	837	1162
	Percentage	62.4	34.3	7.9	4.5	12.4	5.9	19.9	55.9	76.6
Main Respondent Ethnicity										
White	Observations	5581	3764	1038	876	664	952	1790	6023	8679
	Percentage	50.8	27.4	7.4	7.6	5.1	8.0	13.7	45.1	65.6
Indian	Observations	50	29	14	10	8	12	21	58	89
	Percentage	59.1	21.0	10.3	8.3	7.1	9.6	15.6	42.9	64.1
Pakistani or Bangladeshi	Observations	212	104	26	9	13	14	27	142	262
	Percentage	57.3	31.9	5.9	2.0	5.5	4.8	10.0	43.3	72.0
Black	Observations	435	183	133	22	2	5	19	274	555
	Percentage	56.0	23.8	16.1	3.7	0.2	0.4	1.8	34.1	64.8
Mixed	Observations	198	63	61	38	26	68	95	207	325
	Percentage	70.9	12.4	13.7	9.8	6.8	15.8	22.1	46.1	67.2
Other	Observations	115	34	20	16	6	9	16	70	144
	Percentage	58.2	14.5	7.9	8.5	3.8	4.7	9.0	31.9	64.6
Main Respondent Employment Status										
Not employed	Observations	2102	6514	457	267	37	97	220	1628	3129
	Percentage	38.4	14.1	6.2	4.4	0.6	1.4	2.9	23.0	44.0
	Observations	4490	8426	831	703	682	963	1748	5141	6921
	Percentage	59.1	35.2	8.8	9.4	8.0	12.1	20.4	58.8	80.1

Table 5.3 (continued)
Childcare use rates at MCS 3

		Partner	Grand-parents	Other Relatives	Non-Relatives	Child-minder	After-School Club	Formal Care	Any Non-Parental Care	Any Care
Highest Qualification of Parents[a]										
No qualifications	Observations	273	70	43	12	3	2	10	108	306
	Percentage	60.0	13.9	8.9	2.5	0.3	0.2	1.7	21.8	66.2
NVQ1	Observations	176	64	18	7	2	5	12	91	206
	Percentage	49.0	18.4	5.4	1.5	0.3	1.9	3.2	25.3	58.8
NVQ2	Observations	1152	569	166	96	54	69	153	809	1440
	Percentage	52.0	26.3	7.3	4.8	2.5	3.3	6.8	36.8	65.9
NVQ3	Observations	1002	567	134	94	55	83	158	779	1287
	Percentage	53.9	31.1	7.3	5.8	3.2	4.8	8.5	42.6	69.9
NVQ4	Observations	2094	1197	210	283	259	340	656	1923	2845
	Percentage	50.3	28.8	4.5	8.0	6.6	9.2	16.3	47.5	69.9
NVQ5	Observations	1047	511	105	204	187	265	463	1045	1457
	Percentage	52.9	23.5	4.7	12.6	8.8	14.7	23.1	53.0	75.3
Family Type										
Two-parent/caregiver	Observations	6593	3361	830	768	607	828	1584	5363	8634
	Percentage	51.6	26.6	6.0	7.3	5.1	7.6	13.2	43.6	69.2
At least one working	Unweighted Obs	6015	3147	754	719	601	815	1555	5056	7902
	Percentage	52.4	27.6	5.9	7.6	5.5	8.1	14.2	45.3	70.5
Neither working	Unweighted Obs	510	95	43	16	1	2	9	141	541
	Percentage	62.9	12.3	6.9	2.2	0.2	0.2	1.0	19.3	67.5
Lone parent/caregiver	Observations	--	816	462	203	113	232	385	1412	1442
	Percentage	--	27.3	16.1	8.1	4.4	9.3	14.4	48.9	49.3
Working	Unweighted Obs	--	532	277	111	105	192	316	904	910
	Percentage	--	42.5	22.9	10.3	9.1	18.4	27.9	73.5	74.2
Not working	Unweighted Obs	--	314	194	95	12	52	87	549	553
	Percentage	--	16.1	10.6	6.0	0.6	2.5	4.2	29.8	30.0

Note. Observations unweighted. Percentages weighted with weight 2.

[a] NVQ = National Vocational Qualification. Levels range from 1 (basic work activities that are routine and predictable) to 5 (senior management). Also includes academic qualifications, with NVQ1 being equivalent to some basic school-leaving qualifications and NVQ5 being equivalent to a postgraduate qualification or higher degree. Variable is qualification level of whichever parent has the higher qualification.

Hours per Week in Childcare

Respondents were asked how many hours the cohort members spent in each care arrangement, but only for those arrangements reported in the questions about current care use. This means that hours of care were not collected for nursery school/class, playgroup, and pre-school; as reported above, use of these care types was very low. Table 5.4 shows the number of hours in care by type of provision, separately for working and non-working mothers. For each care category, only those who used that type of care were included in the calculation of the average hours per week.

Table 5.4
Hours of childcare per week at MCS 3 by mother's work status

		Non-Working Mothers	Working Mothers
Partner	Mean Hours	7.7	10.6
	Standard Error	0.3	0.2
	Observations	2008	4405
Grandparents	Mean Hours	9.3	8.2
	Standard Error	0.3	0.1
	Observations	1720	3871
Other Relative	Mean Hours	13.8	13.3
	Standard Error	0.7	0.5
	Observations	890	1272
Non-Relative	Mean Hours	4.5	6.0
	Standard Error	0.3	0.5
	Observations	342	782
Childminder	Mean Hours	5.2	8.6
	Standard Error	0.7	0.3
	Observations	41	678
Day Nursery	Mean Hours	7.5	7.3
	Standard Error	2.1	0.6
	Observations	15	82
Total Non-Parental Care	Mean Hours	12.3	15.0
	Standard Error	0.3	0.2
	Observations	3652	6990

Notes: Observations unweighted. Mean hours weighted with weight 2. Total non-parental care does not include partner care.

Among those who used childcare, mothers who were not working used an average of 13 hours per week and mothers who were working used 16 hours. The difference is not as large as might be expected or was seen at MCS 2, but this may be explained by the fact that most children were in school. Working mothers therefore did not need to arrange so much childcare. The numbers of hours that children of non-working and working mothers spent in childcare also did not differ much for each type of care.

Childcare across sweeps

Table 5.5 shows the rates of care by arrangement type and timing of the care. The care at each interview point is not simply what was reported at that interview; the timing of the care was computed from the start and stop dates. For example, care at MCS 1 includes care arrangements that were reported at MCS 1 but also arrangements reported at later sweeps to have been taking place at MCS 1. The table shows only cases for which there was data for all three sweeps.

Rates of informal care -- self, partner, grandparents, relatives, and non-relatives--dropped from MCS 1 to MCS 2 then increased again from MCS 2 to MCS 3. This can be seen both in the individual informal care categories and in the overall informal care rate. Use of day nursery, nursery school, playgroup, and pre-school increased from MCS 1 to MCS 2, then dropped to close to zero at MCS 3. These patterns make sense given that the formal care settings became increasingly available as the cohort members reached age 3 (MCS 2), and then became unavailable or unnecessary as cohort members moved into school (MCS 3).

Table 5.5
Childcare use rates at MCS 1 through MCS 3

Care Type	Statistic	At MCS1	At MCS2	At MCS3	At Any Time
Self*	Observations	455	202	--	558
	Percentage	3.6	1.8	--	4.3
Partner	Observations	3197	1312	5904	7517
	Percentage	25.0	10.8	51.7	56.2
Grandparents	Observations	4229	2137	3738	6297
	Percentage	31.4	16.7	27.4	46.4
Other Relative	Observations	1039	380	1087	2215
	Percentage	7.9	2.8	7.4	15.9
Non-Relative	Observations	502	172	874	1436
	Percentage	4.6	1.4	7.6	12.5
Childminder	Observations	1218	846	673	2338
	Percentage	10.5	7.3	5.3	20.0
Day Nursery	Observations	1472	2358	126	3534
	Percentage	13.0	19.9	0.9	29.3
Nursery School/Class**	Observations	290	4098	114	8985
	Percentage	2.7	30.8	0.8	63.3
Playgroup**	Observations	511	3113	26	4887
	Percentage	4.2	25.5	0.2	37.4
Pre-School**	Observations	20	1439	29	2647
	Percentage	0.2	16.5	0.2	27.0
Other	Observations	88	89	53	287
	Percentage	0.7	0.8	0.4	2.4
Any Informal Care	Observations	6781	3744	8351	10361
	Percentage	51.6	29.6	62.4	78.2
Any Formal Care	Observations	3048	9503	1772	10003
	Percentage	26.1	78.3	13.8	81.6
Any Non-Parental Care***	Observations	6882	10085	6012	11645
	Percentage	53.8	81.8	45.2	91.2
Any Type of Care	Observations	8284	10354	8905	12392
	Percentage	64.0	83.7	66.7	95.9

Notes: Observations unweighted. Mean hours weighted with weight 2. Includes all families who took part in all three sweeps. *Not asked at MCS 3. **Not asked at MCS 1.

Table 5.6 shows the hours per week in each type of care across the sweeps, again for only the families who took part in all sweeps. Respondents were not asked to report care hours at

MCS 1, but they were asked at MCS 2 and because care start and stop dates were also collected, it was possible to assign hours to care that had been taking place at MCS 1. The hours of care at MCS 1 should be seen as less reliable than hours at the other two sweeps because the former were reported retrospectively.

Table 5.6
Hours of childcare per week at MCS 1, MCS 2 and MCS 3

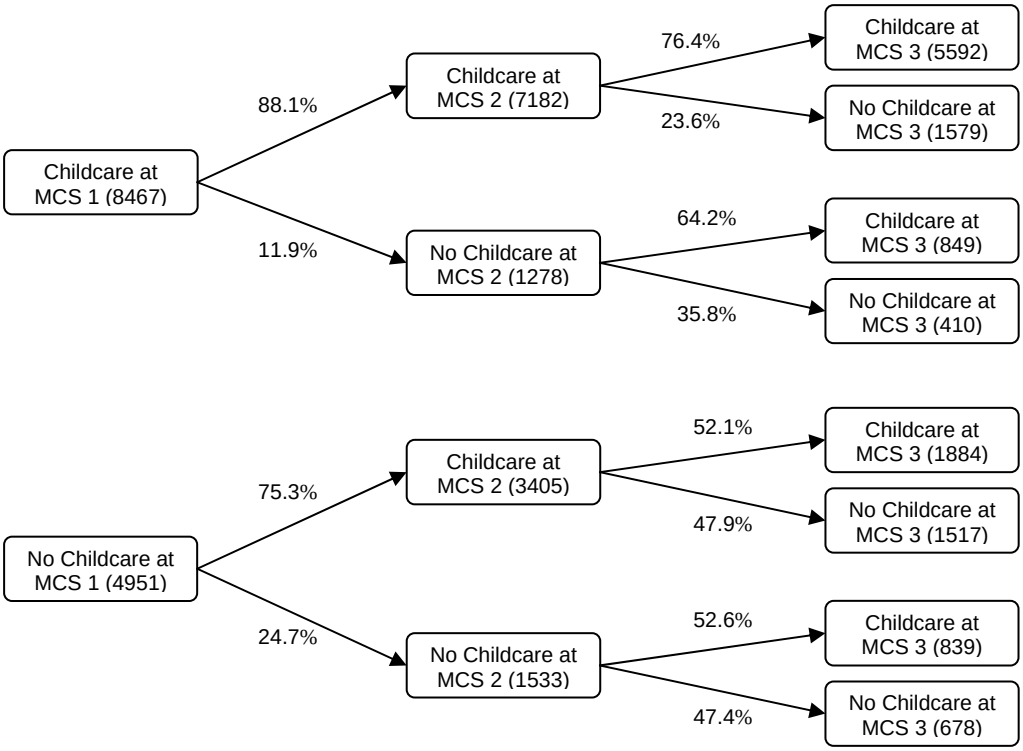
Care Type	Statistic	At MCS 1	At MCS 2	At MCS 3
Self*	Mean Hours	34.5	35.3	--
	Standard Error	3.3	3.9	--
	Observations	109	95	--
Partner	Mean Hours	19.8	19.5	10.4
	Standard Error	0.5	0.5	0.2
	Observations	1239	1011	5955
Grandparents	Mean Hours	18.9	18.4	8.3
	Standard Error	0.3	0.3	0.1
	Observations	1977	1638	5049
Other Relative	Mean Hours	20.7	20.0	12.9
	Standard Error	0.9	1.0	0.4
	Observations	328	233	1870
Non-Relative	Mean Hours	19.4	17.4	5.5
	Standard Error	1.5	1.8	0.4
	Observations	134	92	1018
Childminder	Mean Hours	26.2	24.4	8.4
	Standard Error	0.6	0.6	0.3
	Observations	749	507	683
Day Nursery	Mean Hours	25.8	23.6	7.3
	Standard Error	0.4	0.4	0.7
	Observations	1040	1164	82
Nursery School/Class**	Mean Hours	--	11.2	--
	Standard Error	--	0.4	--
	Observations	--	358	--
Playgroup**	Mean Hours	--	7.4	--
	Standard Error	--	0.2	--
	Observations	--	205	--
All Non-Parental Care	Mean Hours	22.7	20.1	11.2
	Standard Error	0.3	0.3	0.2
	Observations	4219	4224	6925

Notes: Observations unweighted. Mean hours weighted with weight 2. Includes only those families who took part in all three sweeps. *Not asked at MCS 3. **Not asked at MCS 1.

Hours per week in care were very consistent from MCS 1 to MCS 2. Despite the change in the types of care used from MCS 1 to MCS 2, the number of hours the children spent in each type of care was very stable. This could, however, be an artefact of hours for the two time periods having been reported at the same time (MCS 2). Hours per week in all types of care then dropped at MCS 3, probably because children were in school for approximately six hours a day and needed care only outside of school days and hours.

Figure 5.1 shows transitions into, and out of, childcare from sweep to sweep. Regardless of whether care had been used at MCS 1, respondents were more likely to use care at MCS 2 than not use it. Those who had used care at MCS 1 were, however, somewhat more likely to use it at MCS 2 (88%) than were those who had not used care at MCS 1 (75%). At MCS 3, those most likely to be using care were parents who had used it at both MCS 1 and MCS 2. For those who had not used care at MCS 1, rates of using care at MCS 3 were very similar, regardless of childcare use at MCS 2. Rates of care use were very high at MCS 2; it may be that care use at that age was so nearly universal that it was not highly related to use at MCS 1 or MCS 3.

Figure 5.1
Changes in childcare use from MCS 1 to MCS 3



Notes: Observations unweighted. Mean hours weighted with weight 2. Includes only those families who took part in all three sweeps.

Conclusion

Because of differences in data collection and sample, it is not possible to compare directly the childcare rates in the MCS to the studies summarised by Brewer and Shaw (2004), but the patterns in rates and hours found in those four studies were also found in the MCS. Rates of care were lower at MCS 3 than they had been at MCS 2, as were the average number of hours that children spent in childcare, showing the same decline from age 3 to 5 that was seen in the other four surveys.

Both working and non-working mothers used childcare, though working mothers used it more than did non-working mothers. Data from the PDFC and LFS had shown that working and non-working mothers used formal care at about the same rates, but that non-working mothers were less likely than working mothers to use informal care. At MCS 3, non-working mothers were somewhat less likely to use each type of care, most of which were informal at this sweep.

Rates of care use at MCS 3 were lower than at MCS 2, but nearly half of all families were using some form of non-parental care even though most children had started school. This shows that both working and non-working mothers continue to need childcare into school-age years. Research on the quality of childcare settings has focused on early years, but with care continuing to be used past those ages, research on accessibility, affordability, and quality of care outside of school hours could also be informative.

The results reported here are based only on cross-tabulations and therefore say nothing about causality. However, the data available in the MCS allow for future studies to examine causality through more complex modelling and analysis.

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Chapter 6

SCHOOL CHOICE

Kirstine Hansen

Introduction

In 1988, the Education Reform Act ensured that parents in England, Wales and Northern Ireland could express a choice over the school their child attends. Despite obvious policy interest in the extent of, and consequences of, school choice very little is actually known about it. One of the main concerns is that school choice will lead to social segregation or 'sorting' across different schools where the more socio-economically advantaged pupils benefit more than other children, because their parents are better able to secure places for them in the more effective schools. Others argue that school choice is not an issue for most parents who send their child to the local school and that school choice is really only an issue for parents living in specific areas such as London, where there may be a number of local schools which may vary in quality. This chapter uses data from the Millennium Cohort Study to examine the extent to which parents do actually choose the primary schools their children attend, how successful they are in securing their first-choice school and the reasons for their choice.

State versus fee-paying schools

One of the first choices many parents make about schools is whether to educate their child in the state sector or to opt out and send their children to a fee-paying school. Table 6.1 shows the extent to which parents in the MCS are sending their children to fee-paying schools across the different countries of the UK. Examining choices separately by country is important because each country's education system is different and there is a much stronger tradition of private schooling in England, for example, than in Wales.

Around 5 per cent of MCS children in England attend fee-paying schools. This is much higher than in the other countries. In Northern Ireland around 3 per cent of children attend fee-paying schools and only 2 per cent of children in Wales and Scotland.

Table 6.1
Children attending fee-paying schools by country

	Country			
	England	Wales	Northern Ireland	Scotland
Children attending fee-paying school	409 (4.8)	33 (1.9)	40 (2.8)	30 (1.9)
Total observations	9538 *8367.4*	2160 *2143.2*	1510 *1528.5*	1647 *1626.5*
	P=0.000			

Notes: Sample: All children (excluding second and third children in twin and triplet families). 323 observations are excluded because of missing data on school choice variables. Table displays unweighted observations, *weighted observations* and weighted percentages in parenthesis (using weight1).

These country averages are likely to mask some real variation across different areas. For instance, 18.5 per cent of MCS children in Inner London attend fee-paying schools, and take-up of private education is known to be above average in Edinburgh, though this report does not go into such geographic detail.

Applying for a school place in the state sector

Parents who choose the private sector usually apply directly to the school. In England and Wales, applying for a place in a community or voluntary-controlled school involves filling in an application form that gets sent to the local authority (LA), which makes the decision on admissions. Applying to other types of schools may involve sending an application to the school directly. In Northern Ireland, applications are directed to the Education Library Board (ELB). In Scotland, children are allocated a place in their local school but parents can ask for a place at another school. If they wish to do this they make a request to their local education authority.

The extent to which MCS parents applied for a primary school place via an LA/ELB form or requested a school place in Scotland can be seen in Table 6.2. In Northern Ireland, nearly 90 per cent of parents applied for schools via an ELB form and 75 per cent of parents in England applied for a school place via a form to their LA. In Wales, fewer parents (58%) applied for a school place in this way, while in Scotland only 38 per cent of parents requested a place at a particular school.

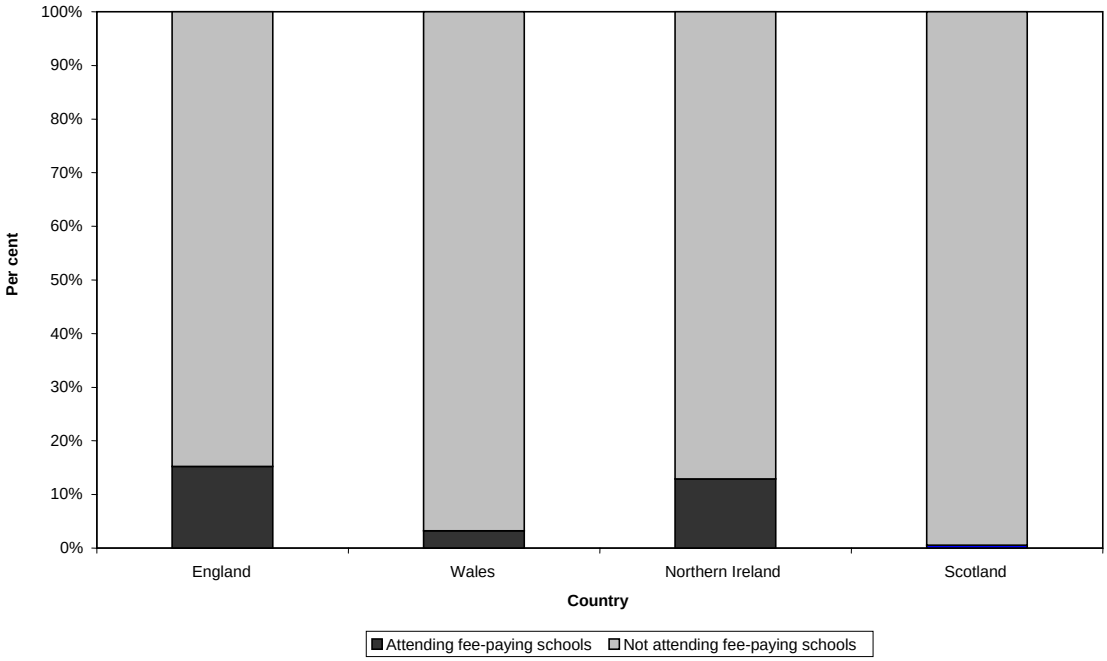
Table 6.2
Families applying through LEA/ELB form for child's school or requesting a place in Scotland

	Country			
	England	Wales	Northern Ireland	Scotland
Applying for a place through LA/ELB form or requesting a place	6875 (75.0)	1189 (58.3)	1334 (88.8)	638 (38.1)
Total observations	9538 *8367.4*	2160 *2143.2*	1511 *1529.3*	1647 *1626.5*
Significance				P=0.000

Notes: Sample: All children (excluding second and third children in twin and triplet families). 323 observations are excluded because of missing data on school choice variables. Table displays unweighted observations, *weighted observations* and weighted percentages in parenthesis (using weight1).

The extent to which parents exerted a choice of school for their child clearly varies across the different countries. However, we cannot assume that other parents are simply not making a choice about school. We already know from Table 1 that some parents chose to send their children to fee-paying schools and we may well think that parents who have made that decision already do not need to apply for a place in this way. If we examine those parents who say they did not apply for a school place via an LA/ELB form or did not request a place at a particular school we first need to subtract those parents who sent their child to a fee-paying school before we can say anything about lack of choice. When we do this we find that only relatively few of those parents who did not apply or request a place at a particular school sent their child to a fee-paying school. This can be seen clearly in Figure 6.1, which shows that just over 15 per cent of children whose parents did not apply for a school place via the LA/ELB in England, just under15 per cent in Northern Ireland, 3 per cent in Wales and less than 1 per cent not requesting a place in Scotland attend fee-paying schools. So opting out of the state sector explains only a small part of those not applying for, or requesting, a place at a particular school. However, it should also be borne in mind that the decision to send a child to a fee-paying school may not always come before choosing a state school. It is possible that choosing to send a child to a fee-paying school may be the result of failing to secure a place in the state school of choice. However, we will see later in this chapter that the majority of parents do get their first-choice school.

Figure 6.1
Percentage of children attending fee-paying school amongst parents who did not apply for/request a school place



Notes: Sample: All children (excluding second and third children in twin and triplet families). 323 observations are excluded because of missing data on school choice variables. Figure displays weighted percentages (using weight1).

Subtracting parents who send their children to fee-paying schools away from those parents who did not apply for, or request, a school place in Table 6.2 leaves: 21 per cent of parents in England; 40 per cent in Wales; 10 per cent in Northern Ireland and; a massive 62 per cent of parents in Scotland, making no application or request for a school place.

The differences in the degree of parental choice may reflect a number of things. Firstly, the countries where parents are less likely to exercise choice may be those where MCS children live in more sparsely populated areas where there are fewer schools within travelling distance. This may help to explain the apparent low exercise of choice in Scotland. Secondly, if quality of schools varies less in some countries than others, it matters less if parents make a choice, as one school will be similar to another. Also, if information about schools is differentially available across countries, this could explain differences in choice. Currently, only England produces league tables. If parents do not have the information to be able to differentiate between schools then it will be harder to choose a school.

Thirdly, as noted previously, there are other types of school to which parents may apply directly in a similar way to independent schools. These include Voluntary Aided schools (where the admissions policy is set by the governing body) and Foundation Schools (where admissions policy is determined and administered by the governing body in consultation with the LEA or ELB). Differential use of these types of schools across countries may explain some of the apparent lack of choice. The MCS 3 sweep did collect information on the type of school attended, so will in future be able to shed light on this topic, but these data are only available under special arrangements due to their potentially disclosive nature.

Fourthly, there is a growing body of literature which shows that parents are willing to pay to live in the catchment areas of better-performing schools (see Gibbons and Machin, 2003). Around 17 per cent of parents moved between MCS 2 and MCS 3 for reasons to do with

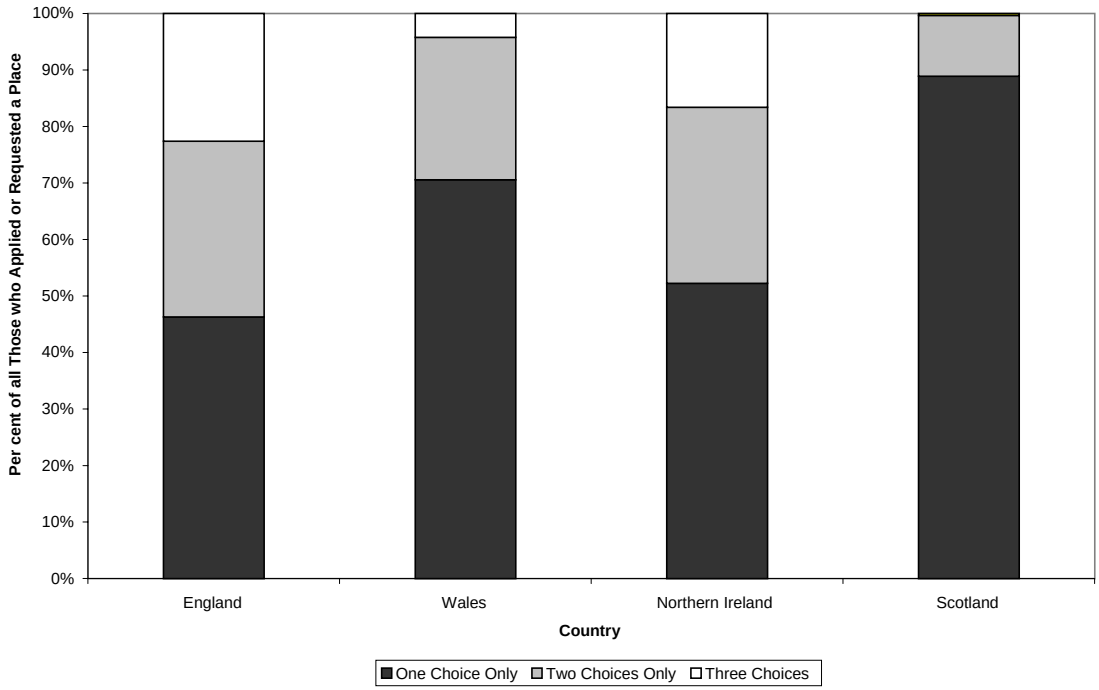
their child's education (Hansen and Machin, 2008). If the degree to which 'selection by mortgage' occurs varies by country this too could contribute to differences in the extent to which parents are seen as exerting choice over the school their child attends.

It is therefore difficult to establish whether these figures really reflect parental choice or simply differences in the education systems across countries. If they do reflect parental choice it is hard to establish how much of a concern that is without supplementary information about the schools the parents are choosing. This will be possible (in England at least) if the MCS data are matched to the Pupil Level Annual School Census (PLASC) and National Pupil Database (NPD).

How many schools do parents apply to?

Parents can apply for a place at one or more schools. Figure 6.2 shows the percentage of parents who apply to, or request a place at, a school by the number of schools they apply to. The figure shows that many MCS parents name only one school. In Scotland, the majority (89%) of parents who request a particular school choose only one school. In Wales, the corresponding figure is 70 per cent, in Northern Ireland 52 per cent and in England 46 per cent.

Figure 6.2
Percentage distribution of number of schools applied for on LA/ELB form or requested



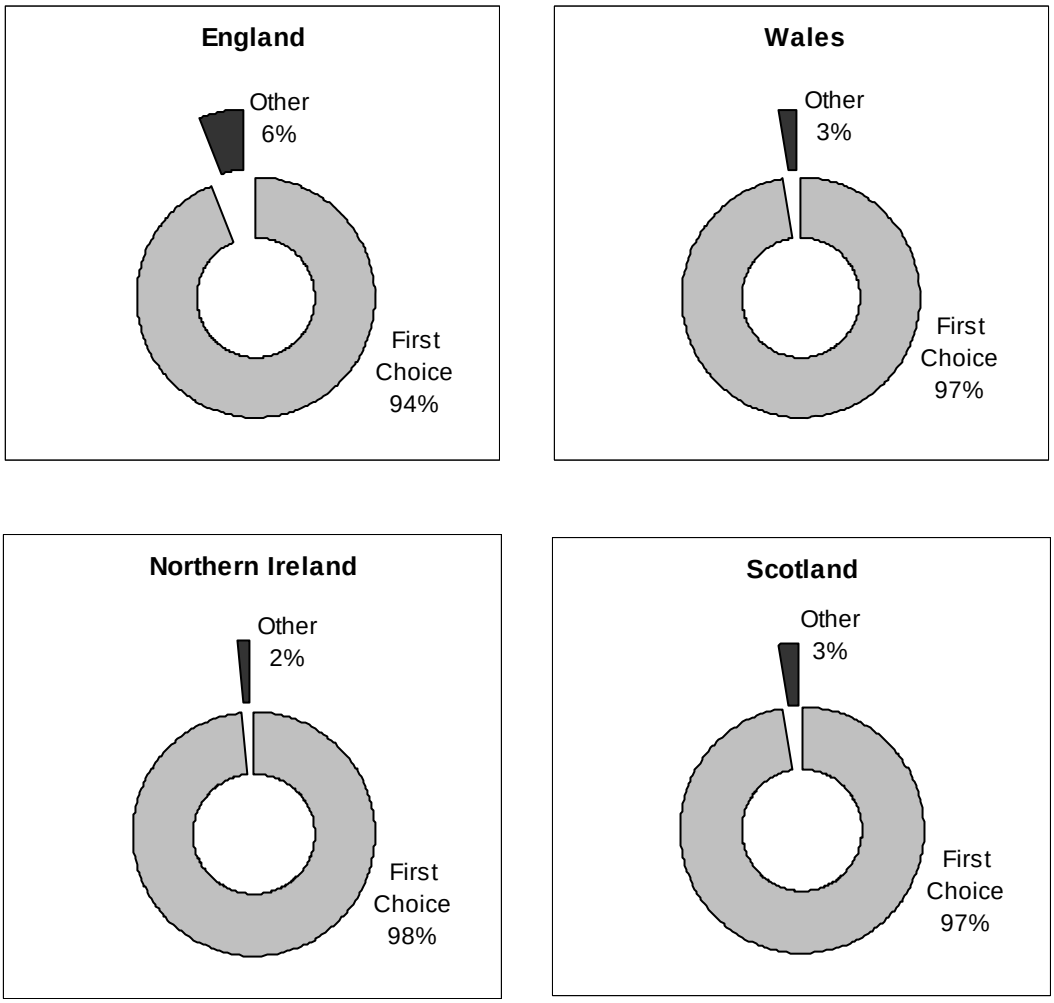
Notes: Sample: All children (excluding second and third children in twin and triplet families) whose parents applied to or requested a place at a school. 323 observations are excluded because of missing data on school choice variables. Figure displays weighted percentages (using weight1).

Do parents get their school choice?

Parents do not necessarily get their first-choice primary school – but the vast majority do. Figure 6.3 shows the percentage of MCS children who attend their first-choice schools. In

Scotland and Wales, 97 per cent of children attend their parents' first-choice school. In Northern Ireland the corresponding figure is 98 per cent while in England it is 94 per cent.

Figure 6.3
Percentage of children attending school by parental choice



Notes: Sample: All children (excluding second and third children in twin and triplet families). 323 observations are excluded because of missing data on school choice variables. Figure displays weighted percentages (using weight1).

How parents choose schools

There is a small, largely qualitative, literature on how parents choose schools. These studies have shown that academic achievement is of great importance to parents (West and Pennell, 1999; Coldon and Boulton, 1991). Table 6.3 shows the criteria MCS parents consider is most important in thinking about a school for their child. Again the table is split by country and also by whether the school was applied to, or requested by, the parent (or not). This latter point is important as we may well think that parents who exert school choice may be different from parents who do not, which may be reflected in the criteria they think is most important in a school. However, we can see from Table 6.3 that this is not the case. Moreover, the pattern is similar across countries.

Interestingly, the school's performance is not the only thing about it that parents mention as important. The other school characteristics that, taken together, parents rate more highly include: good impression of the school; good school (other than results); strong anti-bullying policy; small class sizes; caters for special needs; offers specialist curriculum; good facilities; offers childcare; religious grounds; ethnic mix; teaches in language other than English; and single-sex. The majority of MCS parents list the general impression of the school as being the most important factor (around 63% of this category). Choosing a school that teaches in another language was only identified as the most important factor by 163 people, 124 of whom (76%) lived in Wales, 23 (14%) in Northern Ireland, 9 (6%) in Scotland and 7 (4%) in England. Chapter 7 indicates that around 12 to 14 per cent of schools in Wales teach primarily in Welsh, which may account for the relatively high percentage of parents placing language used in the classroom at the top of the school choice list.

Amongst parents who did not apply for, or request, a place at a school, the highest percentage rated other school characteristics as the most important factor in their choice in England (32%), Wales (33%) and Northern Ireland (33%). In Scotland, parents who did not request a specific school were most likely to rate distance from home as the most important factor (42%).

Amongst parents who applied for, or requested, a school place, the highest percentage rated friends or siblings attending a school as the most important factor. This is true across all countries. In England, 29 per cent, Wales 28 per cent, Northern Ireland 33 per cent and Scotland 31 per cent of parents who applied for, or requested, a school place rated this factor as most important, putting it above school performance and other school characteristics. A high percentage of parents who did not apply for, or request, a school place also rated friends or siblings attending a school as the most important factor for choosing that school (28% in England and Wales, 30% in Northern Ireland and 22% in Scotland).

Table 6.3
Most important factor when thinking about a school by country and whether school was applied to/requested or not

	England		Wales		Northern Ireland		Scotland	
	Applied/Requested School		Applied/Requested School		Applied/Requested School		Applied/Requested School	
	Yes	No	Yes	No	Yes	No	Yes	No
Closest school	1499 (23.4)	470 (20.4)	280 (27.3)	190 (23.2)	370 (32.5)	39 (30.0)	113 (21.9)	378 (41.8)
Friends or sibling attend the school	1757 (29.1)	645 (28.4)	287 (27.8)	232 (27.5)	378 (32.8)	38 (29.9)	168 (31.2)	198 (21.8)
School performance	1097 (18.6)	367 (17.6)	171 (17.1)	115 (14.5)	111 (10.4)	7 (4.9)	72 (12.8)	118 (13.2)
Other school characteristics	1517 (26.4)	620 (32.1)	277 (25.6)	273 (33.3)	245 (21.8)	41 (33.4)	158 (29.0)	201 (22.2)
Other reason	154 (2.5)	31 (1.4)	28 (2.3)	15 (1.6)	26 (2.4)	2 (1.8)	28 (5.2)	8 (1.0)
Total observations	6004 *5616.3*	2133 *1768.6*	1043 *1111.4*	825 *772.6*	1130 *1157.8*	127 *122.5*	539 *528.6*	903 *906.2*
Sign. (Applied=Yes)								P=0.000
Sign. (Applied=No)								P=0.000

Notes: Sample: All children (excluding second and third children in twin and triplet families). 323 observations are excluded because of missing data on school choice variables. Table displays unweighted observations, *weighted observations* and weighted percentages (using weight1).

Does school choice matter?

The descriptive results so far suggest that there may be differences in the extent to which parents exert choice over the schools their children go to. The results have also shown that the majority of parents who apply for, or request, a place did secure their first-choice school for their children. If we expect parental choice to be related to competition and raise standards (Bradley et al., 2001) we may well expect that schools which parents applied for or requested will be better than other schools. We would therefore expect children to be happier and parents to be more satisfied in these schools. This is examined in Table 6.4. which shows that there is very little difference in either child enjoyment of school or parental satisfaction with school by whether the parents applied for, or requested, a place at a school or not.

The test statistics show that the difference in the percentage of parents who applied for/requested a place and say their child always enjoys school and the percentage of parents who did not apply for, or request, a place and say their child always enjoys school is statistically insignificant across all countries examined. Apart from Scotland, this is also true for parental satisfaction. Only in Scotland are parents significantly more likely to report full satisfaction with the school if they requested a place at that particular school. This may suggest that in Scotland lack of school choice is related to parental satisfaction. However, in reality the percentage of parents reporting full satisfaction with the school is high in Scotland, regardless of whether they exercised choice. Indeed, 80 per cent of parents who requested a school place report that they are fully satisfied with the school their child attends, while 74 per cent of parents who did not request a place at their school report full satisfaction. This figure is the same as the percentage of both sets of parents (i.e. those who applied/requested a school and those that did not) in England who reported that they are fully satisfied with the school.

Conclusion

This chapter has offered a preliminary look at the school choice data collected in the third sweep of the MCS when the children were aged 5. The results suggest that the extent to which parents are exerting school choice varies across the UK. But further research is needed to establish the effects that ‘selection by mortgage’; Foundation and Voluntary Aided schools; geographical variations in school quality; and league tables have on patterns of parental choice.

Where parents of the MCS cohort members did make a choice they were, on the whole, successful in securing their first-choice school. However, it is hard to know whether this is a genuine phenomenon and even if it is, it is hard to interpret. It may reflect an under-subscription in schools for this particularly small birth cohort cohort, which made it relatively easy for parents to get their children into their chosen school. On the other hand, many parents may only apply to schools they think their children will get into. Equally, parents may rationalise the situation they find themselves in, leading them to say that the child’s current school was first choice when, in fact, it was not. Further work is needed to unpick this situation.

Whether parents applied to, or requested, a school appeared to matter little to the criteria they identified as most important when thinking about a school for their child. Moreover, this chapter suggests that it also matters little for child enjoyment and parent satisfaction with the school. With the exception of parental satisfaction in Scotland, the difference proved to be statistically insignificant across the two sets of parents (those who applied/requested a school and those that did not). In the future, when the MCS data are linked to NPD and PLASC, we will be able to elaborate on school choice amongst MCS parents.

Table 6.4
Parents' report of child school enjoyment and parental satisfaction with school by country and whether they applied for/requested a school place

	England		Wales		Northern Ireland		Scotland	
	Applied/Requested School		Applied/Requested School		Applied/Requested School		Applied/Requested School	
	Yes	No	Yes	No	Yes	No	Yes	No
Parents report that the child always enjoys school	4932 (70.9)	1969 (72.5)	861 (72.3)	708 (72.2)	1044 (78.4)	143 (81.2)	484 (75.8)	755 (75.5)
Total observations	6875 *6875.0*	2663 *2095.6*	1189 *1250.0*	893 *893.2*	1334 *1357.7*	177 *171.6*	638 *619.6*	1009 *1006.8*
Significance		P=0.153		P=0.975		P=0.399		P=0.869
Parents report full satisfaction with the school their child attends	4983 (73.8)	1903 (73.6)	936 (78.2)	736 (75.2)	1097 (83.0)	155 (86.5)	506 (79.8)	744 (73.7)
Total observations	6875 *6271.7*	2663 *2095.6*	1189 *1250.0*	971 *893.2*	1334 *1357.7*	177 *171.6*	638 *619.6*	1009 *1006.8*
Significance		P=0.872		P=0.149		P=0.319		P=0.013

Notes: Sample: All children (excluding second and third children in twin and triplet families). 323 observations are excluded because of missing data on school choice variables. Table displays unweighted observations, *weighted observations* and weighted percentages in parenthesis (using weight1).

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Chapter 7

FOUNDATION STAGE PROFILE AND DEVOLVED ADMINISTRATION TEACHER SURVEY

Kirstine Hansen and Elizabeth M. Jones

Introduction

A child's academic achievement, even when young, has been found to be a good predictor of future academic and employment outcomes. Evidence from the National Child Development Study suggests test scores at age 7 are good predictors of a range of later outcomes including test scores at 16 and earnings at 33 (Currie and Thomas, 1999 and 2001). Feinstein and Duckworth (2006) found that cognitive tests administered at age 5 were related to maths and reading test scores at age 10 and to highest qualification and income at age 30.

Family and child characteristics, such as socio-economic status, parental education and work status, and family structure are also related to early academic achievement and affect the relationship between early achievement and later outcomes (Currie and Thomas, 1999 and 2001; Feinstein and Duckworth, 2006).

This chapter looks at achievement at age 5 as measured by the teacher in the Foundation Stage Profile (FSP) in England or the equivalent Devolved Administration Teacher Survey (DATS) in Wales, Scotland and Northern Ireland, which was devised by CLS to replicate the information collected by the FSP.

The sample used in this chapter consists of cohort members for whom FSP or DATS data were available. We received FSP data for 8,671 cohort members and DATS data for 3,332 cohort members. Of the cohort members who were in families that took part in MCS 3, no FSP or DATS data were received for 3,466. Only one cohort member per household was included; in families where there were twins or triplets, the data for the second and third cohort members were excluded. This excluded 147 cohort members, leaving 11,856.

The Foundation Stage Profile and Devolved Administration Teacher Survey

The FSP recorded the child's achievement as reported by their teacher at the end of the first year of school for children in state schools in England. These data were collected for MCS children by the Department for Children, Schools and Families (then known as the Department for Education and Skills) and matched to our survey records. Of 9,084 children, 8,671 were matched. This represents a success rate of around 95 per cent.

The FSP covers six areas of learning:

1. Personal, social and emotional development
    - Disposition and attitudes
    - Social development
    - Emotional development
2. Communication, language and literacy
    - Language for communicating and thinking
    - Linking sounds and letters
    - Reading
    - Writing

3. Mathematical development
    - Numbers as labels and for counting
    - Calculating
    - Shape, space and measures
4. Knowledge and understanding of the world
5. Creative development
6. Physical development

In each of these areas teachers give a child a score of 1 to 9 for each category. If a child gets 9 this means their achievement is significantly beyond what is expected at this stage. It has the level of challenge found in aspects of level 1 of the national curriculum and sometimes aspects of level 2b.

Teachers in Wales, Scotland and Northern Ireland, which do not have the FSP, were sent a postal questionnaire aimed at replicating the FSP information. They were asked to measure a child's achievement in the same six areas using the same 1 to 9 ranking system. The response rate for this teacher survey was 55 per cent in Wales, 59 per cent in Scotland and 68 per cent in Northern Ireland.

Though the DATS contained the same items and was scored in the same way as the FSP, there were differences in the way missing data were handled. For the FSP, the scale and total scores adjusted for missing items. The DATS scale scores were not adjusted for missing data, so if one item in a given scale was missing, the scale was computed as missing as well. For this reason, there is much more scale-level missing data for the DATS than for the FSP, which can be seen in the number of observations in the tables of results.

The FSP and DATS scores are looked at across other variables from the MCS study, including child age group, ethnicity, family structure, highest parental qualification, parental work status, and family poverty status. The child age variable used is age at the time of the assessment, which was the end of the school year in England and varied across children, rather than age at the time of the MCS 3 interview, In the other countries the assessment could be several months after the interview, according to how quickly the postal survey was completed (see Table 1.4).

Results

Table 7.1 shows the means, standard errors, and possible range for the scales and subscales. All results are presented separately by country, as different instruments were used. There were notable differences in scores among the countries, including among those in which the DATS was used. For all of the scales and subscales, scores were highest for children in Scotland and lowest for children in England. It is important to keep in mind that the difference in instruments could play some role in the difference between the scores for children in England and the scores for children in the other countries.

The scores for the MCS cohort members in England were very similar to the overall scores for all students in England (DfES, 2007). The pattern of mean scores varying across the scales seen in the MCS sample was the same as in the overall England sample.

Table 7.2 shows the means for the total score on the FSP or DATS. For all countries, there was a trend for older children to be rated higher than younger children. Scores could be looked at by ethnicity for England only, as the number of non-white cohort members was small in the other countries. White children were rated higher than Pakistani or Bangladeshi and black children. For all countries, children with two parents were rated higher than children with lone parents. Total scores were higher for children with parents who had two

working parents with higher qualification levels, and who were from households with incomes above poverty level.

Tables 7.3 to 7.8 show the means for the individual FSP and DATS scales. The patterns seen for the total score are also seen for the scales.

Because older children tended to score higher on the FSP/DATS, differences between countries could also be influenced by the average age of the cohort members in each country. The means of cohort member ages in months were 63.5 in England, 69.2 in Wales, 68.6 in Scotland, and 66.9 in Northern Ireland. Children in Scotland and Northern Ireland were born a little later than the cohort in England and Wales. The younger MCS children in the former countries would have entered a later academic year than the children in England and Wales and would be among the older children in their year rather than the youngest in the class as in England and Wales. This means we see less of penalty for being born later than is apparent among the cohort in England and Wales.

Of the 1,158 children in Wales for whom we had school information from the DATS, 12 per cent were in schools in which children were educated in Welsh only, 4 per cent were in schools in which mainly Welsh was used, 0.3 per cent were in schools in which Welsh and English were used about equally, 54 per cent were in schools in which mainly English was used, and 29 per cent were in schools in which children were educated in English only. We had DATS school information for 1,053 children in Northern Ireland; of these, 2 per cent were in schools in which children were educated in Irish only, .2 per cent were in schools in which mainly Irish was used, 5 per cent were in schools in which mainly English was used, and 93 per cent were in schools in which children were educated in English only.

Conclusions

This chapter has shown the FSP and DATS scales across child and family characteristics from the Millennium Cohort Study. Though no causality can be inferred from these means, it is clear that the FSP and DATS scores do vary across these characteristics. Further research using these data can explore more complex models and analyses. Literature on early test scores suggest that these FSP and DATS data will be important in predicting outcomes for the cohort members as they continue schooling and move into higher education and employment.

There appear to be some differences between countries. Though England cannot be compared to Wales, Scotland and Northern Ireland due to the different instruments used, comparisons can be made among the latter three countries. The means here suggest that cohort members in Scotland may have been rated higher than the cohort members in the other two countries, but this difference needs to be investigated further, controlling for other variables such as cohort- member age, amount of schooling received up to the point of the assessment, and other child and family characteristics as well as the possibility of different sources of bias in the response of teachers in the different administrations..

In addition to the FSP and DATS, the MCS 3 data include a cognitive assessment of the cohort members on the British Ability Scales II. Further research can investigate the relationship between the teacher ratings and the cognitive assessments. As the study progresses, we will be able to investigate whether the teacher ratings of the FSP and DATS or the cognitive assessments better predict later outcomes in childhood and adulthood.

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Table 7.1
Mean achievement scores as recorded by teachers for different areas of learning

Scale (and sub-scale)	FSP England Mean (SE)	FSP England Obs *Weighted*	DATS Wales Mean (SE)	DATS Wales Obs *Weighted*	DATS Scotland Mean (SE)	DATS Scotland Obs *Weighted*	DATS Northern Ireland Mean (SE)	DATS Northern Ireland Obs *Weighted*	Max Possible	FSP National Means
Total Score	87.7 (-0.4)	8563 *7559*	95.6 (-1.2)	862 *826*	103.3 (-0.8)	653 *639*	97.4 (-1.0)	705 *725*	117	
Personal, Social, and Emotional Development	21.1 (-0.1)	8562 *7558*	23.3 (-0.2)	1016 *988*	24.2 (-0.2)	838 *828*	23.9 (-0.2)	849 *877*	27	
Disposition and Attitudes	7.3 (0.0)	8562 *7558*	7.5 (-0.1)	1088 *1057*	7.8 (-0.1)	947 *936*	7.9 (-0.1)	960 *1000*	9	7.2
Social Development	6.9 (0.0)	8562 *7558*	7.9 (-0.1)	1092 *1062*	8.2 (-0.1)	968 *958*	8.1 (-0.1)	951 *983*	9	6.7
Emotional Development	6.9 (0.0)	8562 *7558*	7.8 (-0.1)	1072 *1040*	8.0 (-0.1)	932 *918*	7.9 (-0.1)	917 *946*	9	6.7
Communication, Language, and Literacy	25.4 (-0.2)	8562 *7558*	27.1 (-0.4)	1003 *963*	30.5 (-0.3)	839 *823*	28.3 (-0.3)	872 *899*	36	
Language for Communication and Thinking	6.8 (0.0)	8561 *7558*	7.1 (-0.1)	1094 *1059*	7.5 (-0.1)	957 *940*	7.4 (-0.1)	950 *981*	9	6.6
Linking Sounds and Letters	6.2 (0.0)	8560 *7556*	6.7 (-0.1)	1105 *1074*	7.9 (-0.1)	1013 *996*	6.6 (-0.1)	979 *1014*	9	5.9
Reading	6.5 (0.0)	8561 *7558*	6.9 (-0.1)	1088 *1044*	7.6 (-0.1)	978 *962*	7.5 (-0.1)	979 *1013*	9	6.3
Writing	5.9 (0.0)	8560 *7556*	6.5 (-0.1)	1094 *1063*	7.4 (-0.1)	958 *947*	6.8 (-0.1)	981 *1018*	9	5.7
Mathematical Development	20.5 (-0.1)	8562 *7558*	22.7 (-0.2)	1075 *1033*	24.1 (-0.2)	929 *914*	22.4 (-0.2)	937 *967*	27	
Numbers as Labels and for Counting	7.3 (0.0)	8561 *7557*	7.9 (-0.1)	1126 *1091*	8.3 (-0.1)	1021 *1007*	7.9 (-0.1)	1001 *1034*	9	7.1

Table 7.1 (continued)
Mean achievement scores as recorded by teachers for different areas of learning

Scale (and subscale)	FSP England Mean (SE)	FSP England Obs *Weighted*	DATS Wales Mean (SE)	DATS Wales Obs *Weighted*	DATS Scotland Mean (SE)	DATS Scotland Obs *Weighted*	DATS Northern Ireland Mean (SE)	DATS Northern Ireland Obs *Weighted*	Max Possible	FSP National Means
Calculating	6.4 (0.0)	8559 *7555*	7.0 (-0.1)	1115 *1077*	7.6 (-1.0)	980 *966*	6.5 (-0.1)	974 *1007*	9	6.2
Shape, Space, and Measures	6.8 (0.0)	8559 *7557*	7.9 (-0.1)	1122 *1093*	8.2 (-0.1)	991 *977*	8.1 (-0.1)	1000 *1035*	9	6.7
Knowledge and Understanding of the World	6.7 (0.0)	8563 *7559*	7.0 (-0.1)	1093 *1061*	7.5 (-0.1)	924 *910*	7.0 (-0.1)	934 *964*	9	6.6
Creative Development	6.7 (0.0)	8563 *7559*	7.4 (-0.1)	1118 *1088*	7.9 (-0.1)	1010 *992*	7.5 (-0.1)	980 *1016*	9	7.2
Physical Development	7.3 (0.0)	8561 *7558*	8.2 (-0.1)	1093 *1052*	8.3 (-0.1)	954 *936*	8.3 (-0.1)	940 *973*	9	6.6

Notes: Sample includes all children (excluding second and third children in twin and triplet families). 3,466 observations are excluded because of missing data on FSP or DATS. Table displays weighted mean (using weight1), weighted standard errors, and unweighted observations.

Table 7.2
Mean total achievement scores by child and family characteristics

	FSP			DATS								
	England			Wales			Scotland			Northern Ireland		
	Mean	SE	Obs	Mean	SE	Obs	Mean	SE	Obs	Mean	SE	Obs
All respondents	87.7	0.4	8563	95.6	1.2	862	103.3	0.8	653	97.4	1.0	705
Age group at assessment												
57 months or younger	80.1	1.2	342	--	--	0	--	--	0	--	--	0
58 to 60 months	82.2	0.6	2198	--	--	0	--	--	1	--	--	2
61 to 63 months	86.7	0.6	2126	89.6	3.9	74	103.9	2.3	60	96.5	1.9	99
64 to 66 months	90.7	0.5	2167	89.0	1.4	160	100.0	1.8	134	97.7	1.1	251
67 to 69 months	93.8	0.5	1730	96.0	1.4	217	104.6	1.1	198	98.4	1.4	213
70 months or older	--	--	0	99.4	1.3	384	104.2	1.0	243	97.4	2.4	100
			p=0.000			p=0.000			p=0.159			p=0.513
Ethnicity												
White	88.5	0.5	5572	--	--	--	--	--	--	--	--	--
Mixed	86.4	1.2	347	--	--	--	--	--	--	--	--	--
Indian	86.1	1.4	308	--	--	--	--	--	--	--	--	--
Pakistani or Bangladeshi	75.8	1.3	767	--	--	--	--	--	--	--	--	--
Black	82.1	1.7	397	--	--	--	--	--	--	--	--	--
Other	83.0	1.8	171	--	--	--	--	--	--	--	--	--
			p=0.000									
Family structure												
Two parents	89.1	0.4	6850	97.2	1.5	691	104.3	0.8	518	99.1	1.0	586
Lone parent	81.2	0.6	1713	88.2	2.2	171	99.0	1.9	135	88.4	1.7	119
			p=0.000			p=0.002			p=0.008			p=0.000

Table 7.2 (continued)
Mean total achievement scores by child and family characteristics

	FSP			DATS								
	England			Wales			Scotland			Northern Ireland		
	Mean	SE	Obs	Mean	SE	Obs	Mean	SE	Obs	Mean	SE	Obs
Highest parental qualification												
No qualifications	74.1	0.9	809	79.5	3.8	69	87.3	3.8	41	84.0	2.4	56
NVQ Level 1	77.6	0.9	504	86.7	3.1	49	95.9	3.6	15	84.8	3.8	36
NVQ Level 2	83.9	0.6	2057	93.8	1.4	201	101.6	1.5	123	97.1	1.4	153
NVQ Level 3	87.3	0.6	1277	97.5	1.9	140	103.3	1.3	140	93.9	2.3	118
NVQ Level 4	92.5	0.4	2506	98.5	1.4	281	105.3	1.2	210	100.9	1.4	230
NVQ Level 5	94.4	0.6	1099	101.1	2.0	103	106.2	1.3	113	102.9	1.3	99
			p=0.000			p=0.000			p=0.000			p=0.000
Parental work status												
No parents working	76.6	0.8	1518	79.8	2.8	147	94.9	2.4	91	84.3	1.9	81
One parent working	87.1	0.5	2889	94.1	2.2	243	104.8	0.9	211	94.0	1.3	197
Two parents working	92.2	0.4	3437	101.0	1.1	413	105.3	1.0	295	101.3	1.2	338
			p=0.000			p=0.000			p=0.001			p=0.000
Family poverty status												
Above poverty level	90.9	0.4	5068	99.5	1.3	532	105.3	0.8	439	99.8	1.0	418
Below poverty level	80.2	0.6	2653	86.8	1.7	272	96.9	2.1	149	90.8	1.3	189
			p=0.000			p=0.000			p=0.000			p=0.000

Notes: Sample includes all children (excluding second and third children in twin and triplet families). 3,466 observations are excluded due to missing data on FSP or DATS. Table displays weighted mean (using weight1), weighted standard errors, and unweighted observations. Maximum possible score on scale is 117.

Table 7.3
Mean scores for personal, social, and emotional development by child and family characteristics

	FSP			DATS								
	England			Wales			Scotland			Northern Ireland		
	Mean	SE	Obs	Mean	SE	Obs	Mean	SE	Obs	Mean	SE	Obs
All respondents	21.1	0.1	8562	23.3	0.2	1016	24.2	0.2	838	23.9	0.2	849
Age group at assessment												
57 months or younger	19.9	0.3	342	--	--	0	--	--	0	--	--	0
58 to 60 months	20.1	0.1	2198	--	--	0	--	--	1	--	--	3
61 to 63 months	21.0	0.1	2126	21.9	0.9	67	24.7	0.5	75	24.1	0.3	116
64 to 66 months	21.7	0.1	2166	22.3	0.3	184	23.8	0.3	175	24.1	0.2	297
67 to 69 months	22.2	0.1	1730	23.4	0.2	262	24.5	0.3	251	24.0	0.3	267
70 months or older	--	--	0	24.0	0.2	450	24.1	0.2	312	23.1	0.5	117
			p=0.000			p=0.000			p=0.785			p=0.080
Ethnicity												
White	21.3	0.1	6572	--	--	--	--	--	--	--	--	--
Mixed	20.9	0.3	374	--	--	--	--	--	--	--	--	--
Indian	21.3	0.3	308	--	--	--	--	--	--	--	--	--
Pakistani or Bangladeshi	18.9	0.4	766	--	--	--	--	--	--	--	--	--
Black	19.6	0.4	397	--	--	--	--	--	--	--	--	--
Other	20.3	0.4	171	--	--	--	--	--	--	--	--	--
			p=0.000									
Family structure												
Two parents	21.4	0.1	6850	23.6	0.3	813	24.4	0.2	678	24.3	0.2	703
Lone parent	19.8	0.1	1712	22.0	0.4	203	23.0	0.4	160	22.1	0.4	145
			p=0.000			p=0.004			p=0.002			p=0.000

Table 7.3 (continued)
Mean scores for personal, social, and emotional development by child and family characteristics

	FSP			DATS								
	England			Wales			Scotland			Northern Ireland		
	Mean	SE	Obs	Mean	SE	Obs	Mean	SE	Obs	Mean	SE	Obs
Highest parental qualification												
No qualifications	18.8	0.2	809	20.2	0.9	79	21.2	0.8	52	20.8	0.6	66
NVQ Level 1	19.3	0.2	504	22.2	0.7	60	23.5	0.8	19	22.0	0.9	44
NVQ Level 2	20.4	0.2	2057	23.2	0.2	236	23.9	0.4	155	24.2	0.3	190
NVQ Level 3	21.0	0.2	1276	23.9	0.3	162	24.0	0.4	170	23.0	0.5	139
NVQ Level 4	22.0	0.1	2506	23.7	0.3	330	24.6	0.2	284	24.7	0.3	275
NVQ Level 5	22.3	0.1	1099	23.9	0.6	129	24.8	0.4	142	24.5	0.3	120
			p=0.000			p=0.001			p=0.000			p=0.000
Parental work status												
No parents working	19.0	0.2	1517	20.3	0.5	169	22.2	0.5	110	21.6	0.5	101
One parent working	21.0	0.1	2889	22.9	0.4	282	24.2	0.3	250	23.2	0.3	244
Two parents working	22.0	0.1	3437	24.4	0.2	493	24.7	0.2	402	24.6	0.2	400
			p=0.000			p=0.000			p=0.000			p=0.000
Family poverty status												
Above poverty level	21.7	0.1	5068	24.1	0.2	627	24.5	0.2	568	24.2	0.2	504
Below poverty level	19.7	0.2	2652	21.6	0.3	320	22.9	0.4	191	22.8	0.4	228
			p=0.000			p=0.000			p=0.001			p=0.001

Notes: Sample includes all children (excluding second and third children in twin and triplet families). 3,466 observations are excluded due to missing data on FSP or DATS. Table displays weighted mean (using weight1), weighted standard errors, and unweighted observations. Maximum possible score on scale is 27.

Table 7.4
Mean scores for communication, language, and literacy by child and family characteristics

	FSP			DATS								
	England			Wales			Scotland			Northern Ireland		
	Mean	SE	Obs	Mean	SE	Obs	Mean	SE	Obs	Mean	SE	Obs
All respondents	25.4	0.2	8562	27.1	0.4	1003	30.5	0.3	839	28.3	0.3	872
Age group at assessment												
57 months or younger	22.4	0.4	342	--	--	0	--	--	0	--	--	0
58 through 60 months	23.2	0.2	2198	--	--	0	--	--	1	--	--	2
61 through 63 months	.4.9	0.2	2126	24.9	1.2	86	30.7	0.7	78	27.6	0.7	112
64 through 66 months	26.5	0.2	2166	25.0	0.6	195	29.5	0.6	173	28.3	0.4	309
67 through 69 months	27.8	0.2	1730	26.0	0.5	251	31.1	0.4	249	28.7	0.4	274
70 months or older	--	--	0	28.6	0.5	439	30.7	0.4	310	29.1	0.8	122
			p=0.000			p=0.000			p=0.287			p=0.057
Ethnicity												
White	25.7	0.2	6572	--	--	--	--	--	--	--	--	--
Mixed	25.0	0.4	347	--	--	--	--	--	--	--	--	--
Indian	24.8	0.6	308	--	--	--	--	--	--	--	--	--
Pakistani or Bangladeshi	21.3	0.5	766	--	--	--	--	--	--	--	--	--
Black	23.4	0.6	397	--	--	--	--	--	--	--	--	--
Other	23.8	0.7	171	--	--	--	--	--	--	--	--	--
			p=0.000									
Family structure												
Two parents	25.9	0.2	6850	27.7	0.5	801	30.9	0.3	673	28.8	0.3	720
Lone parent	22.9	0.2	1712	24.3	0.7	202	28.6	0.5	166	25.3	0.6	151
			p=0.000			p=0.000			p=0.000			p=0.000

Table 7.4 (continued)
Mean scores for communication, language, and literacy by child and family characteristics

	FSP			DATS								
	England			Wales			Scotland			Northern Ireland		
	Mean	SE	Obs	Mean	SE	Obs	Mean	SE	Obs	Mean	SE	Obs
Highest parental qualification												
No qualifications	20.0	0.3	809	21.2	1.2	79	25.6	1.0	56	22.6	0.7	68
NVQ Level 1	21.5	0.3	504	23.0	1.2	58	27.0	1.6	16	22.9	1.3	42
NVQ Level 2	23.9	0.2	2057	25.6	0.6	240	29.3	0.5	156	28.1	0.5	197
NVQ Level 3	25.1	0.2	1276	27.8	0.8	158	30.5	0.5	177	27.2	0.8	142
NVQ Level 4	27.2	0.2	2506	28.5	0.5	326	31.3	0.4	278	29.5	0.5	281
NVQ Level 5	28.0	0.2	1099	29.2	0.7	120	31.7	0.5	143	30.5	0.5	123
			p=0.000			p=0.000			p=0.000			p=0.000
Parental work status												
No parents working	21.2	0.3	1517	21.4	0.8	172	27.4	0.7	116	23.1	0.7	106
One parent working	25.2	0.2	2889	26.3	0.9	283	30.6	0.4	259	27.6	0.4	239
Two parents working	27.1	0.2	3437	29.1	0.4	483	31.4	0.4	392	29.6	0.4	421
			p=0.000			p=0.000			p=0.000			p=0.000
Family poverty status												
Above poverty level	26.6	0.2	5068	28.6	0.5	617	31.3	0.3	562	29.0	0.4	521
Below poverty level	22.5	0.2	2652	23.8	0.6	321	28.1	0.5	193	26.1	0.5	233
			p=0.000			p=0.000			p=0.000			p=0.000

Notes: Sample includes all children (excluding second and third children in twin and triplet families). 3,466 observations are excluded because of missing data on FSP or DATS. Table displays weighted mean (using weight1), weighted standard errors, and unweighted observations. Maximum possible score on scale is 36.

Table 7.5
Mean scores for mathematical development by child and family characteristics

	FSP			DATS								
	England			Wales			Scotland			Northern Ireland		
	Mean	SE	Obs	Mean	SE	Obs	Mean	SE	Obs	Mean	SE	Obs
All respondents	20.5	0.1	8562	22.7	0.2	1075	24.1	0.2	929	22.4	0.2	937
Age group at assessment												
57 months or younger	18.6	0.3	342	--	--	0	--	--	0	--	--	0
58 through 60 months	19.1	0.2	2198	--	--	0	--	--	1	--	--	3
61 through 63 months	20.2	0.2	2126	21.0	0.8	91	23.6	0.5	81	21.6	0.4	124
64 through 66 months	21.2	0.1	2166	21.5	0.4	206	23.5	0.4	188	22.3	0.3	322
67 through 69 months	21.9	0.1	1730	22.8	0.3	272	24.5	0.2	282	22.8	0.3	303
70 months or older	--	--	0	23.6	0.2	475	24.4	0.2	349	24.4	0.5	128
			p=0.000			p=0.000			p=0.024			p=0.006
Ethnicity												
White	20.7	0.1	6572	--	--	--	--	--	--	--	--	--
Mixed	20.0	0.3	347	--	--	--	--	--	--	--	--	--
Indian	19.9	0.4	308	--	--	--	--	--	--	--	--	--
Pakistani or Bangladeshi	17.5	0.3	766	--	--	--	--	--	--	--	--	--
Black	19.4	0.4	397	--	--	--	--	--	--	--	--	--
Other	19.3	0.5	171	--	--	--	--	--	--	--	--	--
			p=0.000									
Family structure												
Two parents	20.8	0.1	6850	23.1	0.3	863	24.3	0.2	753	22.8	0.2	780
Lone parent	19.1	0.2	1712	21.1	0.5	212	23.0	0.4	176	20.6	0.4	156
			p=0.000			p=0.002			p=0.001			p=0.000

Table 7.5 (continued)
Mean scores for mathematical development by child and family characteristics

	FSP			DATS								
	England			Wales			Scotland			Northern Ireland		
	Mean	SE	Obs	Mean	SE	Obs	Mean	SE	Obs	Mean	SE	Obs
Highest parental qualification												
No qualifications	17.1	0.2	809	19.4	0.8	84	20.0	0.8	61	19.5	0.7	75
NVQ Level 1	17.9	0.2	504	21.1	0.8	62	22.4	1.1	20	19.6	0.8	48
NVQ Level 2	19.6	0.2	2057	22.0	0.4	256	23.6	0.4	172	22.1	0.3	209
NVQ Level 3	20.5	0.2	1276	23.2	0.4	168	24.0	0.3	189	21.8	0.5	151
NVQ Level 4	21.6	0.1	2506	23.4	0.3	344	24.8	0.3	312	23.3	0.2	297
NVQ Level 5	22.1	0.1	1099	24.0	0.4	137	24.9	0.3	159	23.6	0.3	136
			p=0.000			p=0.000			p=0.000			p=0.000
Parental work status												
No parents working	17.8	0.2	1517	19.3	0.6	181	21.4	0.6	124	19.3	0.6	112
One parent working	20.4	0.1	2889	22.1	0.4	293	24.3	0.2	287	21.7	0.3	257
Two parents working	21.5	0.1	3437	23.9	0.2	528	24.8	0.2	434	23.4	0.2	459
			p=0.000			p=0.000			p=0.000			p=0.000
Family poverty status												
Above poverty level	21.2	0.1	5068	23.6	0.3	665	24.7	0.2	626	22.9	0.2	564
Below poverty level	18.8	0.2	2652	20.7	0.4	339	22.3	0.4	212	21.3	0.4	246
			p=0.000			p=0.000			p=0.000			p=0.000

Notes: Sample includes all children (excluding second and third children in twin and triplet families). 3,466 observations are excluded because of missing data on FSP or DATS. Table displays weighted mean (using weight1), standard errors, and unweighted observations. Maximum possible score on scale is 27.

Table 7.6
Mean scores for knowledge and understanding of the world by child and family characteristics

	FSP			DATS								
	England			Wales			Scotland			Northern Ireland		
	Mean	SE	Obs	Mean	SE	Obs	Mean	SE	Obs	Mean	SE	Obs
All respondents	6.7	0.0	8563	7.0	0.1	1093	7.5	0.1	924	7.0	0.1	934
Age group at assessment												
57 months or younger	6.2	0.1	342	--	--	0	--	--	0	--	--	0
58 through 60 months	6.4	0.1	2198	--	--	0	--	--	1	--	--	3
61 through 63 months	6.7	0.1	2126	6.5	0.3	99	7.3	0.2	87	6.8	0.2	125
64 through 66 months	6.9	0.0	2167	6.7	0.2	212	7.2	0.2	185	7.0	0.1	324
67 through 69 months	7.2	0.0	1730	7.0	0.2	276	7.5	0.1	270	7.2	0.1	296
70 months or older	--	--	0	7.4	0.1	473	7.6	0.1	353	7.1	0.2	131
			p=0.000			p=0.000			p=0.029			p=0.180
Ethnicity												
White	6.8	0.0	6572	--	--	--	--	--	--	--	--	--
Mixed	6.6	0.1	347	--	--	--	--	--	--	--	--	--
Indian	6.5	0.1	308	--	--	--	--	--	--	--	--	--
Pakistani or Bangladeshi	5.7	0.1	767	--	--	--	--	--	--	--	--	--
Black	6.2	0.1	397	--	--	--	--	--	--	--	--	--
Other	6.3	0.1	171	--	--	--	--	--	--	--	--	--
			p=0.000			p=0.003			p=0.166			p=0.000
Family structure												
Two parents	6.9	0.0	6850	7.2	0.1	878	7.5	0.1	747	7.1	0.1	770
Lone parent	6.3	0.1	1713	6.5	0.2	215	7.1	0.2	177	6.3	0.2	163
			p=0.000			p=0.000			p=0.021			p=0.000

Table 7.6 (continued)
Mean scores for knowledge and understanding of the world by child and family characteristics

	FSP			DATS								
	England			Wales			Scotland			Northern Ireland		
	Mean	SE	Obs	Mean	SE	Obs	Mean	SE	Obs	Mean	SE	Obs
Highest parental qualification												
No qualifications	5.7	0.1	809	5.7	0.3	86	5.7	0.3	61	5.9	0.2	77
NVQ Level 1	6.0	0.1	504	6.4	0.2	64	6.9	0.4	21	5.8	0.3	47
NVQ Level 2	6.5	0.1	2057	6.7	0.1	256	7.3	0.2	173	7.0	0.1	211
NVQ Level 3	6.7	0.1	1277	7.2	0.1	173	7.6	0.2	185	6.6	0.3	151
NVQ Level 4	7.1	0.0	2506	7.3	0.1	357	7.7	0.1	311	7.3	0.2	287
NVQ Level 5	7.2	0.1	1099	7.5	0.2	134	7.7	0.2	156	7.6	0.1	141
			p=0.000			p=0.000			p=0.000			p=0.000
Parental work status												
No parents working	5.9	0.1	1518	5.7	0.2	189	6.5	0.3	120	5.8	0.2	116
One parent working	6.7	0.0	2889	7.0	0.2	299	7.5	0.1	284	6.7	0.2	265
Two parents working	7.1	0.0	3437	7.5	0.1	531	7.7	0.1	434	7.4	0.1	265
			p=0.000			p=0.000			p=0.000			p=0.000
Family poverty status												
Above poverty level	7.0	0.0	5068	7.4	0.1	673	7.7	0.1	621	7.2	0.1	550
Below poverty level	6.2	0.1	2653	6.3	0.1	348	6.9	0.2	211	6.6	0.1	251
			p=0.000			p=0.000			p=0.001			p=0.000

Notes: Sample includes all children (excluding second and third children in twin and triplet families). 3,466 observations are excluded because of missing data on FSP or DATS. Table displays weighted mean (using weight1), weighted standard errors, and unweighted observations. Maximum possible score on scale is 9.

Table 7.7
Mean scores for creative development by child and family characteristics

	FSP			DATS								
	England			Wales			Scotland			Northern Ireland		
	Mean	SE	Obs	Mean	SE	Obs	Mean	SE	Obs	Mean	SE	Obs
All respondents	6.7	0.0	8561	7.4	0.1	1093	7.9	0.1	954	7.5	0.1	940
Age group at assessment												
57 months or younger	6.3	0.1	342	--	--	0	--	--	0	--	--	0
58 through 60 months	6.4	0.1	2197	--	--	0	--	--	1	--	--	3
61 through 63 months	6.6	0.1	2125	7.1	0.3	95	7.9	0.2	88	7.5	0.2	122
64 through 66 months	6.9	0.0	2167	7.2	0.2	212	7.7	0.1	194	7.5	0.1	332
67 through 69 months	7.1	0.0	1730	7.4	0.1	278	8.0	0.1	282	7.5	0.1	298
70 months or older	--	--	0	7.6	0.1	475	7.6	0.1	361	7.2	0.2	128
			p=0.000			p=0.103			p=0.187			p=0.370
Ethnicity												
White	6.8	0.0	6572	--	--	--	--	--	--	--	--	--
Mixed	6.6	0.1	346	--	--	--	--	--	--	--	--	--
Indian	6.5	0.1	308	--	--	--	--	--	--	--	--	--
Pakistani or Bangladeshi	5.9	0.1	766	--	--	--	--	--	--	--	--	--
Black	6.4	0.1	397	--	--	--	--	--	--	--	--	--
Other	6.3	0.1	171	--	--	--	--	--	--	--	--	--
			p=0.000									
Family structure												
Two parents	6.8	0.0	6849	7.5	0.1	876	8.0	0.1	768	7.6	0.1	779
Lone parent	6.3	0.1	1712	6.9	0.2	217	7.7	0.2	186	6.9	0.2	161
			p=0.000			p=0.010			p=0.263			p=0.000

Table 7.7 (continued)
Mean scores for creative development by child and family characteristics

	FSP			DATS								
	England			Wales			Scotland			Northern Ireland		
	Mean	SE	Obs	Mean	SE	Obs	Mean	SE	Obs	Mean	SE	Obs
Highest parental qualification												
No qualifications	5.9	0.1	809	6.4	0.3	87	6.9	0.4	63	6.2	0.2	73
NVQ Level 1	6.2	0.1	503	6.8	0.3	63	7.0	0.4	22	6.5	0.3	45
NVQ Level 2	6.5	0.1	2056	7.0	0.1	257	7.9	0.2	175	7.4	0.1	213
NVQ Level 3	6.7	0.1	1277	7.7	0.1	175	8.0	0.1	196	7.2	0.2	152
NVQ Level 4	7.0	0.0	2506	7.6	0.2	355	8.0	0.1	321	7.7	0.1	297
NVQ Level 5	7.1	0.1	1099	8.0	0.2	133	8.0	0.2	161	7.9	0.1	139
			p=0.000			p=0.000			p=0.010			p=0.000
Parental work status												
No parents working	6.0	0.1	1516	6.3	0.3	186	7.1	0.3	129	6.4	0.2	113
One parent working	6.7	0.0	2889	7.2	0.2	301	8.0	0.1	288	7.2	0.1	265
Two parents working	7.0	0.0	3437	7.8	0.1	533	8.1	0.1	449	7.7	0.1	449
			p=0.000			p=0.000			p=0.005			p=0.000
Family poverty status												
Above poverty level	6.9	0.0	5068	7.7	0.1	672	8.1	0.1	643	7.6	0.1	558
Below poverty level	6.2	0.1	2651	6.7	0.1	348	7.4	0.2	221	7.1	0.1	250
			p=0.000			p=0.000			p=0.007			p=0.000

Notes: Sample includes all children (excluding second and third children in twin and triplet families). 3,466 observations are excluded due to missing data on FSP or DATS. Table displays weighted mean (using weight1), standard errors, and unweighted observations. Maximum possible score on scale is 9.

Table 7.8
Mean scores for physical development by child and family characteristics

	FSP			DATS								
	England			Wales			Scotland			Northern Ireland		
	Mean	SE	Obs	Mean	SE	Obs	Mean	SE	Obs	Mean	SE	Obs
All respondents	7.3	0.0	8563	8.2	0.1	1118	8.3	0.1	1010	8.3	0.1	980
Age group at assessment												
57 months or younger	6.7	0.1	342	--	--	0	--	--	0	--	--	0
58 through 60 months	7.0	0.0	2198	--	--	0	--	--	1	--	--	3
61 through 63 months	7.2	0.0	2126	8.2	0.2	94	8.2	0.2	97	8.3	0.1	127
64 through 66 months	7.4	0.0	2167	8.3	0.1	212	8.3	0.1	207	8.2	0.1	342
67 through 69 months	7.6	0.0	1730	8.2	0.1	281	8.4	0.1	294	8.4	0.1	316
70 months or older	--	--	0	8.3	0.1	495	8.3	0.1	380	8.2	0.1	134
			p=0.000			p=0.011			p=0.575			p=0.540
Ethnicity												
White	7.3	0.0	6572	--	--	--	--	--	--	--	--	--
Mixed	7.3	0.1	347	--	--	--	--	--	--	--	--	--
Indian	7.2	0.1	308	--	--	--	--	--	--	--	--	--
Pakistani or Bangladeshi	6.6	0.1	767	--	--	--	--	--	--	--	--	--
Black	7.0	0.1	397	--	--	--	--	--	--	--	--	--
Other	7.1	0.1	171	--	--	--	--	--	--	--	--	--
			p=0.000									
Family structure												
Two parents	7.3	0.0	6850	8.2	0.1	897	8.3	0.1	817	8.4	0.1	809
Lone parent	6.9	0.0	1713	7.8	0.2	221	8.2	0.1	193	7.9	0.1	170
			p=0.000			p=0.035			p=0.277			p=0.000

Table 7.8 (continued)
Mean scores for physical development by child and family characteristics

	FSP			DATS								
	England			Wales			Scotland			Northern Ireland		
	Mean	SE	Obs	Mean	SE	Obs	Mean	SE	Obs	Mean	SE	Obs
Highest parental qualification												
No qualifications	6.6	0.1	809	7.4	0.3	87	7.9	0.3	67	7.5	0.2	75
NVQ Level 1	6.7	0.1	504	8.0	0.2	64	8.5	0.2	21	7.6	0.2	49
NVQ Level 2	7.1	0.0	2057	8.0	0.1	260	8.4	0.1	187	8.3	0.1	222
NVQ Level 3	7.2	0.1	1277	8.3	0.1	175	8.3	0.1	204	8.2	0.2	157
NVQ Level 4	7.5	0.0	2506	8.2	0.1	366	8.3	0.1	336	8.5	0.1	311
NVQ Level 5	7.6	0.0	1099	8.4	0.1	142	8.4	0.1	177	8.6	0.1	145
			p=0.000			p=0.001			p=0.303			p=0.000
Parental work status												
No parents working	6.7	0.1	1518	7.3	0.2	186	7.8	0.2	131	7.7	0.1	117
One parent working	7.2	0.0	2889	8.1	0.1	309	8.4	0.1	309	8.2	0.1	275
Two parents working	7.5	0.0	3437	8.4	0.1	546	8.4	0.1	479	8.5	0.1	475
			p=0.000			p=0.000			p=0.012			p=0.000
Family poverty status												
Above poverty level	7.4	0.0	5068	8.4	0.1	690	8.4	0.1	684	8.4	0.1	588
Below poverty level	6.9	0.0	2653	7.7	0.1	353	8.1	0.1	229	8.1	0.1	257
			p=0.000			p=0.000			p=0.025			p=0.006

Notes: Sample includes all children (excluding second and third children in twin and triplet families). 3,466 observations are excluded due to missing data on FSP or DATS. Table displays weighted mean (using weight1), weighted standard errors, and unweighted observations. Maximum possible score on scale is 9.

Chapter 8

CHILD COGNITION AND BEHAVIOUR

Elizabeth M. Jones and Ingrid Schoon

Introduction

In this chapter we examine cognitive and behavioural adjustment of five-year-old children. We assess differences in adjustment by different demographic and family background characteristics to gain some insight into social and ethnic variation in developmental outcomes at school entry. Social inequalities in children's behaviour and development are of ongoing concern for policy-makers and social scientists (Department for Education and Skills, 2004, 2005, 2006; Every Child Matters, 2003). Children growing up in circumstances characterised by socio-economic disadvantage are at greater risk of developing cognitive and behavioural adjustment problems during childhood, which in turn influence later outcomes regarding education, employment, health and social integration (Duncan & Brooks-Gunn, 1997; Essen & Wedge, 1978; Rutter & Madge, 1976; Schoon, 2006). Mechanisms of intergenerational transmission of disadvantage are not yet well understood, nor are variations in adjustment among different groups in a changing society.

Identification of key factors influencing child development may provide better insights into adjustment among different social groups. This, in turn, will offer a better handle for targeting interventions addressing the needs of children entering the education system. In this chapter, we address variations in development among children growing up in different countries of the UK. We also look at ethnic differences, differences by family type, parental education and employment status.

In the following sections we describe the measures used to assess child developmental outcomes at age 5 and examine how socio-demographic characteristics contribute to differences in developmental adjustment at this age. We first provide information on measures of cognitive abilities using the British Ability Scales (BAS). This is followed by a section on behavioural adjustment, using the Strengths and Difficulties Questionnaire (SDQ). We then assess stability of cognitive and behavioural adjustment over time, linking assessments at age 5 with data collected at age 3.

Cognitive ability as assessed with the British Ability Scales

Cognitive abilities at age 5 have been measured with three subscales of the British Ability Scales Second Edition (BAS II): naming vocabulary, picture similarities, and pattern construction. The three subscales capture core aspects of verbal, pictorial reasoning, and spatial abilities (Elliott, 1996; Hill, 2005). The subtests are robust measures and individually interpretable, helping us to understand the child's abilities in the three most significant information-processing skills: verbal, visual/spatial and non-verbal (Hill, 2005). They can, however, also be used as a composite, giving information about general cognitive ability of the child.

The subscales of the BAS II have been directly measured from the children. The assessments were administered using Computer Assisted Personal Interviewing (CAPI) by interviewers who were specially trained but were not professional psychologists. The use of age-related starting points, decision points, and alternative stopping points means that the motivation and self-esteem of the child are protected, that the testing focuses on the most suitable items for the child, and that the assessment time is kept to a minimum (Hill, 2005).

One of the subscales, naming vocabulary, was used among the millennium cohort children at age 3, enabling us to establish longitudinal stability of verbal ability. Another indicator of early cognitive ability included in the assessments at age 3 was the Bracken School Readiness Composite (Bracken, 1998), which will also be used to establish interrelationship between measures of cognitive ability over time. A more detailed description of these earlier assessments can be found in Chapter 7 of *Millennium Cohort Study Second Survey: A User's Guide to Initial Findings* (George, Hansen and Schoon, 2007).

About 15,000 children completed cognitive assessments, although the exact number varied depending on the subscale used. For 14,853 children we have complete data on all three BAS subscales. There were no significant differences in rates of completing all BAS subscales by country. There were few differences in completion rate by cohort member ethnicity, but Bangladeshi families had a lower completion rate (92%) than did white (96%) or Indian (98%) cohort members. In families with more than one cohort member (twins or triplets), only the first cohort member was included; except for this, all cohort members who completed the assessments were included in analyses.

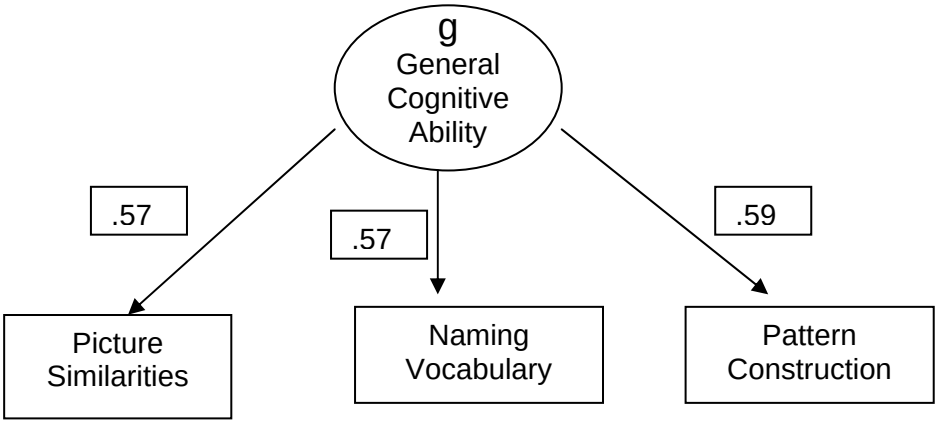
Raw scores vary between 1 and 23 for picture similarities, 1 and 25 for naming vocabulary, and 1 and 92 for pattern completion. For each subscale we computed normed T-scores, derived from the standard BAS II norm tables and defined with reference to the standardisation samples used in developing the assessments (Elliott, 1996). There is a separate standardisation sample for each three-month age band from the age of 2 years 6 months to 7 years 11 months, and each cohort member's T-score is computed based on the standardisation score distribution of his or her own age band. T-scores have a mean of 50 and standard deviation of 10, so a cohort member with a T-score of 50 scored at the mean for the standardisation sample, while a cohort member with a T-score of 60 scored one standard deviation above the mean and a cohort member with a T-score of 40 scored one standard deviation below the mean for the standardisation sample. Because the T-scores are based on age-specific standardisation samples, the T-score mean is 50 for every age band. Means, standard errors, and centiles of the BAS subscales T-scores are given in Table 8.1, as are the number of assessments attained for each scale. T-scores range from 20 to 80 for all three BAS scales. The highest scores have been achieved in the picture similarities subscale, followed by naming vocabulary, while pattern construction yielded the lowest scores.

To get a better understanding of the child's general cognitive ability, we carried out a principal axis factor analysis (PCA) of the positively correlated scores from the three subtests. PCA is generally used when the research purpose is data reduction (to reduce the information in many measured variables into a smaller set of components). The main aim of using PCA is to understand the underlying structure of a set of correlated variables, and to reduce a dataset to a more manageable size while retaining as much of the original information as possible (Dunteman, 1989). The existence of highly correlated coefficients between subsets of variables suggests that those variables could be measuring the same underlying dimension. These underlying dimensions are also known as factors (or latent variables). By reducing a data-set from a group of interrelated variables into a smaller set of factors, PCA achieves parsimony by explaining the maximum amount of variance in a correlation matrix using the smallest number of explanatory concepts.

PCA analysis of the three BAS subscales confirmed the presence of a general underlying cognitive ability factor, traditionally dubbed *g* (Carroll, 2006). The underlying factor accounted for 56 per cent of the total variance among the three tests. The loading of each of the tests on the underlying factor (which can be thought of as the Pearson correlation

between the latent factor and the observed variable) was .57 for picture similarities, .57 for naming vocabulary, and .59 for pattern construction.

Figure 1.1
General cognitive ability: factor loadings



We saved *g* scores for each participant, based on the first unrotated factor from the PCA. The scores indicating general cognitive ability (g) were standardised to a mean of 100 and a standard deviation of 15. The mean and standard error for the general cognitive ability score are given in Table 8.1.

In the following sections we report differences in general cognitive ability (g) by different demographic and family background characteristics to see if early cognitive ability is differentially related to these factors. Tables have also been produced for each of the subscales to check for variations in specific cognitive skills, and are available in the Appendix.

Girls generally performed better than boys in the cognitive ability tests, as they do at this age in other national data sets, for example the children of members of the 1970 British Cohort Study (Parsons and Bynner, 2006). Cognitive ability scores were highest for children living in Northern Ireland and lowest for those living in Wales. Children living in Northern Ireland did particularly well in the picture similarities and pattern construction subscales, and Scottish children did best in naming vocabulary. Although the scores have been adjusted to allow for differences in chronological age at interview, they have not, as yet, been adjusted for the exact age at which the child started school, which varies systematically between countries as well as within them. Compulsory schooling starts earliest in Northern Ireland.

White children achieved the highest scores, followed by children of mixed ethnicity. The lowest-achieving ethnic groups were Bangladeshi and Pakistani children, with mean values of 88.6 and 87.4 respectively. Before drawing firm conclusions about how to interpret this finding, it is necessary to keep in mind the relatively small sample sizes of the minority groups and to investigate further how far their assessments may have been undertaken in particularly difficult circumstances. It would also be important to assess the extent to which English was spoken in the home, and whether this is associated with variations in development. Children in homes where English was not spoken (apart from by the child) scored nearly 13 points below those in homes speaking only English. Compared to children from homes where English was the sole language spoken, those growing up in families where English was spoken in combination with other languages scored nearly 9 points lower on the composite ability score. The difference was much smaller for homes which were

bilingual in Welsh and English; children from Welsh bilingual homes scored only 2 points lower than non-bilinguals.

When examining variation in cognitive ability by family structure, Table 8.2 indicates that children growing up with two natural parents were doing better than those growing up in single-parent households, or in reconstituted families (mean values were 102.5, 97.6, and 96.9 respectively).

Children growing up in a workless household scored nearly 10 points below children with two working parents, and 7 points below children growing up in a household with one bread winner. Furthermore, children living in families with total family incomes 60 per cent below the median poverty line scored 8 points below children from households above this line, on average. (See Chapter 12 for details on how poverty was defined and calculated.) As expected, children with more educated parents achieve higher cognitive scores than children with less educated parents. Children of parents with degree-level qualifications score about 15 points (one standard deviation) higher than children of parents with no qualifications. Nevertheless, the distributions in Table 8.2 show a considerable degree of overlap. [1] The top 10 per cent of children in the low scoring ethnic groups (Pakistani and Bangladeshi) have scores better than the lower half of the white distribution. The top 10 per cent of children whose parents have no qualifications have scores as high as those attained by the top quarter of those whose parents' highest qualification is NVQ3 (A-level or equivalent), and as high as somewhere between the 50th and 75th percentile for children of graduate parents (NVQ 4 and 5). Conversely, some children in the more advantaged families also fall behind. The lowest scoring 10 per cent of children of graduates do less well than the upper 50 per cent of children whose parents have no qualifications

BAS Subscales in Age Equivalents

The scores on cognitive tests do not convey much idea to the general reader of the magnitude of the differentials we report. It is possible, within limits, to express the differences in individuals' scores as the equivalent of the progress one would 'normally' expect over a month of an average five year old. For the individual BAS subscales, we computed the between-group differences in terms of age equivalents in months. The method used to compute these age-equivalent differences (using information on age norms from the authors of the British Ability Scales as well as the actual age of the child at assessment) gives us only rough estimates, so all results given in age equivalents should be treated as approximate. The translation into equivalent months becomes less meaningful as one moves away from the average, so the extreme estimates should be treated with particular caution.

Compared to the average for all MCS children in the UK, children in Wales were one month ahead and children in Northern Ireland were 4 months ahead on picture similarities. Children in Scotland were 3 months ahead on naming vocabulary. There was little country-wise difference on pattern construction.

Girls were approximately one month ahead and boys were one month behind on picture similarities, naming vocabulary and pattern construction scales. On picture similarities, Pakistani children were 7 months behind, Bangladeshi and black African children were 4 months behind, and black Caribbean children were 4 months ahead. There were large differences on naming vocabulary, with Pakistani, Bangladeshi, and black African children being (according to the formula) over a year behind, and Indian and black Caribbean children 8 months behind. On pattern construction, Pakistani and black African children were

[1] The centiles reported in this chapter are weighted to reflect relative prevalence in the population. They are not strictly comparable with those reported in Chapter 7 of the MCS 2 User Guide to Initial Findings, which, it now appears, were not weighted

5 months behind, Bangladeshi children were 3 months behind, and black Caribbean children were 2 months behind. We would note that there is a relatively large sampling error around these estimates, especially those involving the smallest, black Caribbean sample. Their estimated lead in picture similarities has a confidence interval which includes the overall mean, so this margin is not statistically significant. Neither are the differences on the other two scales - in the opposite direction - between black Caribbean children and the overall average significant. The lead of the black Caribbeans over the black Africans is statistically better established, although there is sampling error around its exact magnitude.

Children from bilingual families were 2 months behind the average, while children from families who spoke only a language other than English were 6 months behind on picture similarities. Children from bilingual families were 18 months behind and those from families in which only a non-English language was spoken were 28 months behind on naming vocabulary. On pattern construction, children from bilingual families were 3 months behind and those from families speaking a non-English language only were 2 months behind. As was mentioned above, children from families that were Welsh-English bilingual scored higher than did bilingual families overall.

Children living in step-families were 5 months behind on picture similarities, while children living with lone parents were 2 months behind. Children living with lone parents were 5 months behind on naming vocabulary and children in step-families were 3 months behind. On pattern construction, children living with a lone parent or in a step-family were 2 months behind.

On all of the subscales, children with parents who had no qualifications were behind while those with at least one parent with qualifications at NVQ level 5 were ahead. Children with parents who had no qualifications were 4 months behind the MCS average on picture similarities, 15 months behind on naming vocabulary, and 5 months behind on pattern construction.

Children who had no working parents were 5 months behind on picture similarities, 10 months behind on naming vocabulary, and 4 months behind on pattern construction. Children with two working parents were 2 months ahead on picture similarities, 4 months ahead on naming vocabulary, and one month ahead on pattern construction. Children who were living in poverty were 4 months behind on picture similarities, 8 months behind on naming vocabulary, and 3 months behind on pattern construction.

These estimates of systematic differentials between averages for groups of children do not, of course, apply to every child in each category. The extremely high or low performances are not confined to high or low achieving groups. It is interesting to note that the largest between-group differences are seen on the vocabulary scale, with much smaller differences on the two scales that are not vocabulary-based.

Behaviour as measured with the SDQ

Behavioural adjustment of the children is measured with the Strengths and Difficulties Questionnaire (SDQ). The SDQ is a behavioural-screening questionnaire for 3 to 16-year-olds (Goodman, 1997, 2001; Goodman, Meltzer, & Bailey, 1998) and is a well-validated tool for screening psychiatric disorder. It consists of 25 items generating an overall scale score as well as scores for five subscales measuring conduct problems, hyperactivity, emotional symptoms, peer problems and pro-social behaviour. Each subscale comprises five items. Each SDQ item has three possible answers which are assigned a value of 0, 1, or 2 (see appendix). The score for each scale is generated by adding up the scores on the five items within that scale, producing scale scores ranging from 0 to 10. The SDQ was assessed via parental report (normally the mother) in the computer-assisted, self-completion module.

For the following analysis an overall difficulties mean score for the whole sample was computed by summing replies to the four subscales indicating problematic behaviour, i.e. conduct problems, hyperactivity, emotional symptoms, and peer problems. We obtained scale scores for each of the four subscales, as well as a summary score of total behaviour problems for 12,511 children with complete data on the four subscales. In addition, we computed a score indicating maternal reports of pro-social behaviour for 14,375 cohort members. Complete SDQ data were obtained at lower rates from cohort members in England and Northern Ireland than in Wales and Scotland (74 and 75 per cent versus 80 and 82 per cent). There were also large differences in rates of obtaining complete data by cohort member ethnicity, with rates for Indian, Pakistani, Bangladeshi, and black African cohort members being lower than those for white, mixed ethnicity, and black Caribbean cohort members (a range of 40 to 58 per cent versus 71 to 79 per cent, respectively).

Table 8.3 gives the means, standard errors, centiles and overall number of observations for all of the SDQ scales. The estimated raw mean score for total behaviour difficulties reported is 6.7, and the range of the total difficulties score is between 0 and 40. Scores of between 14 and16 are classified as borderline and scores of 17 and above are classified as abnormal (Goodman, 2001). An abnormal score could be reached in different ways, for example, if it was ‘somewhat true’ that the child had 17 out of 20 problems, ‘certainly true’ that they showed at least nine of them, or some intermediate combination. The raw mean score reported for the whole sample falls into the normal range, and none of the reported scores falls into the ‘abnormal’ range.

Girls showed fewer behaviour problems than boys. There were some variations across UK countries with more behaviour problems being reported for children in England and Wales than for those in Scotland and Northern Ireland. Comparing behavioural adjustment among ethnic groups suggests that mothers of Indian and black African children reported the least behaviour problems, followed by mothers of white children. For all other ethnic groups we find scores higher than the sample mean, with Pakistani children reported to show the most behaviour problems. In interpreting these findings, it has to be kept in mind that behavioural adjustment was assessed via parental report, and that there might be ethnic differences in parental language skills, item interpretation or reporting. The total difficulties score was higher for children in homes where no English was said to be spoken (8.4) compared to 6.6 in homes speaking only English. Children growing up in bilingual homes fall between these two groups. All three groups were significantly different from one another. Although children from bilingual families overall scored significantly higher than did children from English-only families, children specifically from Welsh-bilingual families did not score significantly differently from children from English-only families.

Children described by their parent as having relatively few behavioural problems were those living with two natural parents (6.2); those with more educated parents (5.9 for NVQ4 and 5.4 for NVQ5); or children in households where there were two employed adults (5.9).

Table 8.4 gives the mean, standard errors, and centiles for the prosocial scale score, which can range from 0 to 10. A high score indicates good prosocial skills. The estimated raw score for positive prosocial behaviour reported by the child’s parent was 8.4, suggesting generally good prosocial skills, with children being happy to share with other children, being helpful and kind, and generally liked.

Girls were reported to demonstrate higher levels of prosocial behaviour than boys, and children of more highly educated parents were reported to show slightly higher levels than those of less educated parents (see Table 8.5). Otherwise there were no significant differences in prosocial behaviour, suggesting that there were few variations in positive behaviours among five-year-olds.

Correlations between assessments at age 3 and age 5

To gain a better understanding of the longitudinal consistency of cognitive and behavioural adjustment, we correlated assessments made at age 3 (for more information see George et al., 2007) with those collected at age 5 (see Table 8.6). Measures at age 5 include the summary score of the BAS indicating general cognitive ability, as well as the three subscales assessing verbal skills (naming vocabulary), pictorial reasoning (picture similarities), and spatial abilities (pattern construction). Behavioural adjustment at ages 3 and 5 was assessed with the SDQ, differentiating between the total behaviour problem scale and the pro-social behaviour scale. Cognitive development at age 3 was assessed with the Bracken School Readiness scale (Bracken, 2002) and the BAS subscale Naming Vocabulary. Table 8.6 shows the correlations between measures of cognitive and behavioural development at ages 3 and 5.

The general cognitive ability score assessed at age 5 correlates highly with its subscales, i.e. picture similarities, naming vocabulary, and pattern construction, confirming the usefulness of a general underlying cognitive ability factor. The three subscales of cognitive assessment only correlate moderately with each other, suggesting that they tap into different aspects of cognitive functioning.

High cognitive ability assessed at age 5 shows a positive association with prosocial behaviour (r=0.07), and a negative association with behaviour problems (r=-0.22) assessed at the same age. Similar associations were observed between behavioural adjustment measured at age 3 and cognitive ability assessed at age 5.

School readiness measured at age 3 is positively associated with verbal skills, assessed with the BAS subscale naming vocabulary at age 3 (r=0.54). Both school readiness and naming vocabulary scores were positively associated with prosocial behaviour and show a moderate negative association with behaviour problems, mirroring the relationships between cognitive and behavioural adjustment observed at age 5.

General cognitive ability scores at age 5 show moderate to strong associations with earlier assessments of school readiness (0.44) and verbal skills (0.42). Verbal skills assessed at age 5 show strong associations with verbal skills at age 3 (0.51) and school readiness (0.47). This finding suggests that there is consistency in assessments of cognitive skills, although there is also possibility for change.

We also found strong associations between indicators of problematic behaviour assessed at age 5 and age 3 (r=0.62), and between prosocial behaviour assessed at both ages (r=0.43). The findings thus suggest stronger continuity of problematic behaviour, and to a lesser extent continuity in prosocial behaviour.

Conclusion

This chapter has provided an overview of child outcomes at age 5, using indicators of cognitive and behavioural adjustment. The results showed a marked difference in children from advantaged versus disadvantaged backgrounds, as exemplified in higher cognitive ability and fewer behaviour problems reported for children from highly educated parents, and for children in families with two working parents. There also appear to be substantial differences in adjustment by gender and between ethnic groups. Girls generally showed higher cognitive scores and fewer behaviour problems than boys. Bangladeshi and Pakistani children appear to show lower levels of cognitive ability at school entry, and their mothers report more behaviour problems. However, as already noted, a range of factors have to be

taken into account when interpreting the findings. Data on minority groups are subject to greater sampling error than larger groups, especially as members of ethnic minorities do not all live in the over-sampled areas of concentrated minority ethnic settlement. The response rates of some non-white groups, cultural expectations, the importance of other languages spoken in the home, and the number of siblings are just some of the factors that have to be considered, in addition to the duration of the mother's residence in the UK and her ability to handle the computer-assisted survey interview.

The findings also suggest consistency of cognitive and behavioural adjustment between ages 3 and 5 years - children showing good cognitive skills and few behaviour problems at age 3 are likely to be in the same position two years later. Yet, the level of association, especially regarding cognitive ability and prosocial behaviour, suggests considerable variability in adjustment during the early childhood years. Previous studies have shown that high ability in early life is not a sufficient buffer against the effects of childhood disadvantage (such as poor housing and low levels of economic resources), and that children from relatively disadvantaged backgrounds with initially good adjustment often do not remain at those initial levels as they grew older (Feinstein, 2003; Schoon, 2006). It will be necessary in future research to examine changes in levels of cognitive and behavioural adjustment over time, controlling for socio-economic background factors as well as other contextual factors not included in the present analysis.

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Table 8.1
Means, standard errors, and centiles of BAS scales

	Mean	Standard Error	10th Percentile	25th Percentile	50th Percentile	75th Percentile	90th Percentile	Obs
BAS Score	101.4	0.3	83.2	92.2	101.8	111.0	119.2	14841
BAS Picture Similarities	55.7	0.2	44	49	55	61	70	15135
BAS Naming Vocabulary	55.3	0.2	41	48	57	62	69	15148
BAS Pattern Construction	51.3	0.2	41	46	51	57	63	14889

Notes: Sample includes all cohort members, excluding second and third children in families with twins or triplets. Means, standard errors, and centiles are weighted using weight 2.

Table 8.2
Means, standard errors, and centiles of BAS overall score

	Mean	Standard Error	10th Percentile	25th Percentile	50th Percentile	75th Percentile	90th Percentile	Obs
All	101.4	0.3	83.2	92.2	101.8	111.0	119.2	14841
Country								
England	101.3	0.4	83.1	92.2	101.8	111.1	119.1	9469
Wales	100.6	0.6	83.9	92.0	100.1	109.4	117.8	2121
Scotland	101.1	0.7	82.8	92.1	101.9	110.3	118.5	1762
Northern Ireland	104.4	0.7	84.9	93.7	104.1	114.3	125.9	1489
Child's Gender								
Male	100.3	0.3	81.1	90.9	100.8	110.4	119.0	7527
Female	102.4	0.3	85.6	93.5	102.6	111.7	119.5	7314
Child's Ethnicity								
White	102.2	0.3	84.8	93.1	102.5	111.5	119.6	12412
Mixed	101.3	0.8	82.7	91.4	102.1	112.4	117.9	421
Indian	98.3	0.9	81.3	89.7	98.1	107.8	116.3	376
Pakistani	87.4	0.8	69.3	78.1	86.8	96.6	105.9	661
Bangladeshi	88.6	1.3	69.2	77.6	88.1	99.8	108.2	269
Black Caribbean	98.0	1.5	80.9	89.9	97.5	105.5	116.9	166
Black African	91.4	1.0	71.0	82.6	92.5	102.0	108.5	295
Other	95.7	1.6	74.2	86.0	97.0	105.7	116.7	238
Child's Ethnicity and Gender								
White male	101.2	0.3	82.7	92.1	101.6	110.9	119.4	6312
Mixed male	100.8	1.2	80.9	89.9	100.9	112.9	118.6	202
Indian male	97.8	1.4	81.6	89.7	97.1	107.2	115.8	196
Pakistani male	85.4	1.0	69.0	76.9	83.3	95.0	105.0	327
Bangladeshi male	84.9	1.4	68.9	75.3	83.7	93.0	101.5	128
Black Caribbean male	97.3	2.0	78.7	88.5	94.6	106.4	119.4	85
Black African male	89.1	1.6	67.2	77.9	89.8	101.1	109.0	153
Other male	94.2	2.2	71.5	81.2	94.8	105.8	120.0	122
White female	103.2	0.3	86.5	94.5	103.2	112.2	120.1	6100
Mixed female	101.8	1.2	84.0	93.4	103.0	111.2	116.1	219
Indian female	98.7	1.0	80.9	88.1	99.5	107.9	117.3	180
Pakistani female	89.3	0.9	71.5	82.0	89.4	98.4	106.1	334
Bangladeshi female	92.1	1.7	70.6	81.0	92.8	102.5	109.6	141

Table 8.2 (continued)
Means, standard errors, and centiles of BAS overall score

	Mean	Standard Error	10th Percentile	25th Percentile	50th Percentile	75th Percentile	90th Percentile	Obs
Black Caribbean female	98.9	1.8	82.0	91.2	99.5	105.0	116.1	81
Black African female	93.8	1.1	77.4	86.3	95.3	102.0	105.6	142
Other female	97.0	1.6	78.8	89.8	97.7	105.4	115.4	116
Languages Spoken in the Home								
English only	102.1	0.3	84.6	93.0	102.4	111.5	119.7	12723
English and other language	93.2	0.8	73.3	82.5	93.5	103.9	113.3	2039
Other language only	89.3	1.5	72.5	82.2	88.5	99.1	108.0	78
Family Structure								
Two natural parents	102.5	0.3	84.6	93.3	102.8	112.1	120.1	11219
Lone parent	97.6	0.4	79.6	88.5	97.8	107.0	115.5	2862
Step family	96.9	0.7	79.6	88.5	97.4	106.2	113.0	592
Highest Parental Qualification [a]								
No qualifications	90.6	0.7	71.3	80.9	91.1	100.2	109.9	1280
NVQ1	93.9	0.7	73.2	84.9	94.1	104.0	111.3	781
NVQ2	98.4	0.4	81.4	89.5	98.4	107.3	115.2	3364
NVQ3	100.5	0.4	83.2	91.7	100.8	109.7	117.2	2335
NVQ4	104.9	0.3	88.4	96.1	104.7	113.9	122.1	4524
NVQ5	106.1	0.4	89.5	97.4	106.5	114.8	122.6	2087
Parental Employment								
No parent employed	94.2	0.5	74.7	84.7	94.4	104.0	113.2	2434
One parent employed	101.2	0.4	82.8	91.9	101.5	110.9	119.4	4787
Two parents employed	104.0	0.3	87.5	95.1	104.2	112.6	120.7	6259
Poverty Status+								
Above 60% median	103.57	0.30	86.8	94.8	103.7	112.6	120.5	8907
Below 60% median	95.81	0.41	77.0	86.5	96.0	105.7	114.6	4410

Notes: Sample includes all cohort members, excluding second and third children in families with twins or triplets. Means, standard errors, and centiles are weighted using weight1 for country-specific numbers and weight2 for all others.

[a] NVQ = National Vocational Qualification. Levels range from 1 (basic work activities that are routine and predictable) to 5 (senior management). Also includes academic qualifications, with NVQ1 being equivalent to some basic school-leaving qualifications and NVQ5 being equivalent to a postgraduate qualification or higher degree. Variable is qualification level of whichever parent has the higher qualification.

+ Poverty status calculated on those reporting income, not including imputations for income

Table 8.3
Means, standard errors, and centiles of SDQ scales

	Mean	Standard Error	10th Percentile	25th Percentile	50th Percentile	75th Percentile	90th Percentile	Obs
SDQ Pro-Social	8.4	0.0	6	8	9	10	10	14375
SDQ Total Difficulties	6.7	0.1	2	3	6	9	13	12511
SDQ Hyperactivity	3.2	0.0	0	1	3	5	6	13844
SDQ Emotional Symptoms	1.3	0.0	0	0	1	2	3	14178
SDQ Conduct Problems	1.4	0.2	0	0	1	2	3	14338
SDQ Peer Problems	1.0	0.1	0	0	1	2	3	13464

Notes: Sample includes all cohort members, excluding second and third children in families with twins or triplets. Means, standard errors, and centiles are weighted using weight2.

Table 8.4
Means, standard errors, and centiles of SDQ total difficulties scale

	Mean	Standard Error	10th Percentile	25th Percentile	50th Percentile	75th Percentile	90th Percentile	Obs
All	6.7	0.1	2	3	6	9	13	12511
Country								
England	6.7	0.1	2	3	6	9	13	7347
Wales	6.7	0.2	2	3	6	9	13	1783
Scotland	6.4	0.1	1	3	6	9	12	1519
Northern Ireland	6.2	0.2	1	3	5	9	12	1203
Child's Gender								
Male	7.2	0.1	2	4	6	10	14	6038
Female	6.1	0.1	1	3	5	8	12	5814
Child's Ethnicity								
White	6.6	0.1	2	3	6	9	13	10389
Mixed	7.4	0.3	2	4	7	10	14	325
Indian	6.5	0.4	1	3	6	9	13	235
Pakistani	9.2	0.3	4	5	9	12	15	332
Bangladeshi	7.6	0.5	2	4	7	10	15	121
Black Caribbean	8.2	0.5	2	5	7	11	15	126
Black African	6.5	0.6	1	3	5	10	13	180
Other	8.0	0.6	2	4	7	12	16	142
Child's Ethnicity and Gender								
White male	7.1	0.1	2	4	6	10	13	5309
Mixed male	7.8	0.4	3	4	7	11	15	157
Indian male	7.2	0.5	1	4	7	9	13	117
Pakistani male	9.6	0.4	4	6	9	13	17	149
Bangladeshi male	7.8	0.9	2	3	7	12	15	63
Black Caribbean male	8.9	0.5	3	5	8	12	15	66
Black African male	7.4	0.9	1	3	8	11	14	95
Other male	8.7	0.8	2	4	7	12	18	81
White female	6.0	0.1	1	3	5	8	12	5080
Mixed female	7.0	0.4	2	4	7	9	13	168
Indian female	5.9	0.6	1	2	5	9	12	118
Pakistani female	8.8	0.3	4	5	8	12	15	183
Bangladeshi female	7.3	0.5	2	4	7	10	13	58

Table 8.4 (continued)
Means, standard errors, and centiles of SDQ total difficulties scale

	Mean	Standard Error	10th Percentile	25th Percentile	50th Percentile	75th Percentile	90th Percentile	Obs
Black Caribbean female	7.4	0.9	2	4	6	10	15	60
Black African female	5.5	0.4	1	2	5	8	12	85
Other female	7.3	0.8	2	4	6	11	15	61
Languages Spoken in the Home								
English only	6.6	0.1	2	3	6	9	13	10602
English and other language	7.3	0.2	2	3	7	10	14	1208
Other language only	8.4	0.6	4	5	8	11	12	41
Family Structure								
Two natural parents	6.2	0.1	2	3	5	8	12	9028
Lone parent	8.3	0.1	3	4	7	12	15	2230
Step family	8.5	0.3	3	5	8	11	16	463
Highest Parental Qualification								
No qualifications	9.7	0.2	3	5	9	13	17	867
NVQ1	8.6	0.2	3	5	8	12	16	553
NVQ2	7.7	0.1	2	4	7	10	14	2687
NVQ3	6.7	0.1	2	4	6	9	13	1923
NVQ4	5.9	0.1	1	3	5	8	11	3783
NVQ5	5.4	0.1	1	3	5	7	11	1760
Parental Employment								
No parent employed	9.1	0.1	3	5	8	12	17	1762
One parent employed	6.8	0.1	2	3	6	9	13	3776
Two parents employed	5.9	0.1	1	3	5	8	11	5276
Poverty Status+								
Above 60% median	6.13	0.07	1	3	5	8	12	7531
Below 60% median	8.15	0.12	2	4	7	11	15	3230

Notes: Sample includes all cohort members, excluding second and third children in families with twins or triplets. Means, standard errors, and centiles are weighted using weight1 for country-specific numbers and weight2 for all others.
+ Poverty status calculated on those reporting income, not including imputations for income

Table 8.5
Means, standard errors, and centiles of SDQ pro-social scale

	Mean	Standard Error	10th Percentile	25th Percentile	50th Percentile	75th Percentile	90th Percentile	Obs
All	8.4	0.0	6	8	9	10	10	14375
Country								
England	8.4	0.0	6	8	9	10	10	9039
Wales	8.6	0.0	6	8	9	10	10	2122
Scotland	8.4	0.0	6	7	9	10	10	1765
Northern Ireland	8.4	0.0	6	7	9	10	10	1449
Child's Gender								
Male	8.2	0.0	6	7	9	10	10	7292
Female	8.7	0.0	7	8	9	10	10	7083
Child's Ethnicity								
White	8.4	0.0	6	8	9	10	10	12339
Mixed	8.5	0.1	6	8	9	10	10	422
Indian	8.8	0.1	7	8	9	10	10	328
Pakistani	8.2	0.1	6	7	8	10	10	504
Bangladeshi	8.1	0.2	6	7	8	10	10	181
Black Caribbean	8.5	0.2	6	8	9	10	10	160
Black African	8.5	0.2	6	8	9	10	10	247
Other	8.5	0.1	6	8	9	10	10	191
Child's Ethnicity and Gender								
White male	8.2	0.0	6	7	9	10	10	6286
Mixed male	8.3	0.1	6	8	9	10	10	203
Indian male	8.7	0.1	7	8	9	10	10	168
Pakistani male	8.0	0.1	5	7	8	10	10	234
Bangladeshi male	7.8	0.2	6	7	8	9	10	88
Black Caribbean male	8.4	0.2	6	8	9	10	10	81
Black African male	8.1	0.2	5	7	9	10	10	130
Other male	8.0	0.2	5	6	8	10	10	130
White female	8.7	0.0	7	8	9	10	10	6053
Mixed female	8.7	0.1	7	8	9	10	10	219
Indian female	8.9	0.2	7	8	9	10	10	160
Pakistani female	8.3	0.1	6	7	9	10	10	270
Bangladeshi female	8.4	0.3	6	8	9	10	10	93

Table 8.5 (continued)
Means, standard errors, and centiles of SDQ pro-social scale

	Mean	Standard Error	10th Percentile	25th Percentile	50th Percentile	75th Percentile	90th Percentile	Obs
Black Caribbean female	8.7	0.3	7	8	9	10	10	79
Black African female	9.0	0.2	7	8	10	10	10	117
Other female	8.9	0.1	7	8	9	10	10	91
Languages Spoken in the Home								
English only	8.4	0.0	6	8	9	10	10	12648
English and other language	8.5	0.1	6	8	9	10	10	1668
Other language only	7.9	0.3	5	6	8	10	10	58
Family Structure								
Two natural parents	8.5	0.0	6	8	9	10	10	10829
Lone parent	8.4	0.0	6	7	9	10	10	2795
Step family	8.3	0.1	6	7	9	10	10	587
Highest Parental Qualification								
No qualifications	8.2	0.1	6	7	8	10	10	1106
NVQ1	8.3	0.1	6	7	9	10	10	739
NVQ2	8.3	0.0	6	7	9	10	10	3310
NVQ3	8.5	0.0	6	8	9	10	10	2310
NVQ4	8.5	0.0	6	8	9	10	10	4471
NVQ5	8.5	0.0	6	8	9	10	10	2048
Parental Employment								
No parent employed	8.3	0.1	6	7	9	10	10	2298
One parent employed	8.4	0.0	6	7	9	10	10	4596
Two parents employed	8.5	0.0	6	8	9	10	10	6189
Poverty Status+								
Above 60% median	8.48	0.02	6	8	9	10	10	8856
Below 60% median	8.36	0.03	6	7	9	10	10	4160

Notes: Sample includes all cohort members, excluding second and third children in families with twins or triplets. Means, standard errors, and centiles are weighted using weight1 for country-specific numbers and weight2 for all others.
+ Poverty status calculated on those reporting income, not including imputations for income

Table 8.6
Correlations between assessments at age 3 and age 5

	MCS 3						MCS 2			
	BAS Overall	BAS PS	BAS NV	BAS PC	SDQ Pro-Social	SDQ Total Difficulties	BAS NV	Bracken	SDQ Pro-Social	SDQ Total Difficulties
BAS Overall, MCS 3										
BAS Picture Similarities, MCS 3	0.74									
BAS Naming Vocabulary, MCS 3	0.71	0.29								
BAS Pattern Construction, MCS 3	0.75	0.31	0.31							
SDQ Pro-Social, MCS 3	0.07	0.06	0.06	0.04						
SDQ Total Difficulties, MCS 3	-0.22	-0.13	-0.18	-0.17	-0.37					
BAS Naming Vocabulary, MCS 2	0.42	0.19	0.51	0.23	0.08	-0.20				
Bracken School Readiness	0.44	0.22	0.47	0.28	0.09	-0.25	0.54			
SDQ Pro-Social, MCS 2	0.06	0.06	0.03	0.03	0.43	-0.22	0.08	0.09		
SDQ Total Difficulties, MCS 2	-0.21	-0.14	-0.18	-0.15	-0.28	0.62	-0.21	-0.28	-0.36	

Notes: Sample includes all cohort members who completed the assessments.

Appendix to Chapter 8

BAS Subscales:

Table A1: Picture Similarities: Means and Centiles

Table A2: Naming Vocabulary: Means and Centiles

Table A3: Pattern Construction: Means and Centiles

Strengths and Difficulties Questionnaire (SDQ)

Appendix Table A1
Means and centiles for BAS picture similarities

	Mean	Standard Error	10th Percentile	25th Percentile	50th Percentile	75th Percentile	90th Percentile	Obs
All	55.7	0.2	44	49	55	61	70	15135
Country								
England	55.6	0.2	44	49	55	61	68	9648
Wales	55.8	0.3	44	49	55	61	70	2156
Scotland	55.1	0.3	43	48	54	61	68	1802
Northern Ireland	58.6	0.5	45	50	57	67	80	1529
Child's Gender								
Male	55.1	0.2	43	48	55	61	68	7709
Female	56.3	0.2	45	49	56	61	70	7426
Child's Ethnicity								
White	55.8	0.2	44	49	55	61	70	12660
Mixed	56.2	0.6	44	49	56	63	70	431
Indian	55.9	0.7	44	49	55	62	70	380
Pakistani	51.9	0.6	40	46	52	58	61	671
Bangladeshi	53.4	1.0	40	46	53	60	67	277
Black Caribbean	57.2	1.2	45	51	57	61	74	173
Black African	54.4	0.5	43	48	54	60	67	301
Other	57.0	1.1	44	48	57	63	74	239
Child's Ethnicity and Gender								
White male	55.2	0.2	43	48	55	61	68	6465
Mixed male	56.3	0.8	44	49	56	63	70	209
Indian male	55.9	1.0	45	49	55	62	70	198
Pakistani male	51.1	0.6	39	46	51	57	61	334
Bangladeshi male	50.5	1.1	39	44	50	56	62	132
Black Caribbean male	57.9	1.4	45	52	57	64	77	90
Black African male	53.7	0.8	41	46	53	60	67	156
Other male	56.4	1.5	43	47	56	63	74	123
White female	56.4	0.2	45	49	56	62	70	6195
Mixed female	56.2	0.9	44	49	57	63	70	222
Indian female	56.0	0.9	44	50	55	61	72	182

Appendix Table A1 (continued)
Means and centiles for BAS picture similarities

	Mean	Standard Error	10th Percentile	25th Percentile	50th Percentile	75th Percentile	90th Percentile	Obs
Pakistani female	52.7	0.8	40	46	52	58	64	337
Bangladeshi female	56.1	1.3	43	49	56	63	72	145
Black Caribbean female	56.5	1.2	45	49	56	61	70	83
Black African female	55.1	0.9	44	49	55	59	68	145
Other female	57.5	1.2	45	50	58	63	75	116
Languages Spoken in the Home								
English only	55.8	0.2	44	49	55	61	70	12983
English and other language	54.8	0.5	43	48	54	61	70	2069
Other language only	52.6	1.0	44	46	51	57	64	82
Family Structure								
Two natural parents	56.1	0.2	44	49	56	61	70	11411
Lone parent	54.5	0.3	43	48	54	60	68	2954
Step family	53.2	0.5	42	47	53	58	67	600
Highest Parental Qualification								
No qualifications	52.4	0.5	39	45	51	58	67	1329
NVQ1	53.0	0.5	41	46	53	59	67	803
NVQ2	54.2	0.3	42	48	54	60	68	3450
NVQ3	55.2	0.3	43	48	55	61	68	2382
NVQ4	56.8	0.2	46	50	56	62	70	4580
NVQ5	58.1	0.3	47	52	58	63	72	2111
Parental Employment								
No parent employed	53.1	0.3	40	47	53	59	67	2526
One parent employed	55.6	0.3	43	49	55	61	70	4882
Two parents employed	56.6	0.2	45	50	56	61	70	6343
Poverty Status+								
Above 60% median	56.40	0.19	45	50	56	61	70	9039
Below 60% median	53.81	0.27	41	47	53	59	67	4522

Notes: Sample includes all cohort members, excluding second and third children in families with twins or triplets. Means, standard errors, and centiles are weighted using weight1 for country-specific numbers and weight2 for all others. + Poverty status calculated on those reporting income, not including imputations for income

Appendix Table A2
Means and centiles for BAS naming vocabulary

	Mean	Standard Error	10th Percentile	25th Percentile	50th Percentile	75th Percentile	90th Percentile	Obs
All	55.3	0.2	41	48	57	62	69	15148
Country								
England	55.2	0.3	41	48	57	62	69	9658
Wales	54.2	0.3	43	48	54	60	65	2153
Scotland	56.6	0.4	43	49	57	63	69	1805
Northern Ireland	56.0	0.5	43	49	57	62	71	1532
Child's Gender								
Male	54.9	0.2	40	48	56	62	69	7707
Female	55.6	0.3	42	49	57	62	69	7441
Child's Ethnicity								
White	56.2	0.2	43	49	57	62	69	12677
Mixed	54.4	0.6	40	46	56	62	67	429
Indian	50.6	0.9	35	42	51	60	65	380
Pakistani	41.7	0.7	28	34	41	49	57	673
Bangladeshi	41.2	0.7	29	35	41	47	54	275
Black Caribbean	50.2	1.0	36	43	49	59	62	171
Black African	45.9	0.8	31	38	46	53	60	301
Other	45.8	1.2	29	38	46	54	62	239
Child's Ethnicity and Gender								
White male	55.9	0.2	42	49	57	62	69	6464
Mixed male	54.4	0.8	41	47	56	61	67	207
Indian male	50.4	1.2	38	43	51	60	62	198
Pakistani male	40.7	0.8	26	34	40	48	56	337
Bangladeshi male	40.7	0.9	31	34	40	46	53	131
Black Caribbean male	48.8	1.5	35	42	48	56	61	89
Black African male	44.4	1.1	28	36	45	51	60	156
Other male	45.0	1.6	27	38	43	53	63	123
White female	56.5	0.2	43	49	57	62	69	6213
Mixed female	54.4	0.9	40	46	56	62	67	222
Indian female	50.9	1.0	32	42	49	60	67	182

Appendix Table A2 (continued)
Means and centiles for BAS naming vocabulary

	Mean	Standard Error	10th Percentile	25th Percentile	50th Percentile	75th Percentile	90th Percentile	Obs
Pakistani female	42.6	1.0	28	35	42	50	60	336
Bangladeshi female	41.8	1.0	28	35	42	48	54	144
Black Caribbean female	51.9	1.4	39	46	51	60	62	82
Black African female	47.5	0.9	35	41	48	53	60	145
Other female	46.5	1.4	31	38	46	56	60	116
Languages Spoken in the Home								
English only	56.2	0.2	43	49	57	62	69	12998
English and other language	45.8	0.7	31	37	46	54	62	2068
Other language only	40.2	1.3	27	32	41	47	57	81
Family Structure								
Two natural parents	56.0	0.2	41	49	57	62	69	11424
Lone parent	52.4	0.3	39	46	53	60	65	2952
Step family	53.8	0.5	42	47	53	60	65	600
Highest Parental Qualification								
No qualifications	46.5	0.5	31	39	46	54	60	1333
NVQ1	50.3	0.5	36	43	49	57	63	800
NVQ2	53.1	0.3	40	46	53	60	65	3444
NVQ3	54.6	0.3	41	48	56	62	67	2388
NVQ4	58.3	0.2	46	51	60	65	71	4585
NVQ5	58.6	0.3	46	51	60	65	73	2116
Parental Employment								
No parent employed	50.0	0.3	36	43	49	57	62	2522
One parent employed	55.0	0.3	41	48	56	62	69	4885
Two parents employed	57.5	0.2	44	51	59	63	69	6355
Poverty Status+								
Above 60% median	57.13	0.20	43	51	57	63	69	9054
Below 60% median	51.06	0.32	36	43	51	59	65	4512

Notes: Sample includes all cohort members, excluding second and third children in families with twins or triplets. Means, standard errors, and centiles are weighted using weight1 for country-specific numbers and weight2 for all others.+ Poverty status calculated on those reporting income, not including imputations for income

Appendix Table A3
Means and centiles for BAS pattern construction

	Mean	Standard Error	10th Percentile	25th Percentile	50th Percentile	75th Percentile	90th Percentile	Obs
All	51.3	0.2	41	46	51	57	63	14889
Country								
England	51.3	0.2	41	46	51	57	63	9501
Wales	51.1	0.4	41	46	51	56	62	2126
Scotland	50.2	0.5	40	45	51	56	61	1766
Northern Ireland	52.2	0.4	42	47	52	58	64	1496
Child's Gender								
Male	50.5	0.2	40	45	50	56	62	7548
Female	52.1	0.2	42	47	52	57	63	7341
Child's Ethnicity								
White	51.5	0.2	41	46	51	57	63	12450
Mixed	51.0	0.6	39	45	51	57	63	423
Indian	50.6	0.6	41	45	50	56	61	376
Pakistani	46.5	0.5	34	42	47	52	57	664
Bangladeshi	47.0	0.7	37	42	48	53	57	274
Black Caribbean	49.7	0.8	41	45	50	55	59	166
Black African	46.9	0.9	36	43	47	51	58	295
Other	50.3	0.7	42	46	50	54	61	238
Child's Ethnicity and Gender								
White male	50.8	0.2	40	46	51	57	63	6328
Mixed male	50.5	0.9	39	45	51	57	64	202
Indian male	50.5	0.8	41	45	50	55	63	196
Pakistani male	45.0	0.6	31	40	45	51	56	329
Bangladeshi male	44.9	1.0	36	39	45	51	54	131
Black Caribbean male	49.2	1.2	31	44	49	56	64	85
Black African male	45.5	1.2	31	40	46	52	57	153
Other male	49.4	1.1	40	45	49	54	63	122
White female	52.3	0.2	43	47	52	58	63	6122
Mixed female	51.6	0.7	41	46	51	58	61	221
Indian female	50.8	0.8	42	45	50	56	61	180

Appendix Table A3 (continued)
Means and centiles for BAS pattern construction

	Mean	Standard Error	10th Percentile	25th Percentile	50th Percentile	75th Percentile	90th Percentile	Obs
Pakistani female	47.9	0.5	40	43	48	53	58	335
Bangladeshi female	48.9	0.9	39	45	49	54	59	143
Black Caribbean female	50.3	0.9	43	45	50	54	59	81
Black African female	48.4	1.0	40	44	48	51	58	142
Other female	51.1	0.8	45	47	52	55	61	116
Languages Spoken in the Home								
English only	51.5	0.2	41	46	51	57	63	12762
English and other language	48.7	0.3	39	44	49	54	59	2047
Other language only	49.5	1.2	42	45	48	56	63	79
Family Structure								
Two natural parents	51.8	0.2	42	46	51	57	63	11254
Lone parent	49.4	0.3	39	45	49	56	60	2872
Step family	48.9	0.5	38	44	49	56	60	593
Highest Parental Qualification								
No qualifications	46.4	0.3	34	42	47	52	58	1293
NVQ1	47.5	0.5	34	43	48	54	59	781
NVQ2	50.2	0.3	40	45	50	56	61	3374
NVQ3	51.1	0.3	41	46	51	57	63	2340
NVQ4	52.8	0.2	43	47	52	59	64	4539
NVQ5	53.0	0.3	43	48	53	58	64	2091
Parental Employment								
No parent employed	48.0	0.3	36	43	48	54	59	2447
One parent employed	51.3	0.2	41	46	51	57	63	4805
Two parents employed	52.3	0.2	43	47	52	58	63	6273
Poverty Status+								
Above 60% median	52.18	0.19	42	47	52	58	64	8933
Below 60% median	48.84	0.23	39	44	49	55	60	4423

Notes: Sample includes all cohort members, excluding second and third children in families with twins or triplets. Means, standard errors, and centiles are weighted using weight1 for country-specific numbers and weight2 for all others.
+ Poverty status calculated on those reporting income, not including imputations for income

Strengths and Difficulties Questionnaire (SDQ)

For the next section please answer on the basis of your child's behaviour over the last six months. For each question, please say whether the statement is not true, somewhat true or certainly true of your child

(1) Not true
(2) Somewhat true
(3) Certainly true

[Lchildact] shows concern for other people's feelings
[Lchildact] is restless, overactive and cannot stay still for long
[Lchildact] often complains of headaches, stomach-aches or sickness
[Lchildact] is happy to share with other children (treats, toys, pencils etc..)
[Lchildact] often has temper tantrums or hot tempers
[Lchildact] tends to play alone, is rather solitary
[Lchildact] generally obeys, usually does what adults ask
[Lchildact] has many worries, often seems worried
[Lchildact] is helpful if someone is hurt, upset or feeling ill
[Lchildact] can't sit still, is constantly fidgeting or squirming
[Lchildact] has at least one good friend
[Lchildact] often fights with other children or bullies them
[Lchildact] is often unhappy, tearful, or downhearted
[Lchildact] is generally liked by other children
[Lchildact] is easily distracted, attention wanders
[Lchildact] is nervous or clingy in new situations, easily loses confidence
[Lchildact] is kind to younger children
[Lchildact] often argues with adults
[Lchildact] is picked on or bullied by other children
[Lchildact] often volunteers to help others (parents, teachers, other children)
[Lchildact] can stop and think things over before acting
[Lchildact] can be spiteful towards others
[Lchildact] gets on better with adults than with other children
[Lchildact] has many fears, is easily scared
[Lchildact] sees tasks through to the end, has good attention span

Chapter 9

CHILD HEALTH

Alice Sullivan and Heather Joshi

Introduction

The Millennium Cohort Study provides an important opportunity to examine dimensions of health and illness in the context of children's lives, their families, and their social and environmental circumstances; and to understand factors that mediate between social experience and these health outcomes. This chapter reviews some of the evidence, collected at age 5, on the child's health and development up to that age. It pursues child health themes addressed in earlier reports, and provides a much larger sample of this particular age group than the national household surveys of the health of the public: the Health Survey for England, the Welsh Health Survey, the Scottish Health Survey and the Northern Ireland Survey of Health and Well-being. Part 1 deals with outcomes relevant to child development, disability and longstanding conditions, as well as children's experiences of injuries and hospitalisation. The second part makes use of one of the largest national exercises to collect the height and weight of young children. It assesses how many were overweight or obese, and examines the social and lifestyle factors which may be linked to overweight and obesity.

The sample used here consists both of cohort members who are singletons, and some from multiple births, but only the first cohort member in this case. This results in 214 observations being discarded. The weightings used in this chapter are the original sampling weights with no allowance for non-response or attrition since MCS 1.

We have sought patterns in the data by using two-way, mostly cross-sectional, analysis. The associations we present should not be interpreted as evidence of causal relationships. These will have to be investigated in a multivariate and longitudinal framework. These findings are intended to serve as a guide to further investigation.

Part 1

General health

The vast majority of five-year-olds were reported by their mothers (or main carers) to be in excellent or very good health, 84 per cent in the UK sample as a whole (Table 9. 1). Boys had slightly but significantly less good health than girls, 51 per cent of boys being reported as having excellent general health compared with 54 per cent of girls (Table 9. 1). There were broadly similar rates in each of the UK's constituent countries. Table 9.2 shows that children in Scotland and Wales were most likely to be described as in excellent health (59%), compared with only 52 per cent of children in England. Very few were said to be in fair or poor health (3% in Scotland and 4% elsewhere).

Table 9.1
General health

Health		Male	Female	Total
Excellent	%	51.1	54.3	52.7
	Unweighted Obs	3825	3962	7787
	Weighted Obs	*4053*	*4116.3*	*8169.3*
Very good	%	31.5	30.6	31.1
	Unweighted Obs	2459	2260	4719
	Weighted Obs	*2498.3*	*2319.7*	*4817.9*
Good	%	13.2	11.6	12.4
	Unweighted Obs	1074	891	1965
	Weighted Obs	*1047.2*	*877.8*	*1925*
Fair	%	3.7	2.9	3.3
	Unweighted Obs	341	251	592
	Weighted Obs	*293.3*	*221.9*	*515.1*
Poor	%	0.6	0.6	0.6
	Unweighted Obs	57	50	107
	Weighted Obs	45.1	42.1	87.2
Total	%	100	100	100
	Unweighted Obs	7756	7414	15170
	Weighted Obs	*7936.8*	*7577.7*	*15514.5*
		P>F = 0.0022		

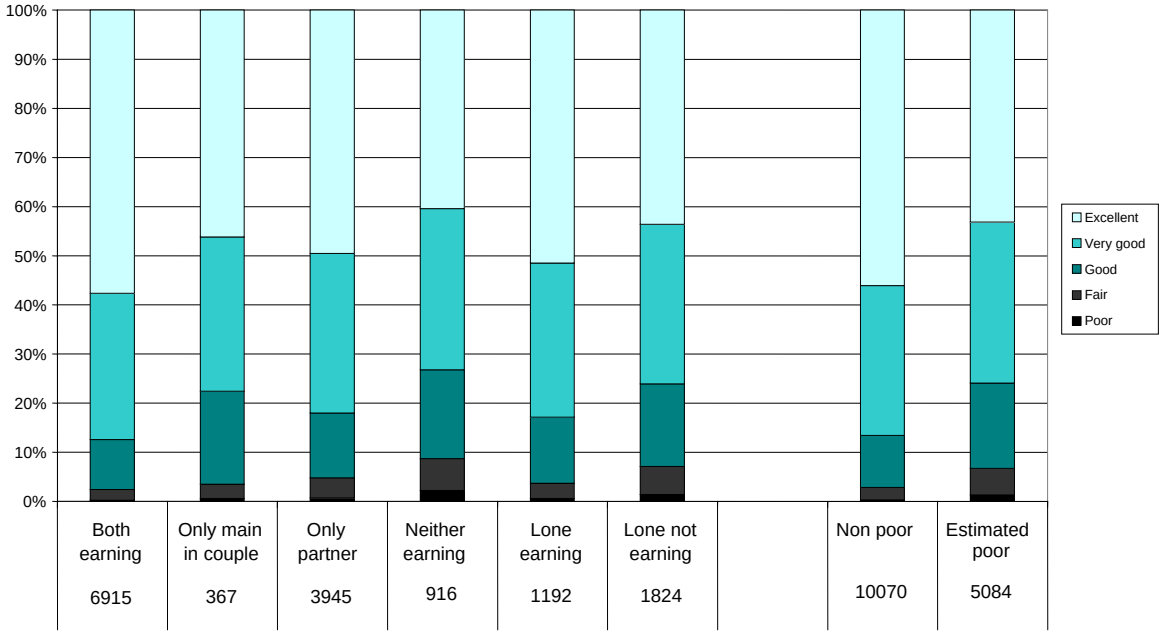
Notes: Weights are sampling weight2 unless otherwise noted.
Tables in chapter display weighted percentage, unweighted cell size followed by *weighted cell size* unless otherwise specified.

Table 9.2
Child's general health by country at MCS 3

		England	Wales	Scotland	NI	Total
Excellent	%	51.5	58.6	58.9	56.4	52.7
	Unweighted Obs	4710	1199	1042	834	7785
	Weighted Obs	*6609.1*	*458.3*	*802.8*	*298.3*	*8168.5*
Very good	%	31.6	27.1	29	29.5	31
	Unweighted Obs	3125	604	530	458	4717
	Weighted Obs	*4052.2*	*211.9*	*395.4*	*156.2*	*4815.7*
Good	%	13	10.7	8.9	10.1	12.4
	Unweighted Obs	1400	231	166	167	1964
	Weighted Obs	*1665.9*	*83.4*	*121.5*	*53.6*	*1924.4*
Fair	%	3.4	3.1	2.8	3.4	3.3
	Unweighted Obs	396	82	53	61	592
	Weighted Obs	*435.2*	*24*	*37.8*	*18.1*	*515.1*
Poor	%	0.6	0.6	0.4	0.6	0.6
	Unweighted Obs	73	15	9	10	107
	Weighted Obs	*73.4*	*5*	*5.8*	*2.9*	*87.2*
Total	%	100	100	100	100	100
	Unweighted Obs	9704	2131	1800	1530	15165
	Weighted Obs	*12835.8*	*782.5*	*1363.4*	*529.1*	*15510.8*
		P = 0.0000				

Notes: Weighted by weight1

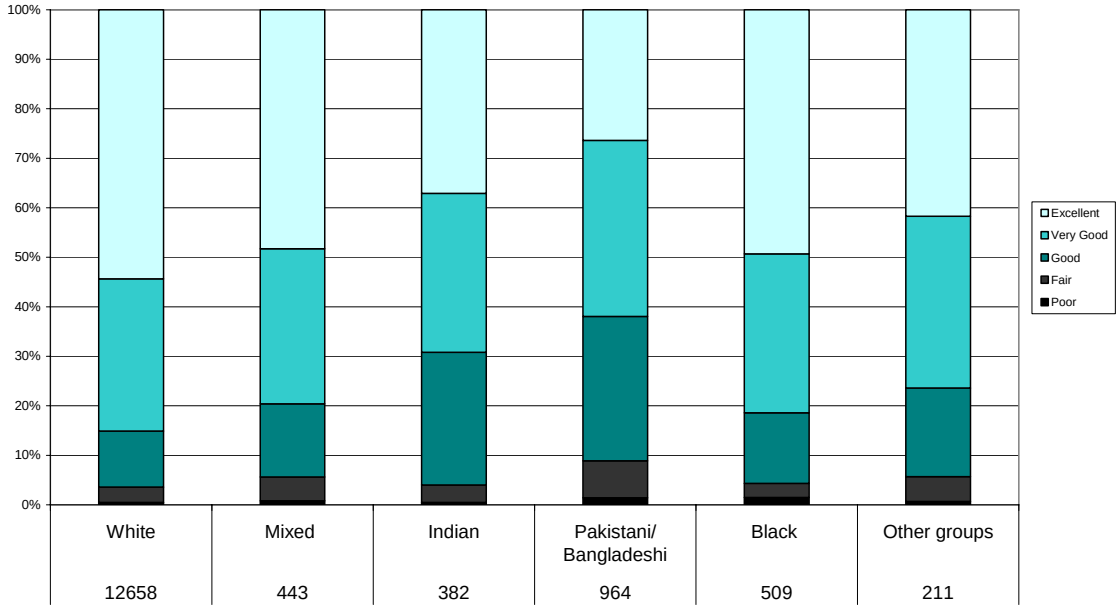
Figure 9.1
Child's general health by employment of parents and by income band



Notes: Numbers are unweighted bases of weighted percentages

There were also significant differences in the general health reported by poverty status (as defined in chapter 12), and employment of parents (Figure 9.1), and ethnicity (Figure 9.2). More than one in four (27%) families were classed as poor in the observed sample (after sample weighting but without adjustment for attrition). Only 43 per cent of the cohort children in these poor families were reported as having excellent health compared with 57 per cent in non-poor families. They were also more than twice as likely to have fair or poor health (6% versus 3% of the rest). Figure 9.1 shows that the children with no employed parent, whether in one or two-parent families have the same health profile as the group of poor families, with whom they largely overlap. The children in families with one employed parent, whether it be a lone parent or one of a couple, have middling general health, while children in two-earner families do best (58% in excellent health). Among the ethnic groups (Figure 9.2), the Pakistani and Bangladeshi children stand out as having the poorest general health. Only 26 per cent were reported to have excellent health and nearly 9 per cent of them as having fair or poor heath. Whites are the only ethnic group where more than half are reported in excellent health. The other groups are intermediate.

Figure 9.2
Child's general health by child's ethnicity



Notes: Numbers are unweighted bases of weighted percentages

Illness and disability

About eight in ten children were free from longstanding illness (defined as 'any longstanding illness, disability or infirmity that may have troubled the child for a period of time, or is likely to affect him/her over a period of time'). This 20 per cent with a longstanding condition is slightly higher than some other estimates: 16 per cent of children of all ages with a longstanding illness, disability or impairment in the 2004/5 Families and Children Survey (FACS); or 9 per cent in the Family Resources Survey (FRS) (Read, 2007). However, it is not clear whether these surveys are exactly comparable, even allowing for the age differences in coverage.

Table 9.3
Longstanding illness by gender

	Male	Female	Total
No illness %	78.2	82.9	80.5
Unweighted Obs	6040	6142	12182
Weighted Obs	*6202.2*	*6276*	*12478.2*
Illness, not limiting %	15	12.4	13.7
Unweighted Obs	1125	901	2026
Weighted Obs	*1186.3*	*940.7*	*2127*
Limiting illness %	6.8	4.7	5.8
Unweighted Obs	585	364	949
Weighted Obs	*542.5*	*352.6*	*895.1*
Total %	100	100	100
Unweighted Obs	7750	7407	15157
Weighted Obs	*7930.9*	*7569.3*	*15500.3*
			P = 0.0000

Around one third of children in MCS 3 with a long-term illness, i.e. 6 per cent of all children, were limited in their activities by their condition (Table 9.3). This is closer to the FRS estimate for all children with a limiting long-term illness in 2004-5 of 5.1 per cent. Those with

limiting long-term illness are an approximate measure of those targeted by the Disability Discrimination Act (Read, 2007). The FRS is able to identify a further 2.2 per cent of children who would be officially classified as disabled, in those who depend on medication or treatment to contain the extent of their disability, which we cannot allow for here. Although there is a question about regular medication, it is not linked to whether or not the condition treated would otherwise limit activity. The survey is unlikely to provide detailed evidence about many particular child health disabilities but we can report that, among the 1,738 families answering a follow-up question on problems with eyes, a small number, 41, had registered the child as having poor vision. This represents 0.2 per cent of the cohort, and 2 per cent of those with an eyesight problem.

Table 9.4
Longitudinal long-term conditions at 3 and 5

Longstanding (diagnosed) health condition at age 3		Longstanding illness at age 5		
		Yes	**No**	**All**
Yes	%	7.8	8.0	15.9
	Unweighted Obs	1071	1062	2133
	Weighted Obs	*1116.7*	*1144.7*	*2261.4*
No	%	11.5	72.6	84.1
	Unweighted Obs	1578	9926	11504
	Weighted Obs	*1634.7*	*10348.2*	*11983*
All	%	19.3	80.7	100.0
	Unweighted Obs	2649	10988	13637
	Weighted Obs	*2751.5*	*11492.9*	*14244.4*
				P = 0.0000

Notes: Weighted percentages of the total sample who were observed at both surveys

Around half of those for whom a longstanding (diagnosed) condition was reported at the age 3 survey still reported a problem at age 5 (Table 9.4). More than half of those said to have a longstanding illness at age 5 had no reported condition at age 3, raising the prevalence from 16 to 19 per cent. Seventy-three per cent of the sample had no reported long-term conditions at either survey.

Gender and health conditions

Table 9.5
Percentage answering yes to selected health and development problems where significant gender differences were found

Problem	Boys	Girls	Total	Significance
	Weighted percentages			
Ever had hearing problem *%*	14.3	11.8	13.1	
Unweighted Base Nos	7749	7404	15153	P = 0.0001
Weighted Base Nos	*7933*	*7568*	*15501*	
Any current concerns about speech %	16.9	9.5	13.3	
Unweighted Base Nos	7756	7415	15171	P = 0.0000
Weighted Base Nos	*7936*	*7579*	*15515*	
Ever had Asthma %	17.0	11.8	14.5	
Unweighted Base Nos	7734	7384	15118	P = 0.0000
Weighted Base Nos	*7912*	*7546*	*15458.0*	
Ever had Eczema %	36.7	33.9	35.3	
Unweighted Base Nos	7750	7411	15161	P = 0.0020
Weighted Base Nos	*7927*	*7575*	*15502*	
Ever had Hay Fever %	11.7	9.2	10.48	
Unweighted Base Nos	7711	7392	15103	P = 0.0000
Weighted Base Nos	*7887*	*7547*	*15434*	
ADHD diagnosed %	1.4	0.2	0.8	
Unweighted Base Nos	7739	7412	15151	P = 0.0000
Weighted Base Nos	*7925*	*7576*	*15501*	
Autism or Asperger's diagnosed *%*	*1.4*	*0.3*	*0.9*	
Weighted Base Nos	*7928*	*7576*	*15504*	
Unweighted Base Nos	7746	7413	15159	P= 0.0020
Wets the bed at night (occasionally or more often) %	32.1	20	26.2	
Unweighted Base Nos	7707	7374	15081	P = 0.0000
Weighted Base Nos	*7894*	*7540*	*15434*	

The poorer health and tardier development of boys are apparent in Tables 9.1 and 9.6, and in a selection of conditions reported in Table 9.5. Hearing and speech problems were each reported to affect around 13 per cent of the children. Though in both cases the rate was significantly higher for boys, the gender gap is a little wider in the case of speech problems. The proportions of children reported to have had asthma, eczema and hay fever are 15 per cent[1], 35 per cent and 10 per cent respectively. In each case there were higher rates for boys than for girls. The behavioural or cognitive developmental conditions of Attention Deficit Hyperactivity Disorder (ADHD) and Autism/ Asperger's Syndrome are reported for only a tiny fraction of the cohort, less than 1 per cent, but the minority is strikingly higher for boys (1.4% with each condition) than for girls.

[1] Asthma incidence for children aged 0-15 was 20 in 2001-2 (Fuller, 2005) Figures for children aged 2-15 ever diagnosed were 21 per cent asthma, 24 per cent eczema and 9 per cent hay fever in the 1996 Health Survey for England.

Although, by age five, almost all of the children were long out of nappies, and 'dry by day', a considerable minority (still) had problems of bedwetting, at least occasionally, at night (20% of girls and 32% of boys). Seven per cent of boys and 4 per cent of girls wore nappies at night. Although this could reflect a number of other problems, it suggests that the development of bladder control continued to lag behind for boys, as it had at age three. There were no significant differences by gender for problems with sight, infectious diseases, and fits or epilepsy. Boys were more likely to have required hospital treatment, either for accidents or for illness (see Table 9.9, below), but less likely than girls to be overweight or obese (see Table 9.10 and following).

Ethnicity and health conditions

Table 9.6
Selected child health conditions at age 5 which vary by ethnic group: weighted percentages

	White	Mixed	Indian	Pakistani/ Bangla deshi	Black	Other ethnicity	Total
Any longstanding condition %	19.8	23.9	13.0	16.0	14.5	18.3	19.5
(limiting) %	5.7	6.1	3.9	7.1	6.2	7.2	5.8
Unweighted Base Nos	12652	443	382	963	508	211	15159
Weighted Base Nos	*13716.3*	*469.3*	*272.3*	*534.1*	*352.6*	*157.9*	*15502.4*
							P = 0.0025
Any hearing problems	13.8	9.2	9.1	8.8	5.0	4.3	13.06
Unweighted Base Nos	12643	442	382	964	508	211	15150
Weighted Base Nos	*13709.9*	*468.9*	*272.3*	*535.2*	*352.6*	*157.9*	*15496.8*
							P=0.0000
Any problems with speech %	13.5	12.6	6.2	13.3	11.2	14.3	13.3
Unweighted Base Nos	12659	443	382	964	509	211	15168
Weighted Base Nos	*13723.4*	*469.3*	*272.3*	*535.2*	*353*	*157.9*	*15511*
							P=0001
Toothache in past year	11.1	9.7	9.6	17.3	12.1	11.4	11.3
Unweighted Base Nos	12654	443	382	964	509	211	15163
Weighted Base Nos	*13719.3*	*469.3*	*272.3*	*535.2*	*353*	*157.9*	*15506.9*
							P=0.0001
Ever had Eczema	35.8	37.9	31.4	22.1	36.9	31.8	35.3
Unweighted Base Nos	12650	443	381	964	509	211	15158
Weighted Base Nos	*13711.2*	*469.3*	*271.9*	*535.2*	*353*	*157.9*	*15498.4*
							P=0.0000
Ever had Hay Fever	9.9	14.6	15.8	10.6	19.4	15.2	10.4
Unweighted Base Nos	12597	442	382	961	508	210	15100
Weighted Base Nos	*13646.8*	*468.2*	*272.3*	*533.4*	*351.9*	*157.5*	*15429.9*
							P=0.0000
Wets the bed at night (occasionally or more often) %	26.6	27.6	17.7	17.4	30.6	18.8	26.2
Unweighted Base Nos	12598	438	378	951	504	209	15078
Weighted Base Nos	*13663.5*	*462.7*	*270.1*	*528.7*	*348.1*	*156.3*	*15429.4*
							P=0003

Table 9.6 displays some of the health conditions which varied significantly by the child's ethnic group at age 5. As weighted and unweighted sample sizes differ considerably, reflecting the over-representation of minority ethnic areas in the sample design, it is

necessary to consider unweighted base numbers in gauging the statistical significance of ethnic differences, or the weighted base numbers should the reader wish to aggregate across particular groups. Table 9.6, however, confirms the well-known diversity among minority groups; ethnic minority groups do not all suffer uniform health disadvantage. For longstanding illness, in general it is children of 'mixed' ethnicity and whites who show the highest prevalence (23% and 20%), with Indian families reporting the lowest level of longstanding health problems in cohort children, at 13 per cent. However, it is the Pakistani and Bangladeshi children, along with those of other unspecified ethnic groups, who are most likely to be reported as having a limiting condition (7%). Indian children still have the lowest rate (4%) of limiting longstanding conditions and black, mixed and white children all display about the national average of 6 per cent[2]. Thus, though the differences are statistically significant, they are not stark. Indian children also do relatively well in terms of the proportion with speech problems (6%), which is well below the average for other groups, including whites. Indian, Pakistani and Bangladeshi children, and those classified as 'other ethnicity', were substantially less likely than average to wet the bed. The Pakistani and Bangladeshi group also have the lowest rate of eczema, and a rate of hay fever which is below average for the other minority groups, though higher than the rate for the white majority. Ethnic differences in asthma were not significant[3]. The other area of poor health where the Pakistanis and Bangladeshis can be singled out is the experience of toothache in the past year (17% against an average of 11%). Among the conditions reported in this table, black children (black Caribbean, African and black British combined) show good hearing, but have high rates of hay fever and of bed wetting.

Parental employment and health conditions

Table 9.7 shows another selection of health conditions, those which vary significantly by the number and employment status of parents. This composite variable contains information contrasting lone parents with couple families; and within each type of family counts whether the parent or parents are earning. In practice, the two groups of 'workless' families, i.e. couples where neither earn and lone parents without jobs, coincide fairly closely with those whose income comes below the poverty line (as defined in Chapter 12). Although Table 9.7 does not distinguish the 'working poor' among families with earners, it does capture a major part of the health differential associated with poverty. In all but one of the conditions listed in Table 9.10, it is the two groups of workless families which stand out as having the worst child health. For example, 22 per cent of the children of workless couples and 17 per cent of the children of non-employed lone parents had had toothache in the previous year in contrast to the average of 11 per cent. Speech and eyesight problems, though not hearing problems, were reported more often for children from workless families, and those with two non-working parents were more likely than other children to have problems with bladder control in the day (there was no difference by parental work status in bedwetting at night). The small minority diagnosed with ADHD were twice as likely to be found (2%) where no parent was employed as the average. The two groups of workless families were also the most likely to expose children to someone smoking in the same room (33% and 30%, compared to an average of 13%). The exception to the pattern of poor child health being associated with workless families is the incidence of eczema, slightly more likely to be reported for the children of two-earner couples. Beyond worklessness, Table 9.7 shows little difference between children with working mothers, be they lone mothers or the sole or joint earner in couples. Although this chapter does not explore a large number of indicators of material or subjective deprivation, there is scope in the data collected to explore the material circumstances of families with

[2] The Health Survey for England had boosted sample of ethnic minorities in 2004, which also found high longstanding illness among children of all ages under 16 among black Caribbean and Chinese groups, not shown separately here, and reports higher rates for Pakistani than Bangladeshi children (Fuller 2005).
[3] However, the Health Survey for England in 2004 had shown significantly lower rates of asthma for girls aged up to 15 from black African, Pakistani and Bangladeshi origin (Fuller, 2005).

disabled children. Read and colleagues (2007), using other national datasets, showed that their circumstances are relatively adverse on many dimensions.

Table 9.7
Selected child health conditions by parents' employment at age 5

	Couples				Lone Parents		Total
	Both working	Main working	Partner working	Neither working	Working (single)	Not working (single)	
Any Longstanding Illness %	17.8	19.6	19.1	25.5	22.5	24.3	19.5
Limiting illness %	4.2	8.5	6.2	9.2	6	8.6	5.8
Unweighted Base	6914	366	3942	915	1191	1823	15151
Weighted Base	*7695.2*	*308.3*	*3996.7*	*723.5*	*1226.6*	*1546.5*	*15496.8*
						F=7.9786, P>F = 0.0000	
Toothache %	8.9	10.8	11.1	21.5	13.7	16.9	11.3
Unweighted Base	6916	366	3944	916	1192	1821	15155
Weighted Base	*7697.4*	*308.1*	*3999.6*	*723.7*	*1227.7*	*1544.7*	*15501.3*
						F=28.90, P>F = 0.0000	
Eyesight problems %	9.5	11.7	11.2	14.5	11.7	14.3	10.9
Unweighted Base	6912	367	3945	916	1191	1822	15153
Weighted Base	*7692.6*	*308.7*	*4000.7*	*723.7*	*1226.8*	*1546.3*	*15498.7*
						F =5.53 P = 0.0001	
Speech problems %	11.1	14	14.8	21.6	12.4	17.2	13.3
Unweighted Base	6915	367	3945	917	1192	1824	15160
Weighted Base	*7696.8*	*308.7*	*4000.7*	*723.9*	*1227.7*	*1547.6*	*15505.4*
						F=15.70 P = 0.0000	
Ever had fits, convulsions/epilepsy %	4.4	4.4	4.4	5.9	6.1	6.8	4.8
Unweighted Base	6916	367	3941	915	1192	1822	15153
Weighted Base	*7697.4*	*308.7*	*3995.9*	*723.3*	*1227.7*	*1546.6*	*15499.6*
						F=2.35 P = 0.0003	
Ever had Asthma	12.6	10.6	14.1	17.4	18	21.6	14.5
Weighted Base	*7665*	*308.7*	*3989.3*	*718.4*	*1224.7*	*1542.2*	*15448.3*
Unweighted Base	6888	367	3935	912	1188	1817	15107
						F= 15.34 P = 0.0000	
Ever had Eczema %	36.5	32.3	35.4	30.4	36.6	31.2	35.3
Unweighted Base	6913	367	3943	914	1191	1822	15150
Weighted Base	*7692.8*	*308.7*	*3998.3*	*722.1*	*1225.7*	*1545.2*	*15492.8*
						F=4.60 P = 0.0004	
Ever Hay fever %	9.6	6.3	10.8	11.8	12.3	12.9	10.5
Weighted Base	*7648.8*	*308.7*	*3982.8*	*719.4*	*1221.3*	*1543.3*	*15424.3*
Unweighted Base	6878	367	3930	911	1187	1819	15092
						F=5.00 P = 0.0002	
ADHD diagnosis %	0.6	0.4	0.6	2.3	0.8	2.3	0.8
Unweighted Base	6910	367	3941	910	1191	1821	15140
Weighted Base	*7693.4*	*308.7*	*3998*	*719.7*	*1225.7*	*1544.8*	*15490.3*
						F=10.70, P>F = 0.0000	
Wets sometimes during day %	7.6	10.2	7.8	12.4	6.7	9.4	8.1
Unweighted Base	6916	367	3945	916	1192	1823	15159
Weighted Base	*7697.4*	*308.7*	*4000.7*	*723.7*	*1227.7*	*1545.6*	*15503.8*
						F =4.04 P = 0.0011	

Infectious diseases and immunisations

A connection between maternal employment and child health is perhaps more evident when one considers the incidence of chickenpox, a childhood infection that is not subject to mass immunisation. Table 9.8 shows that three quarters of the children had had chickenpox, with the highest proportion (81 per cent) in the families with both parents working at MCS 3, and the lowest rates among the currently workless families. One may speculate that the children of working mothers were more likely to have had contact with other children in day care in pre-school years, though this remains to be investigated in the longitudinal dataset. Two other childhood infections shown in Table 9, measles and whooping cough, are at a very much lower level, with incidences of 3 per cent and 1.5 per cent respectively, reflecting the general success of immunisation policies. The questions about immunisations in the survey found that 96 per cent of children were up to date with the vaccination that protects against whooping cough, along with diphtheria and tetanus. Similar numbers were up to date with immunisation against polio (95%) and measles (96%). The two groups of workless families (along with working lone parents in the case of measles) seem to be over-represented among the few not effectively protected by immunisation; both in terms of reporting the disease and not reporting immunisation. The survey also collected information on some other types of immunisation not routinely offered to all, such as Hepatitis B and BCG against tuberculosis, and on which further details are not given here. The survey found 16 children who had had tuberculosis.

Table 9.8
Incidence of infectious diseases by age 5, by parental employment status

	Couples				Lone Parents		
	Both working	Main working	Partner working	Neither working	Working (single)	Not working (single)	Total
Ever had Chickenpox %	80.9	74.1	73.4	64.6	74.5	62.2	75.7
Unweighted Base	6903	367	3932	911	1189	1819	15121
Weighted Base	*7680.7*	*308.7*	*3983.5*	*718.7*	*1224.4*	*1543.7*	*15459.7*
							P = 0.0000
Measles %	2.5	3	2.8	3.7	4.4	4.8	3
Unweighted Base	6904	366	3939	911	1187	1818	15125
Weighted Base	*7688.1*	*308.3*	*3995.2*	*720.4*	*1221.8*	*1541.5*	*15475.3*
							P = 0.0001
Whooping Cough %	1.1	1	1.5	2.6	1.4	3	1.5
Unweighted Base	6915	367	3943	915	1191	1823	15154
Weighted Base	*7696.8*	*308.7*	*3998.3*	*722.6*	*1225.7*	*1547.3*	*15499.5*
							P = 0.0000

Hospitalisation

Table 9.9 shows reports of having been admitted to hospital for illness or accidents. The latter includes going to Accident and Emergency departments. Each type of experience is tabulated against the type of area from which the cohort child was originally sampled, which shows a geographical spread across the UK countries, and within them the local social profile at the turn of the Millennium. Attending hospital for at least one accident was much more frequent for this age group, 28 per cent, than for illness, 12 per cent. Within each country, hospitalisation rates tended to be lower in advantaged areas than disadvantaged. The disadvantaged wards in Wales had the highest rates of hospitalisation for illness (17%) and for accidents (32%). An exception to this trend is that, despite the low economic status of the minority ethnic wards in England, this stratum had the lowest rate of hospitalised

accidents, reflecting the lower rate of accidents reported for all the minority ethnic groups than whites, whether or not they came from the over-sampled ethnic areas.

Table 9.9
Any hospital admissions since last interview

MCS sample stratum		Accident		Illness	
Country at MCS 1	Type of electoral ward	%	n	%	n
England	Advantaged	23.3	4,053	11.2	4,055
England	Disadvantaged	28.1	3,734	12.2	3,737
England	Minority Ethnic	18.8	1,866	12.9	1,866
Wales	Advantaged	29.2	664	13.4	665
Wales	Disadvantaged	31.5	1,503	17.4	1,503
Scotland	Advantaged	23.3	916	12.0	916
Scotland	Disadvantaged	28.9	894	13.4	894
Northern Ireland	Advantaged	19.6	593	12.2	593
Northern Ireland	Disadvantaged	24.4	936	14.0	936
Total		28.0	15,159	11.9	15,165
	Chi	117.62		52.32	
	P		0.0000		0.0000

Notes: The individual rows are not weighted because we are using the stratum variable.

Part 2

Obesity

Excess body fat is a matter of concern because it leads to a number of health problems, such as high blood pressure and diabetes, and can have a direct impact on a child's well-being if it leads to bullying or low self-esteem. It is all the more a public health issue because it is on the increase. The 'childhood obesity epidemic' has set an agenda of investigating the factors thought to be responsible and which policy will have to tackle if it is to be reversed.

The MCS children were weighed and measured, allowing us to derive a measure of Body Mass Index (BMI). Eighty per cent of the sample were within the normal range, 15 per cent were overweight (but not obese) and 5 per cent obese. On our measures, levels of overweight and obesity were slightly higher for girls than for boys. We do not present estimates of underweight for children.

Definition

Overweight and obesity are generally operationalised in terms of the BMI (weight in kg divided by the square of height in metres). Although there is a standard pair of cut-off points generally agreed for adults (25 and 30), various benchmarks are used for children, which, also unlike those for adults, differ by age and gender. The definitions of overweight and obesity used in this chapter are those of the International Obesity Task Force (IOTF), which were also used in the analysis of MCS 2 (Cole et al., 2000). The value of the cut-offs used at exact age 5, were for overweight, BMI= 17.42 and 17.12 for boys and girls respectively, 19.30 and 19.17 for obesity. These cut-offs were estimated to be on growth curves that would reach 25 and 30 at age 18. They were based on larger numbers of observations in reference populations than were available for evidence on children used to generate an alternative set of cut-offs, the UK Reference Population, as used by the Health Survey for England.

They were based on larger numbers of observations in reference populations than were available for evidence on children that generated an alternative set of cut-offs, the UK Reference Population, used by the Health Survey for England.

These alternative cut-offs (Cole et al., 1995) are set at the 85th and 95th percentile of a national reference population in 1990. This procedure assumed that children below the 85th percentile in 1990 had at least relatively healthy BMIs, and gave a benchmark for assessing BMI at other dates. This definition can be readily used to track the spread of the 'obesity epidemic'. For example, childhood obesity, defined in this way as the equivalent of the 'fattest' 5 per cent in the UK in 1990, can be said to have trebled should the numbers with BMI over this threshold level reach 15 per cent. The UK Reference standard has different and less stringent values from the IOTF used here at three of the four thresholds[4]. The biggest discrepancy, the 'obesity' cut-off for boys, is over 1kg/m^2 below the definition used here. This may help to account for the biggest gap between MCS 3 and HSE five- year-olds in 2006 being in the percentage of boys classed as obese (19% vs. 5%). Note that the HSE estimates (Craig and Mindell, 2008) are based on around 400 children, in contrast to the MCS 15,000, which would entail more sampling error on the HSE side. Other reasons for the differences remain to be investigated.

This does not mean that we present these estimates as gold standard. We have made no attempt to control for differences other than age and gender in the extent to which BMI can be interpreted as adiposity. For example, there are likely to be ethnic differences in the relationship between BMI and body fat for which adjustments might be made (Daniels et al., 1997). Neither have we yet made much use of the measurements of waist circumference that were taken during this survey. They could, for example, be used to evaluate data quality, which might lead to more cases being rejected than have already been discarded at the preliminary cleaning of the data, and they could also be used to identify other cases where body mass does not seem to be accumulating around the waist.

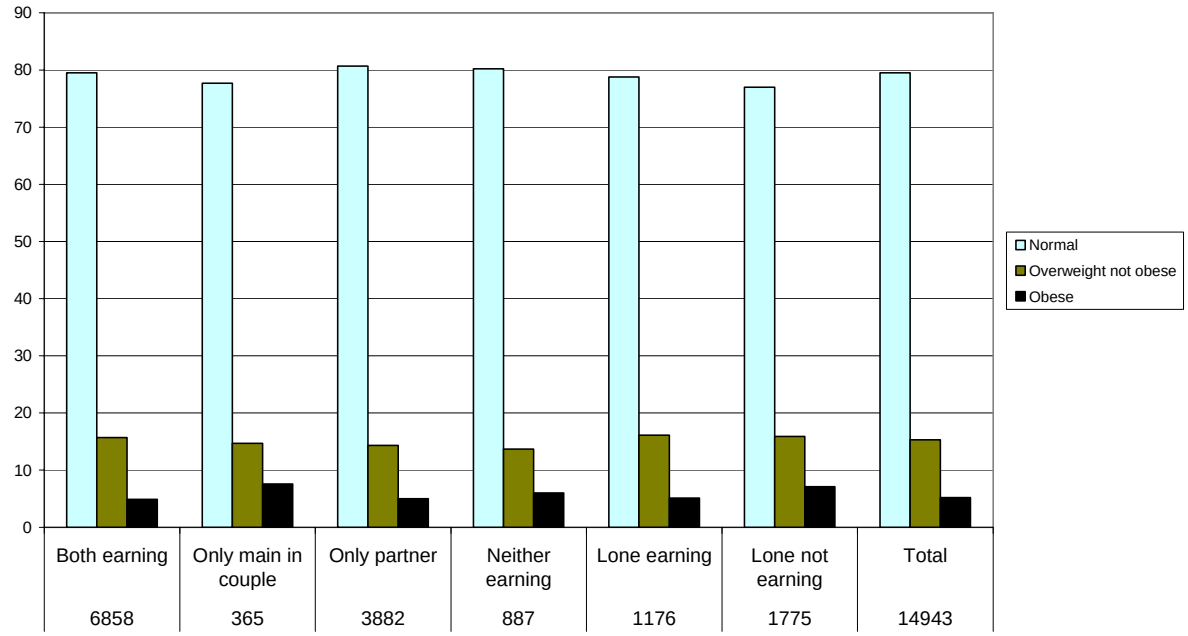
We examine the associations between children's BMI and various background characteristics, as well as some indicators of diet and exercise. We use the term 'overweight' in the tables and following text to denote those children whose BMI is over the lower threshold, but under the line for obesity. Strictly speaking they are 'overweight but not obese'.

4

	MCS 3			HSE		Difference	
	IOTF definition			UK Ref definition			
Grouped BMI	Male	Female	Total	Male	Female	Male	Female
Normal %	81.6	77.3	79.5	70	73	12	7
Overweight %	13.5	17.2	15.3	11	13	2.5	-4.2
Obese %	4.9	5.6	5.3	19	14	-14.5	-8.4-7
Total %	100	100	100	100	100		
n	7650	7339	14989	212	197		
	Cut-off BMI at exact age 5, kg/m2						
	International Obesity Task Force			UK Reference 1990			
Overweight	17.42	17.15		16.96	17.16	0.46	-.001
Obese	19.30	19.17		17.95	18.35	1.35	0.82

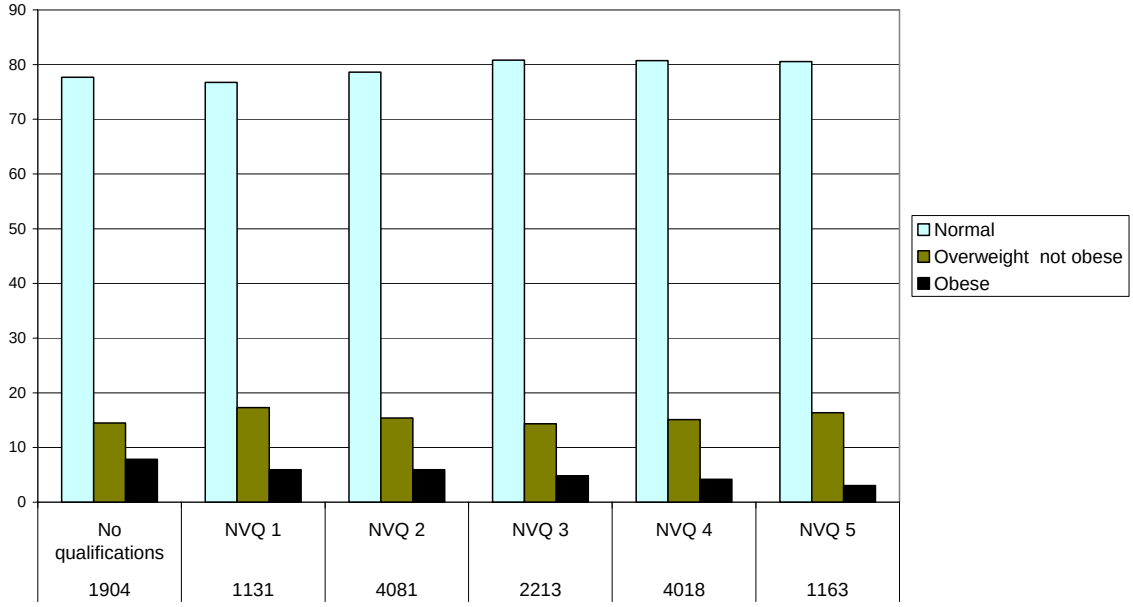
We do not expect all the variation in the sample to be explained by any one factor. There is a complex relationship between environment, behaviour and genetics in determining an individual's BMI (Wardle et al., 2008). Although there is considerable genetic variability between individuals it clearly cannot account for the growth over recent decades in rates of overweight and obesity. There is a consensus among researchers that this increase in weight gain is due to excessive energy intake combined with increasingly sedentary lifestyles (Bleich et al., 2007).

Figure 9.3
Child BMI by parents' employment



Notes: Numbers are unweighted bases of weighted percentages

Figure 9.4
Child's BMI by mother's qualifications



Notes: Numbers are unweighted bases of weighted percentages

Multivariate analysis of children of all ages in the HSE has found a significant inverse relationship between income and obesity for girls but not for boys (Craig and Mindell, 2008). In our bivariate analysis, poor children were no more likely to be overweight, and only very slightly more likely to be obese than the better-off. While this difference is statistically significant, this suggests strongly that individual variation in overweight and obesity among children is not solely driven by poverty. Differences according to parents' work status were also minor albeit statistically significant, with the children of unemployed lone parents the least likely to have healthy BMIs. The association of worklessness with BMI was more pronounced among parents' BMI (see Chapter 10). There was a somewhat stronger link to the mother's educational level: 8 per cent of the children of main respondents with no qualifications were obese, compared to 3 per cent of the children of graduates. Among the ethnic groups, children from Asian backgrounds (Indian, Pakistani and Bangladeshi) were the least likely, and black children the most likely, to be overweight or obese[5]. Comparing the UK countries, 80 per cent of English and Scots children had healthy BMIs, compared to 77 per cent of the Welsh and 75 per cent of the Northern Irish (See Tables 9.10 to 9.12, Figures 9.3 and 9.4).

Table 9.10
BMI and poverty

	above poverty line*	below poverty line*	Total
Normal	80	78.1	79.5
	7856	3865	11721
	8990.7	*3173.3*	*12164*
Overweight	15.2	15.3	15.3
	1570	771	2341
	1712.1	*621.6*	*2333.7*
Obese	4.7	6.6	5.2
	526	333	859
	533	*270.2*	*803.2*
Total	100	100	100
	8960	4472	13432
	10184.2	*3777.6*	*13961.8*
			P= 0.0013

Notes: * poverty line divides net equivalised family income at 60% of national distribution of net household income before housing costs. See Chapter 12. Note this chapter, unlike Chapter 12, makes no adjustment for attrition.

[5] It will be especially important to confirm this in waist-measurement data, because of possible ethnic differences in body fat for a given BMI (Daniels et al., 1997).

Table 9.11
BMI and ethnic group

	White	Mixed	Indian	Pakistani and Bangladeshi	Black	Other	Total
Normal %	79.6	77.4	83.4	81.6	66.2	87.3	79.5
Observed	9823	328	320	772	343	179	11765
Weighted	*10825.7*	*350.5*	*224.7*	*432.4*	*229.4*	*135.5*	*12198.1*
Overweight %	15.4	15.5	12.5	10.4	21.3	7.9	15.3
Observed	2023	69	44	103	100	17	2356
Weighted	*10825.7*	*350.5*	*224.7*	*432.4*	*229.4*	*135.5*	*12198.1*
Obese %	4.9	7.1	4.1	8	12.5	4.8	5.3
Observed	673	30	15	76	58	12	864
Weighted	*670.3*	*31.9*	*11.2*	*42.6*	*43.1*	*7.5*	*806.7*
Total %	100	100	100	100	100	100	100
Observed	12519	427	379	951	501	208	14985
Weighted	*13594.5*	*452.7*	*269.5*	*530.2*	*346.2*	*155.2*	*15348.3*
	P = 0.0000						

Table 9.12
BMI by country at MCS 3

	England	Wales	Scotland	Northern Ireland	Total
Normal	7623	1605	1401	1134	11763
	79.8	77.3	79.5	75.4	79.5
	10137.7	*597*	*1070*	*394*	*12198.6*
Overweight	1436	373	278	269	2356
	15.1	17.3	15.1	17.9	15.3
	1913.8	*133.6*	*202.8*	*93.4*	*2343.5*
Obese	538	121	98	107	864
	5.2	5.4	5.4	6.8	5.3
	657.1	*41.9*	*72.4*	*35.3*	*806.7*
Total	100	100	100	100	100
	9597	2099	1777	1510	14983
	12708.6	*772.4*	*1345.2*	*522.6*	*15348.8*
	P = 0.0423				

Parental concern and other reported health problems

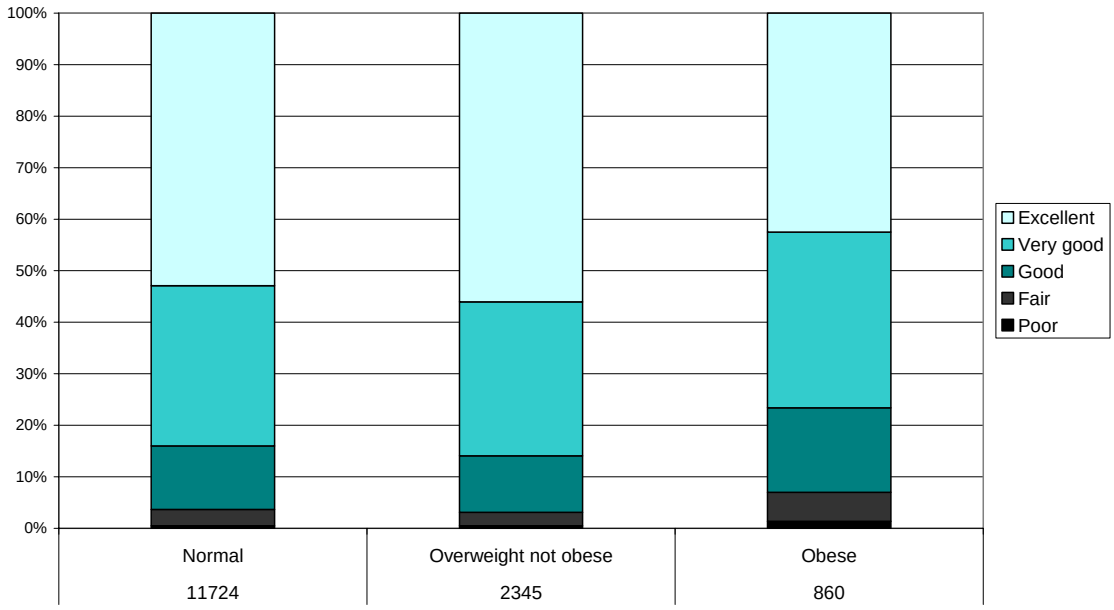
Most of the parents of obese children (71%) were concerned about their child's future weight (they were not asked whether they were concerned about their current weight). However, for children in the overweight category, more than half of the main respondents were unconcerned. Twenty-two per cent of main respondents whose children were in the 'normal' category were nevertheless concerned about their future weight (see Table 9.13).

Table 9.13
Future overweight concern and asthma incidence

	Normal	Overweight	Obese	Total
Main respondent concerned about child's weight				
Weighted %	21.8	43.8	70.6	27.7
obs	2436	975	576	3987
Unweighted base	11718	2344	861	14923
Weighted Base	*12160.6*	*2335.4*	*803.9*	*15299.8*
				P= 0.0000
Child ever had Asthma				
Weighted %	14	15.4	17.4	14.4
obs	1708	391	161	2260
Unweighted base	11689	2331	859	14879
Weighted Base	*12124.9*	*2323.3*	*801.3*	*15249.5*
				P= 0.0090

The child's BMI category was linked to their general health as reported by the main respondent. Obese children were substantially less likely to be reported to be in excellent health. However, overweight children were actually more likely than normal-weight children to be in excellent health (Figure 9.5).

Figure 9.5
Child's general health by obesity



Notes: Numbers are unweighted bases of weighted percentages

Overweight and obese children were more likely to suffer from asthma (see Table 9.13). We must bear in mind that asthmatic children may be more likely to gain weight (through lack of exercise) as well as the possibility that the overweight may be more likely to become asthmatic. More sophisticated longitudinal analyses will be required to examine this relationship.

Diet and exercise

Main respondents were asked to name one type of snack the child typically ate between meals. The most common response was crisps, sweets, chocolate, cake or sweet biscuits.

Overweight children were actually less likely than children of normal weight to be reported to favour these sugary snacks, although obese children were slightly more likely to prefer such snacks. Obese children were markedly less likely to favour fruit (or vegetables) as a snack. However, it is notable that there is no consistent pattern of difference between the overweight and normal-weight children in their reported snacking habits (Table 9.14). Of course, the responses may not be entirely reliable, and, perhaps crucially, we do not know how much of the various types of snack is consumed, with the exception of fruit.

Table 9.14
Snack of choice and BMI

	Normal	Overweight	Obese	Total
Crisps, sweets, chocolates, cake	37.8	35.2	40.6	37.6
	3919	715	291	4925
	3938.2	*699.8*	*265.8*	*4903.8*
Cereal and starch	6.9	6.1	6.9	6.8
	715	132	51	898
	723.1	*120.7*	*45*	*888.7*
Fruit and veg	43.3	45.6	35.5	43.3
	4123	859	246	5228
	4506.4	*907.5*	*232.5*	*5646.4*
Dairy	10	11	14.6	10.4
	1094	242	105	1441
	1043.5	*219.4*	*95.5*	*1358.5*
Other	1.9	2.1	2.5	2
	192	42	16	250
	197.6	*42.6*	*16.6*	*256.9*
Total	10043	1990	709	12742
	10408.8	*1990.1*	*655.3*	*13054.3*
				P= 0.0026

The next table (Table 9.15) shows the number of portions of fruit the child consumes daily, at or between meals, according to the main respondent. Overweight children are reported to eat more fruit than normal-weight children, while obese children are reported to eat less. However, the differences are slight. Unfortunately, we have no indicators of the content of the children's main meals, let alone their daily calorie intake. Detailed data on nutritional intake were beyond the scope of this, and other, multipurpose surveys.

Table 9.15
Portions of fruit and BMI

	Normal	Overweight	Obese	Total
None	3.9	3.5	4.9	3.9
	499	93	44	636
	499	93	44	636
One	15	13.6	17.7	15
	2091	380	175	2646
	1828.5	*317.1*	*142.5*	*2288.1*
Two	27.2	26.5	29.2	27.2
	3340	649	260	4249
	3302.9	*618.3*	*234.6*	*4155.8*
Three or more	53.9	56.4	48.2	54
	5783	1222	382	7387
	6555.4	*1317.5*	*387.7*	*8260.5*
Total	11713	2344	861	14918
	12156.7	*2334.7*	*803.9*	*15295.3*
	P= 0.0279			

There is a clearer link between BMI and eating breakfast. The obese children were about twice as likely to fail to eat breakfast daily as the normal-weight children. Breakfasting was, in turn, strongly related to parents' work status, with workless households far less likely to report that the child ate breakfast. This may be due to the lack of a daily routine of rising early enough to eat breakfast (Tables 9.16 and 9.17).

The question about whether the child ate regular meals was not related to the BMI categories, at least in a two-way analysis, neither was eating lunch provided at school (Table 9.16).

Table 9.16
Daily breakfast, lunch at school and BMI

	Normal	Overweight	Obese	Total
Eats breakfast daily	93.6	90.7	87.6	92.8
	10817	2106	750	13673
Number of obs	11717	2345	861	14923
Weighted base	*12161.2*	*2335.7*	*803.9*	*15300.8*
			P>F = 0.0000	
Eats lunch at school	43.9	43.6	46.5	44
	5535	1140	438	7113
Number of obs	11569	2327	850	14746
Weighted base	*12025.8*	*2322.4*	*795*	*15143.1*
	P= 0.4534			

.

Table 9.17
Daily breakfast and parental employment

	Both working	Main working	Partner working	Neither working	Working (single)	Not working (single)	Total
Yes	94.9	90.7	93.4	87.4	90.8	85.6	92.8
	6511	335	3624	782	1072	1549	13873
	7302.7	280.1	3732.9	631.7	1114.3	1323.7	14385.4
No	5.1	9.3	6.6	12.6	9.2	14.4	7.2
	403	32	316	133	120	272	1276
	393.7	28.6	264.3	90.9	113.4	223.1	1114
Total	6914	367	3940	915	1192	1821	15149
	7696.4	308.7	3997.2	722.6	1227.7	1546.7	15499.4
							P= 0.0000

.
The tendency for contemporary children to be driven to school rather than walk is seen as a cause for concern. Just over half of our sample walked (or cycled) to school, with most of the remainder being driven. However, we find no link between the mode of travel to school and the child's BMI category in two-way tabulation. This is not ideal evidence on exercise, as it does not tell us about other forms of activity. It may also be that the health benefits of exercise are understated by the BMI measure, which does not distinguish between fat-weight and muscle-weight. Future sweeps will use an indicator of the percentage of body fat, which will allow researchers to investigate these issues further, and also track how far excess weight builds up over the school years.

Table 9.18
Computer: weekday hours and BMI

Computer hours	Normal	Overweight	Obese	Total
None	32.8	31.3	33.2	32.6
	3794	734	273	4801
	3986.1	*731.5*	*266.8*	*4984.4*
Less than 1	46.1	45.4	40.6	45.7
	5173	1044	342	6559
	5603.3	1059.7	326.5	6989.5
1-3 hours	18.6	20.5	22.1	19.1
	2414	495	210	3119
	2262.3	479.1	177.3	2918.7
3+ hours	2.5	2.8	4.1	2.7
	342	71	35	448
	309.6	65.1	32.8	407.6
Total	11723	2344	860	14927
	12161.4	*2335.4*	*803.3*	*15300.1*
				P>F = 0.0132

Time spent sitting in front of a computer or TV screen can be seen as a proxy for lack of physical activity. Table 9.18 shows that overweight and obese children were disproportionately represented among those spending more than an hour each weekday on the computer. Children who watch more than three hours of television daily are also overrepresented among the overweight and obese (Table 9.19).

Table 9.19
TV/DVD weekday hours and BMI

viewing	Normal	Overweight	Obese	Total
Less than 1	22.7	18.7	15.1	21.7
	2554	447	131	3132
	2761.2	*437.2*	*121.3*	*3319.7*
1 to 3	63.6	65.7	65.9	64.1
	7453	1520	553	9526
	7738	*1535.1*	*530.1*	*9803.2*
3 to 5	8.7	10.2	12.7	9.1
	1127	266	118	1511
	1127	*266*	*118*	*1511*
5+	5	5.4	6.3	5.1
	588	111	59	758
	604.7	*125.4*	*50.3*	*780.4*
Total	100	100	100	100
	11722	2344	861	14927
	12163.7	*2335.4*	*803.9*	*15303*
				P>F = 0.0000

Intergenerational and longitudinal patterns

Table 9.20 shows the strong link between mother's and child's BMI category, especially for girls. This resembles the finding for children of all ages in the Health Survey for England, 2006, although.the relationship for boys was not significant in that survey, which had a smaller sample size (Craig and Mindell, 2008).

Table 9.20
Mother's and child's BMI by gender

row percentages

Mother's BMI	Child's BMI : Girls				Child's BMI : Boys			
	Normal	Overweight	Obese	Total, girls	Normal	Overweight	Obese	Total, boys
Underweight	91.4	8.1	0.5	100	89.4	6.6	4	100
	143	17	2	162	137	11	5	153
				154.5				*159*
Normal weight	84	13	3	100	86.1	10.7	3.2	100
	2758	459	108	3325	2961	389	123	3473
				3607.1				*3752.6*
Overweight	73.3	19.7	7	100	78.9	16.2	4.9	100
	1213	332	132	1677	1310	272	93	1675
				1668.7				*1722.4*
Obese	64.5	24.9	10.6	100	73.7	17.4	8.9	100
	435	159	69	663	543	125	67	735
				655.9				*708.3*
Morbidly obese	61.9	27	11.2	100	67.8	18.3	13.9	100
	201	93	49	343	227	62	46	335
				343.6				*334.1*
Total	4750	1060	360	6170	5178	859	334	6371
	78.2	16.6	5.2	100	82.1	13.1	4.8	100
	5030.6	*1067.8*	*331.2*	*6429.7*	*5482*	*875.1*	*319.3*	*6676.4*
	P = 0.0000				P = 0.0000			

Finally, we examine changes in BMI between sweeps 2 and 3, i.e., ages 3 and 5. There was some movement between categories, in both directions. Encouragingly, there was somewhat more movement into the 'normal' category than out of it, reflecting a slight decline in the proportion of overweight children between the two sweeps (Table 9.21).

Table 9.21
Child's BMI sweeps 2 and 3

	MCS 3			
MCS 2	Normal	Overweight	Obese	Total
Normal	91.2	7.605	1.195	100
	8729	768	138	9635
	9346	*779.3*	*122.5*	*10247.8*
Overweight	45.73	44.36	9.908	100
	1026	980	246	2252
	1064	*1032*	*230.5*	*2327*
Obese	20.13	32.77	47.1	100
	153	234	316	703
	136.4	*222.1*	*319.2*	*677.7*
Total	*10546.4*	*2033*	*672.2*	*13251.6*
	79.58	15.35	5.073	100
	9908	1982	700	12590
	P=0.0000			

It will be important to examine which lifestyle factors are associated with a change in BMI over time. To illustrate this, we show change and stability in BMI according to whether

breakfast is eaten daily. Children who did not eat breakfast at age 5 were overrepresented among those who had moved into a (more) unhealthy BMI category, and underrepresented among those who moved into a more healthy category (Table 9.22). Of course, more analysis, conditioning on a range of potential confounding factors, will provide a more secure understanding of these relationships.

Table 9.22
BMI change Age 3 to Age 5 and Daily Breakfast

Breakfast MCS 3	Normal to normal	Normal to overweight	Normal to obese	Overweight to overweight	Overweight to obese	Overweight to normal	Obese to obese	Obese to overweight	Obese to normal	Total
Yes	8051	669	118	900	223	953	269	212	140	11535
	93.9	89.4	87.26	92.19	91.54	94.23	85.54	92.7	93.62	93.2
	8750	694.5	104.8	950	211	997.9	273.1	204.6	127.5	820.38
No	644	97	18	78	23	68	47	20	12	1007
	6.1	10.6	12.74	7.813	8.459	5.772	14.46	7.297	6.382	6.797
	568.3	82.37	15.3	80.51	19.5	61.13	46.17	16.1	8.69	898
Total	100	100	100	100	100	100	100	100	100	100
	8695	766	136	978	246	1021	316	232	152	12542
	9318	*776.9*	*120.1*	*1030*	*230.5*	*1059*	*319.2*	*220.7*	*136.2*	*13211.4*
	P = 0.0000									

Conclusions

This preliminary investigation into the health of the Millennium Cohort children at age 5 suggests that the majority are in good health. However, our analysis also confirms that the well-established pattern of socio-economic inequalities in children's health still obtains. Poor children, and those from workless households, fare substantially worse than others in terms of both their reported level of general health, and specific conditions. Eczema and bed-wetting are the only conditions we have examined which are actually *less* likely to affect poor children. As well as the obvious implications for well-being, inequalities in child health are likely to be further implicated in the intergenerational transmission of disadvantage, as health and developmental problems affect children's schooling.

There initially appear to be stark ethnic differentials in health: white children are more than twice as likely as Bangladeshi and Pakistani children to be reported to be in excellent health. However, Asian children are actually less likely than whites to be reported as having a longstanding health condition. This may reflect their lesser exposure to smoking in pregnancy and the higher rate at which they were breastfed in infancy, which longitudinal analysis may help establish. Alternatively there may be issues with possible cultural differences in interpretation of the meaning of some of these questions.

Boys fared worse than girls in terms of many health outcomes, and the gap was widest on variables such as parental concerns about speech, and bedwetting, which reflect failure to achieve developmental milestones. Girls were more likely to be overweight or obese than boys at age five, as they had also been at age 3.

Our exploration of overweight and obesity suggests that BMI is more weakly associated with economic inequality than many other health outcomes, as there is only a slight gap between poor children and others in the risk of obesity. This suggests that economic pressures, such as the inability to afford healthy food, for example, are not necessarily key issues driving weight gain. There are strong ethnic differentials, with Asian children relatively unlikely to be rated as overweight or obese. Dietary differences are likely to be important here, and genetics may also play a role. No single lifestyle factor is likely to account for overweight and obesity in a cross-section, but eating breakfast daily emerged as a strong predictor of healthy BMI, while the number of hours spent in front of the TV was a strong negative predictor. Having said this, we clearly need to carry out multivariate analyses in order to unpack the relationships between the many variables involved. There is scope for a great deal more work to be done here, taking advantage of the waist-measurement data as well as the BMI indicator we have used.

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Chapter 10

PARENTAL HEALTH

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Introduction

Health remains a high profile issue in public and political arenas. Reiterating policy outlined in the 2004 White Paper 'Choosing Health', the Prime Minister, Gordon Brown, described in his 2008 New Year announcement the priorities for the National Health Service in its 60th year. The focus will be on preventative care for 'lifestyle' diseases such as obesity and better management of long-term conditions such as asthma and diabetes. Sixty per cent of the population are projected to be clinically obese by 2050, and therefore new measures such as an increase in activity-based prescriptions and the provision of at least five hours of sport a week for schoolchildren are to be implemented.

Already in place are Government policy initiatives aimed at targeting specific disease areas agreed with external reference groups that include health professionals, service users and carers, health service managers, and partner agencies. The rolling programme of National Service Frameworks (NSFs) was launched in 1998 and currently covers long-term conditions, mental health, coronary heart disease, diabetes, chronic obstructive pulmonary disease, cancer, children, paediatric intensive care, older people and renal services. Other Government 'Health Improvement and Promotion' initiatives relevant to MCS parental health are targeting tobacco, alcohol misuse, substance abuse, obesity, healthy living and health inequalities, which exist in some form across the Devolved Administrations of Wales, Scotland and Northern Ireland as well as England.

Nearly all are of direct relevance to the health information collected from parents in the Millennium Cohort Study. The health, disability and health-related behaviour of the parents have current and future implications for the well-being and lifestyle of the cohort children.

The Millennium Cohort Study

In this chapter, we focus on sweep 3 of the Millennium Cohort Study (MCS 3), comparing its findings with sweep 2 (MCS 2) and sweep 1 (MCS 1) where possible. We replicate the presentation format of the parental health chapter in the MCS 2 Initial Guide to Findings to facilitate comparison.

We report health data on the cohort children's mothers and fathers, including the small numbers of adoptive and step-parents. Collecting information about parental health is essential in formulating the health and lifestyle context in which the MCS children will grow up. Parents were asked about several areas of health and lifestyle, such as general health, longstanding illness, smoking, alcohol, drug use, mental health, life satisfaction, and height and weight to calculate body mass index (BMI).

In this report, we introduce simple, initial descriptive accounts of these health topics in relation to key demographic factors, such as age, sex, UK country, ethnicity, couples' employment, education level and family type. It should be noted that these are preliminary, introductory investigations. Using more powerful, complex tools of analysis outside the remit of this report may reveal additional significant results.

We will also attempt to include, where possible, comparative data from other large-scale surveys such as the General Household Survey (GHS), the Health Survey for England (HSE)

and evidence from the literature. The GHS and HSE are large country-wide surveys carried out by and on behalf of the Government. Although there are also government health surveys in the other UK countries: the Welsh and Scottish Health Surveys and the Northern Ireland Survey of Health and Social Well-being, we have not attempted to make systematic reference to their findings.

General Health

Self-assessed health has been shown to be a powerful predictor of life expectancy and that predictability appears to vary across socio-economic groups (Hernandez-Quevedo, Jones and Rice et al., 2005). Mansyur, Amick, Harrist and Franzini (2008) cite Wilkinson's seminal 1996 work which demonstrated that higher income inequality is associated with lower life expectancy in wealthier countries. Mansyur and colleagues further found that higher average self-rated health was associated with higher income in over 70,000 respondents in 45 countries using the World Values Survey and European Values Survey. Other authors (Perruccio, Power and Badley, 2007) have found negative or poor self-assessments of health to be significant predictors of reduced social-psychological well-being.

This powerful global indicator sets the general scene in health terms for the parents of the MCS children.

Mothers

Overall, 14 per cent of mothers at MCS 3 reported their health to be generally fair or poor (Table 10.1). This is of the same order of magnitude as found in the GHS for adult females reporting less than good health, 14 per cent in 2004, and 12 per cent in 2006. In MCS 3, mothers' fair/poor health varied significantly by age, ethnicity, couples' employment, education and family type. Mothers under 30 years reported the highest levels of fair/poor health (18% to 19%). Prevalence of fair/poor health appeared to decrease up to age 39, then rise again for the over 40s. Prevalence ranged from 12 per cent for mothers in Scotland to 14 per cent in England. This difference between countries was not statistically significant, unlike the other variables in Table 10.1.

Black African mothers reported the lowest prevalence of fair/poor health, at 11 per cent, followed by 13 per cent of white mothers. Pakistani and black Caribbean mothers had the highest levels at 22 per cent and 21 per cent respectively.

There was also wide variation in reported fair/poor health by employment status. Lowest levels were among those mothers where both partners were employed (9%) and three times higher (30%) where both partners were not employed. Non-employed lone mothers were also more likely to report fair/poor health (26%).

There also wide variation by education level. Mothers with no qualifications reported almost four times fair/poor health levels (26%) than mothers with the highest qualifications (7%). Hernandez-Quevedo et al. (2005) also found that reporting good health increased with levels of education. Lone natural mothers reported twice the level of fair/poor health of married natural mothers, at 21 per cent and 11 per cent respectively.

Fathers

Overall, 11 per cent of fathers reported fair/poor health (Table 10.1). Significant differences were found by age, country, ethnicity, mother's employment, education and family type. Fathers under 30 reported highest levels of fair/poor health (15 % to 16%), while those over 30 reported levels between 9 per cent and 12 per cent.

Fathers in England were most prevalent in the fair/poor health range (11 %), and fathers in Wales were the least prevalent (9 %) but, as with mothers, these differences were not statistically significant. Almost 1 in 5 Bangladeshi fathers reported fair/poor health, the highest among the ethnic groups, while the lowest was for black African fathers, at 9 per cent.

There were striking differences by employment. Eight per cent of fathers where both partners were employed reported fair/poor health, compared with 38 per cent of those where both partners were not employed.

Lower education levels were associated with poorer health. Fathers with no qualifications were four times more likely to report fair/poor health (22%) than fathers with NVQ level 5 (5%). Married fathers appeared to enjoy better general health than cohabiting fathers.

Table 10.1
Mothers' and fathers' general health fair or poor

	Mothers		Fathers	
	Observed sample numbers	Per cent	Observed sample numbers	Per cent
Age				
Overall	14,754	13.8	10,205	11.0
Under 25	1,063	19.0	169	15.5
25 to 29	2,570	17.6	920	15.0
30 to 34	4,018	13.6	2,176	11.0
35 to 39	4,483	10.5	3,458	8.8
40 and over	2,620	14.1	3,480	11.9
		P<0.001		P<0.001
Country				
England	9,328	14.0	6,448	11.2
Wales	2,142	13.6	1,488	9.4
Scotland	1,779	12.4	1,262	10.1
N. Ireland	1,505	12.5	1,007	9.5
		P = 0.374		P<0.001
Ethnicity				
White	12,659	13.3	8,848	10.6
Mixed	138	18.4	77	9.6
Indian	367	16.1	278	12.1
Pakistani	602	21.6	388	17.5
Bangladeshi	242	18.4	157	19.1
Black Caribbean	189	21.2	93	16.3
Black African	297	11.2	128	9.2
Other ethnicity	251	16.6	159	14.7
		P<0.001		P<0.001

Table 10.1 (continued)
Mothers' and fathers' general health fair or poor

	Mothers		Fathers	
	Observed sample numbers	Per cent	Observed sample numbers	Per cent
Employment				
Both partners employed	6,822	8.8	6,084	8.2
Main employed, partner not employed	256	12.6	256	28.3
Partner employed, main not employed	3,880	14.4	3,180	9.7
Neither employed	853	29.9	685	38.3
Lone parent employed	1,153	13.2	-	-
Lone parent not employed	1,781	26.0	-	-
		P<0.001		P<0.001
Education Level				
NVQ 1	1,110	17.8	592	13.4
NVQ 2	4,040	15.4	2,565	12.8
NVQ 3	2,185	11.4	1,509	9.3
NVQ 4	3,984	8.8	2,637	6.9
NVQ 5	1,125	7.1	1,168	5.3
Other/overseas qualifications	428	19.3	414	21.0
None of the above	1,856	25.7	1,046	21.9
		P<0.001		P<0.001
Family Type				
Married natural parents	9,090	10.6	7,974	9.6
Cohabiting natural parents	2,727	16.7	2,211	15.5
Lone natural mother	2,934	20.8	-	-
		P<0.001		P<0.001

Notes: Base: All mothers (including a few adoptive, step-mothers and foster mothers) who were main respondents. All fathers (including step-fathers) who were partner respondents. Table displays unweighted observations and weighted percentages. Unit non-response weights (Wave 2) used.

Longstanding illness

The World Health Organisation defines longstanding illnesses (LIs), or long-term conditions, or chronic conditions, as health problems that require ongoing management over a period of years or decades. They include a plethora of conditions, such as coronary heart disease, heart failure, stroke, hypertension, diabetes, chronic obstructive pulmonary disease (COPD), epilepsy, cancer, severe mental health conditions, asthma, chronic kidney disease, dementia, multiple sclerosis and Parkinson's disease. Numbers are predicted to increase because of factors such as an ageing population and lifestyle choices. The Department of Health (2008), describes how the probability of having an LI increases with age. Some 17 per cent of those aged under 40 say they have a LI, and this increases to around 60 per cent of those aged 65 and over.

'The NHS Improvement Plan' 2004 identified long-term conditions as one of the three top priorities for the NHS in the period up to 2008 because of their burden on healthcare

services. The plan advocated a move away from reactive care based in acute systems, towards a more patient-centred approach. Building on this, the main theme in the White Paper 'Our health, our care, our say: a new direction for community services' (January 2006) was self–care. There is evidence that care is less effective if people feel they are not in control.

A further paper 'Supporting people with long-term conditions to self-care – A guide to developing local strategies and good practice' in February 2006 identified three key areas to help people with LIs care for themselves: skills and training, information, tools and devices, and support networks. The paper reported that the prevalence of LI among men increased overall from 40 per cent in 1993 to around 44 per cent between 1997 and 2003, but appeared to have decreased gradually over the last three years to 41 per cent in 2006.

The implications for MCS children may be far-reaching. They may have to take on care responsibility for parents with chronic illness, and if they make the same lifestyle choices as their parents, they may be at greater risk of developing at least one LI themselves, with the potential for adverse impact on earnings, quality of life and well-being.

Mothers

Almost a quarter (24%) of mothers at MCS 3 reported an LI (Table 10.2). This apparently favourable comparison with adult females (aged 16-64 years) surveyed in the General Household Survey (GHS), where overall reported prevalence levels were 29 per cent in 2001, 30 per cent in 2004 and 31 per cent in 2006, may be at least in part due to the MCS mothers being younger, very few are as old as 40. The figure from the Health Survey for England (HSE) for women aged 16-34 was 28 per cent in 2004. All three surveys appeared to ask about LI in the same way, but the lower prevalence of longstanding illness in MCS mothers may also be because they are healthier on average than women of their own age who have not borne children.

There were significant differences in age, ethnicity, education level and family type. Differences between countries were not significant. LI levels were highest among mothers over age 40 (28%) and lowest among those under 25.

Black African and Bangladeshi mothers were least likely to report LI (both 16%), with black Caribbean mothers reporting highest levels at 26 per cent. Mothers where both partners were not employed reported much higher levels of LI (35%) than those where both were employed (21%). Mothers with no educational qualifications reported the highest prevalence of LI, at 28 per cent, as opposed to mothers who achieved NVQ level 5 (21%).

Fathers

Overall, almost one in four (24%) MCS fathers reported an LI (Table 10.2). They appeared to compare favourably with males aged 16 – 64 in the GHS where the prevalence of LI was 27 per cent in 2001, 25 per cent in 2002 and 26 per cent in 2006. The HSE found that the prevalence of LI among men aged 16-34 was 23 per cent in 2004.

Prevalence of LI was highest in MCS fathers over age 40 (28%) and appeared to fluctuate across other age ranges from 21 per cent to 25 per cent (very similar to the HSE).

Differences were not statistically significant by country. Fathers in England and Wales reported highest levels of LI, 24 per cent each, and fathers in Northern Ireland reported 21 per cent. A quarter of Indian (25%) and white (24%) fathers reported LI, while black African fathers reported the lowest levels (13%).

More than half of fathers where both partners were not employed (56%) had an LI, contrasting with 21 per cent of fathers where both were employed. Lower education level was again associated with higher prevalence of LI. Thirty-one per cent of cohort fathers who had no qualifications reported LI, while those with NVQ 3 or higher reported levels of 21 per cent to 23 per cent.

Married fathers reported 23 per cent prevalence and co-habiting fathers 26 per cent.

Table 10.2
Mothers' and fathers' longstanding illness

	Mothers		*Fathers*	
	Observed sample numbers	Per cent	Observed sample numbers	Per cent
Age				
Overall	14,752	24.1	10,200	23.9
Under 25	1,063	20.4	169	21.3
25 to 29	2,571	24.6	920	24.5
30 to 34	4,017	22.7	2,175	22.3
35 to 39	4,481	23.6	3,454	21.0
40 and over	2,620	27.9	3,480	27.7
		P<0.001		P<0.001
Country				
England	9,326	23.9	6,445	24.3
Wales	2,142	26.1	1,487	24.4
Scotland	1,778	25.1	1,261	21.4
N. Ireland	1,506	23.4	1,007	20.9
		P = 0.304		P = 0.065
Ethnicity				
White	12,658	24.6	8,843	24.2
Mixed	138	22.8	77	20.9
Indian	367	16.2	278	24.7
Pakistani	601	20.5	388	22.8
Bangladeshi	242	17.0	157	18.0
Black Caribbean	189	26.2	93	23.5
Black African	297	15.8	128	12.6
Other ethnicity	251	20.6	159	21.1
		P<0.001		P = 0.2438
Employment				
Both partners employed	6,821	21.2	6,081	21.3
Main employed, partner not employed	256	30.7	256	42.4
Partner employed, main not employed	3,880	24.5	3,180	21.6

Table 10.2 (continued)
Mothers' and fathers' longstanding illness

	Mothers		*Fathers*	
	Observed sample numbers	Per cent	Observed sample numbers	Per cent
Neither employed	851	35.4	683	55.5
Lone parent employed	1,153	22.3	-	-
Lone parent not employed	1,782	30.3	-	-
		P<0.001		P<0.001
Education Level				
NVQ 1	1,110	24.6	593	24.0
NVQ 2	4,041	24.8	2,564	25.1
NVQ 3	2,185	22.9	1,509	21.8
NVQ 4	3,982	22.9	2,634	22.6
NVQ 5	1,125	20.7	1,168	22.1
Other/ overseas qualifications	428	24.7	414	25.3
None of the above	1,855	28.2	1,044	30.7
		P = 0.002		P = 0.002
Family Type				
Married natural parents	9,088	22.6	7,970	23.3
Cohabiting natural parents	2,726	25.9	2,210	26.0
Lone mothers	2,935	27.0	-	-
		P<0.001		P<0.001

Notes: Base: All mothers (including a few step-mothers and foster mothers) who were main respondents. All fathers (including step-fathers) who were partner respondents. Table displays unweighted observations and weighted percentages. Unit non-response weights (Wave 2) used.

Smoking

Smoking is known to be the principal avoidable cause of premature deaths in the UK[1]. The Government White Paper 'Choosing Health: Making healthier choices easier' (Dept of Heatlh, 2004) outlined plans to tackle smoking and reduce the 106,000 deaths in the UK for which smoking is responsible each year.

The Government Public Service Agreement for smoking aims to reduce adult rates (from 26% in 2002) to 21 per cent or less by 2010, with a reduction in prevalence among routine and manual groups (from 31% in 2002) to at least 26 per cent.

A number of high-profile Government initiatives have been implemented throughout the UK, including smoke-free legislation, ongoing media/education campaigns and tax increases on tobacco.

Smoking is the main cause of COPD, a common disorder covering a range of conditions including chronic bronchitis and emphysema. About one million people in the UK have COPD. It mainly affects people over the age of 40 and accounts for more time off work than any other illness. The MCS parents with LI may include cases of COPD.

The Health Survey for England 2006 found that the proportion of men who were smokers declined overall from 28 per cent in 1993 to 24 per cent in 2006. The proportion of men who smoked 20 or more cigarettes per day also fell from 11 per cent in 1993 to 7 per cent in 2006. The proportion who smoked fewer than 10 cigarettes showed little change at 8 per cent in 2006.

HSE found that the proportion of women smokers decreased overall in the same period, from 26 per cent to 21 per cent. As with men, there were no significant changes in the proportion who smoked fewer than 10 cigarettes (8% in 2006).

Smoking is an important health issue for our cohort study. Evidence has shown that children whose parents and/or siblings smoke may be more likely to smoke as adults than children whose parents and/or siblings do not smoke (Stanton and Silva, 1991) These children may also be at risk from secondhand smoke (also known as 'environmental tobacco smoke' or 'passive smoking'). Evidence has shown that secondhand smoke can kill, and that there is no safe level of exposure.

Mothers

Overall, 28 per cent of mothers smoked, with 18 per cent smoking more than 10 cigarettes per day (Table 10.3). These levels are higher than those found by HSE in 2006. Ten per cent of mothers smoked fewer than 10 cigarettes per day, compared to 8 per cent reported by HSE. Significant differences were found by age, country, ethnicity, education level and family type**.**

Smoking decreased substantially with age, from 57 per cent of the under 25s, 40 per cent of whom smoked 10 or more cigarettes per day, to 18 per cent of those aged 40 or more, with 10 per cent smoking 10 or more per day.

Twenty-seven per cent of mothers in England reported smoking, lower than Wales, Scotland and Northern Ireland (34%, 30% and 33% respectively). MCS mothers in England, however, compared less favourably with smoking figures for adult females in England reported by DH (down from 28% in 1998 to 25% in 2004. The GHS reported lower adult female prevalence in England and Wales than Scotland in 2006, at 21 per cent, 20 per cent and 25 per cent respectively.

Only 4 per cent of Bangladeshi mothers reported smoking, the lowest levels of all ethnic groups in the MCS sample. The 'mixed' and black Caribbean mothers reported the highest levels, at 38 per cent and 34 per cent respectively.

There was substantial variation by employment. Mothers where both partners were employed reported the lowest smoking levels (18%), while the highest levels were reported by lone mothers who were not employed (58%).

Higher education levels were associated with lower smoking prevalence. Wide variation in prevalence was also associated with family type. Prevalence of smoking was 16 per cent for mothers where the natural parents were married, compared with 52 per cent of lone natural mothers.

Fathers

Overall, 29 per cent of fathers smoked (Table 10.3), higher than the proportion found by HSE in 2006. Twenty per cent smoked 10 or more cigarettes. Nine per cent of fathers smoked fewer than 10 cigarettes per day, around the same as men in the HSE survey (8%).

There were significant differences by age, country, ethnicity, employment, education level and family type. Smoking prevalence and heavy smoking (10 or more cigarettes per day) decreased with age, particularly after age 30.

Fathers in Northern Ireland were least likely to smoke (71% non-smokers) and those in Scotland most likely to smoke (68% non-smokers). Men aged 16 to 64 in Scotland also reported the highest smoking prevalence (25%) in the GHS 2006. Fathers in England reported lowest levels of 10 or more cigarettes per day (20%), with Scotland again highest at 26 per cent. GHS found a steady decrease in smoking prevalence in adult male smoking across 2001, 2004 and 2006.

Black African fathers were the least likely to smoke (88% non-smokers), while Bangladeshi fathers were most likely (57% non-smokers). Black African fathers also reported the lowest levels of heavy smoking (3%), with Pakistani and white fathers reporting the highest levels (22% and 21% respectively). This contrasts with the Asian mothers, but for employment, partnership status and employment the patterns of smoking for mothers and fathers were similar.

Table 10.3
Mothers' and fathers' smoking

	Mothers			Fathers		
	Observed sample numbers	Per cent Non-Smoker	Per cent 10+ Cigarettes Per Day *inc roll-ups*	Observed sample numbers	Per cent Non-Smoker	Per cent 10+ Cigarettes Per Day *inc roll-ups*
Age						
Overall	14,754	72.1	18.3	10,205	70.5	20.4
Under 25	1,063	43.0	39.7	169	41.2	44.0
25 to 29	2,570	57.2	29.4	920	44.9	40.5
30 to 34	4,018	72.3	17.9	2,175	64.1	25.0
35 to 39	4,483	79.7	12.5	3,458	76.5	15.7
40 and over	2,620	83.8	10.4	3,481	75.9	16.3
		P<0.001	P<0.001		P<0.001	P<0.001
Country						
England	9,327	73.0	17.3	6,448	70.9	19.6
Wales	2,142	66.3	23.0	1,488	69.3	22.0
Scotland	1,779	69.7	21.7	1,262	67.8	25.5
N. Ireland	1,506	66.9	24.6	1007	71.0	23.3
		P<0.001	P<0.001		P<0.001	P<0.001
Ethnicity						
White	12,659	70.2	20.0	8,848	70.7	21.0
Mixed	138	62.0	16.2	77	68.2	18.3
Indian	367	94.8	1.4	278	76.5	11.1
Pakistani	602	92.5	1.6	388	60.8	21.6
Bangladeshi	242	95.9	1.0	157	56.6	20.3

Table 10.3 (continued)
Mothers' and fathers' smoking

	Mothers			Fathers		
	Observed sample numbers	Per cent Non-Smoker	Per cent 10+ Cigarettes Per Day *inc roll-ups*	Observed sample numbers	Per cent Non-Smoker	Per cent 10+ Cigarettes Per Day *inc roll-ups*
Black Caribbean	189	66.1	15.7	93	68.1	4.8
Black African	297	92.1	1.6	128	88.2	2.8
Other ethnicity	251	88.7	4.3	159	68.4	17.4
		P<0.001	P<0.001		P<0.001	P<0.001
Employment						
Both partners employed	6,822	81.7	10.3	6,083	75.4	16.0
Main employed, partner not employed	256	68.4	22.5	256	54.2	30.3
Partner employed, main not employed	3,880	76.5	15.7	3,181	68.5	22.5
Neither employed	853	53.7	37.1	685	36.8	50.3
Lone parent employed	1,153	56.8	26.0	-	-	-
Lone parent not employed	1,781	42.1	42.6	-	-	-
		P<0.001	P<0.001		P <0.001	P <0.001
Education Level						
NVQ 1	1,110	56.1	33.1	593	62.4	29.8
NVQ 2	4,041	65	23	2,565	63.9	26.2
NVQ 3	2,185	74.4	15.1	1,509	70.4	20.8
NVQ 4	3,984	86.3	6.9	2,637	82.2	9.8
NVQ 5	1,125	87.6	6.3	1,168	84.9	7.7
Other/ overseas qualifications	428	72.0	19.9	413	63.6	25.9
None of the above	1,855	51.9	37.1	1,046	46.4	40.6
		P<0.001	P<0.001		P<0.001	P<0.001
Family Type						
Married natural parents	9,090	84.4	9.2	7,973	76.2	15.8
Cohabiting natural parents	2,727	57.5	29.4	2,212	50.9	36.0
Lone natural mother	2,934	48.2	35.8	-	-	-
		P<0.001	P<0.001		P<0.001	P(P)<0.001

Notes: Base: All mothers (including a few step-mothers and foster mothers) who were main respondents. All fathers (including step-fathers) who were partner respondents. Table displays unweighted observations and weighted percentages. Unit non-response weights used.

Alcohol

The UK has an ambivalent relationship with alcohol. Increases in binge drinking mean that alcohol misuse now poses one of the biggest challenges to society. Excessive drinking costs the UK economy around £20 billion each year in health, crime and disorder[2].

In 2005/06, 17 per cent of all violent incidents were committed in or around pubs or clubs. Alcohol-related deaths and disease have increased. In 2005, 4,160 people in England and Wales died from alcoholic liver disease. Men who regularly drink more than eight units of alcohol a day and women who regularly drink more than 6 units a day are at significantly higher risk of strokes and liver disease.

DH reported over half of mothers (54%) drinking alcohol during pregnancy. Pregnant women who drink heavily may put their babies at particular risk of developing foetal alcohol syndrome or foetal alcohol spectrum disorder, which can lead to lifelong intellectual and behavioural problems for their child. A systematic review by Henderson, Kesmodel and Gray (2007) found some evidence for neuro-developmental effects on foetuses caused by binge drinking during pregnancy, although many of the reported studies contained methodological weaknesses. Evidence from one of MCS's sister-studies, the 1970 British Birth Cohort Study, suggests that adolescent binge drinking may contribute to the development of health and social inequalities during the transition from adolescence to adulthood (Viner and Taylor, 2007).

In 2004, the Government published the Alcohol Harm Reduction Strategy for England and in 2007 DH and the Home Office jointly launched an updated alcohol strategy, 'Safe. Sensible. Social', which set out goals to promote sensible drinking to reduce the harm that alcohol can cause (Dept of Health, 2007a). DH is due to publish a national review of alcohol-related costs to the NHS this autumn (2008). DH and the Home Office intend to publish a framework in December 2008 to support in the planning of local investment.

Current Government guidelines on alcohol consumption limits are 21 units per week for men, 14 for women. Women should not regularly drink more than 2–3 units of alcohol a day and men should not regularly drink more than 3–4 units of alcohol a day, and both should have two alcohol-free days per week.

Alcohol is certainly an important health issue for our cohort study. Most children have their first drink of alcohol at home with their parents. Attitudes towards alcohol, drinking habits and associated behaviours may be learned from parents and family, as well as from the wider peer group.

Mothers

Overall, 82 per cent of mothers reported drinking alcohol (Table 10.4). Significant differences were found by age, country, ethnicity, education level and family type.

Except for the under-25s, alcohol use generally increased with age. The highest level of 86 per cent was reported by mothers in the 35-39 years group. Almost 11 per cent of 35 to 39-year-olds and 13 per cent of the over 40s were drinking more than the recommended frequency of five times per week.

Mothers in England reported lowest alcohol use (81%), while those in Scotland and Wales reported the highest levels (87% and 86% respectively). Mothers in England, however, reported the highest levels for drinking more than five times per week (9%).

Hardly any Bangladeshi or Pakistani mothers reported using alcohol (0.5% and 2% respectively), contrasting with white mothers who had the highest levels of 88 per cent, with black Caribbean mothers the second highest at 79 per cent. White mothers also reported the highest levels of drinking more than recommended frequency limits (9%).

Similar proportions of employed lone mothers and mothers where both partners were employed used alcohol (91% and 89%). By contrast, the figure for mothers where both were not employed was 59 per cent. Above-limit drinking frequency was three times more prevalent for mothers in employed couples (9%) as for non-employed lone mothers and mothers where both partners were not employed (both 3%).

Higher education level was associated with higher prevalence of drinking. Thirteen per cent of mothers with NVQ level 5 qualifications were drinking on five or more days per week.

Fathers

Overall, 90 per cent of fathers said they drank alcohol while 16 per cent drank more than five times per week. Differences were significant by age, country, ethnicity, employment, education level and family type, as shown in Table 10.4, and the patterns were generally similar to those found among mothers

For example, alcohol use was most prevalent among fathers where both partners were employed (6% 'never users') and lowest where both were not employed (33% 'never users'). High frequency drinking was twice as prevalent in fathers where both were employed as where both were not employed. For these families alcohol use is associated with affluence rather than deprivation.

Table 10.4
Mothers' and fathers' frequency of alcohol use

	Mothers			*Fathers*		
	Observed sample numbers	Per cent Never	Per cent 5 times + per week	Observed sample numbers	Per cent Never	Per cent 5 times + per week
Age						
Overall	14,752	17.9	7.8	10,203	10.3	16.2
Under 25	1,063	19.0	1.2	169	11.2	9.1
25 to 29	2,570	24.9	3.1	920	15.9	8.9
30 to 34	4,018	19.9	5.2	2,174	12.1	12.3
35 to 39	4,482	14.1	10.9	3,457	9.1	15.8
40 and over	2,619	14.4	13.3	3,481	9.0	21.0
			P<0.001			P<0.001
Country						
England	9,325	18.7	8.6	6,448	10.7	17.4
Wales	2,142	13.7	5.9	1,487	7.7	16.7
Scotland	1,779	13.0	4.3	1,261	7.7	10.6
N. Ireland	1,506	16.0	1.8	1007	9.8	3.7
			P<0.001			P<0.001

Table 10.4 (continued)
Mothers' and fathers' frequency of alcohol use

		Mothers		*Fathers*		
	Observed sample numbers	Per cent Never	Per cent 5 times + per week	Observed sample numbers	Per cent Never	Per cent 5 times + per week
Ethnicity						
White	12,657	11.9	8.6	8,846	6.1	17.3
Mixed	138	32.2	3.2	77	17.7	19.7
Indian	367	60.0	0.9	278	29.2	10.1
Pakistani	602	98.0	0.1	388	88.1	0
Bangladeshi	242	99.5	0	157	94.5	0
Black Caribbean	189	21.0	6.9	93	11.7	11.2
Black African	297	62.9	1.7	128	40.1	2.7
Other ethnicity	251	53.7	1.0	159	28.6	5.1
			P<0.001			P<0.001
Employment						
Both partners employed	6,822	11.0	9.4	6,082	5.7	17.2
Main employed, partner not	256	18.6	9.3	256	12.7	17.1
Partner emp, main not	3,879	25.3	7.6	3,180	14.8	15.8
Neither employed	853	40.6	3.0	685	33.2	8.4
Lone parent employed	1,153	9.2	7.9	-	-	-
Lone parent not employed	1,780	25.0	3.3	-	-	-
			P<0.001			P <0.001
Education Level						
NVQ 1	1,110	20.8	4.4	593	11.6	14.7
NVQ 2	4,040	15.2	6.4	2,565	7.9	12.5
NVQ 3	2,185	14.2	7.6	1,509	7.3	16.5
NVQ 4	3,984	12.1	11.2	2,636	6.1	19.8
NVQ 5	1,125	12.5	13.0	1,168	9.5	22.6
Other/overseas qualifications	428	47.4	5.2	413	27.9	10.6
None	1,854	38.8	2.2	1,045	26.1	12.0
			P<0.001			P<0.001
Family Type						
Married, intact	9,089	18.2	8.9	7,971	10.8	16.4
Cohab, intact	2,727	16.0	7.1	2,212	8.7	15.8
Lone nat)mother	2,933	18.4	5.2	-	-	-
			P<0.001			P<0.001

Notes: Base: All mothers (including a few adoptive, step-mothers and foster mothers) who were main respondents. All fathers (including step-fathers) who were partner respondents. Table displays unweighted observations and weighted percentages. Unit non-response weights (Wave 2) used

Drug use

Although there is no over-arching National Service Framework on drug use, there is a plethora of policy and guidance on substance misuse and addiction, such as 'Reducing Drug-Related Harm: An Action Plan'(Dept of Health, 2007b), 'Drug misuse and dependence: UK guidelines on clinical management' (Dept of Health (England) and the Devolved Administrations, 2007), and 'Out of Sight?...not out of mind'. Children, Young People and Volatile Substance Abuse (VSA). A Framework for VSA (Dept of Health, 2005)'. Young people are a priority, as are some vulnerable groups, such as homeless drug-users and those leaving prison.

The potential health consequences from illegal drug use are well documented. Some effects are from long-term use, such as liver, kidney and heart problems. There are also immediate risks, such as overdose. Healthy people can die from a heart attack after taking drugs – especially volatile substances, such as gases, glues and aerosols. A history of mental health problems in the family is an additional risk factor.

The British Crime Survey (Home Office, 2007) found that 10 per cent of 16 to 59-year-olds in private households in England and Wales in 2007 had used drugs at least once in the previous year.

Parents' attitudes towards illegal drugs, and their recreational drug use, particularly if it is done with the children's knowledge, are important for the MCS study, since drug use, alongside other lifestyle behaviours with documented detrimental consequences, may impact negatively upon the cohort children's behaviour, health and well-being.

Mothers

Overall, 5 per cent of mothers reported using recreational drugs, such as cannabis, cocaine or ecstasy in the previous year (Table 10.5). There were significant differences by age, country, ethnicity, education, and family type. Prevalence was highest among the under-25s, at 9 per cent, and declined with age.

A higher proportion of mothers in Scotland (6%) than other UK mothers had used drugs in the previous year. Those of mixed heritage reported the highest drug use in the previous year, at 13 per cent, and Bangladeshi mothers having the lowest use (1%).

Drug use was highest among mothers where both partners were not employed (9%), closely followed by lone mothers, whether employed or not (both 8%). Prevalence was lowest in mothers were both partners were employed (3%). Mothers with lower educational attainment reported higher levels of drug use.

Fathers

Overall, 9 per cent of fathers reported using illegal recreational drugs in the previous year at least once (Table 10.5). Drug use was most prevalent among fathers under 30 (up to 21%) and least prevalent in those over 40 (6%). Fathers in Scotland were most likely to have used drugs in the previous year (11%), while Northern Irish fathers were least likely (5%). Almost a quarter of mixed-heritage fathers had used drugs in the previous year, followed by black Caribbean fathers (21%). Indian fathers were least likely (3%).

The pattern of use by employment, education and marital status was similar to that reported for mothers. In contrast to alcohol use, 'recreational' drugs were more likely to be reported by those with low qualifications and no employment.

Table 10.5
Mothers' and fathers' drug use in previous year

	Mothers		Fathers	
	Observed sample numbers	Per cent	Observed sample numbers	Per cent
Age				
Overall	14,010	4.6	9,785	9.2
Under 25	1,026	8.6	165	20.6
25 to 29	2,421	7.9	870	20.4
30 to 34	3,807	4.7	2,079	12.2
35 to 39	4,285	3.2	3,345	7.6
40 and over	2,471	2.2	3,325	5.9
		P< 0.001		P< 0.001
Country				
England	8,678	4.6	6,104	9.2
Wales	2,123	3.5	1,461	9.2
Scotland	1,762	5.6	1,245	11.0
N. Ireland	1,447	1.9	975	4.7
		P<0.001		P = 0.0002
Ethnicity				
White	11,733	4.6	8,705	9.3
Mixed	125	12.6	76	23.6
Indian	316	1.7	258	2.8
Pakistani	412	2.4	263	4.7
Bangladeshi	135	0.5	76	3.9
Black Caribbean	170	9.8	90	21.1
Black African	197	1.1	106	5.3
Other ethnicity	188	6.9	138	7.5
		P< 0.001		P< 0.001
Employment				
Both partners employed	6,721	3.3	5,999	8.0
Main employed, partner not employed	250	4.1	237	17.0
Partner employed, main not employed	3,557	3.6	2,968	9.0
Neither employed	720	8.9	581	20.9
Lone parent employed	1,140	8.1	-	-

Table 10.5 (continued)
Mothers' and fathers' drug use in previous year

	Mothers		*Fathers*	
	Observed sample numbers	Per cent	Observed sample numbers	Per cent
Lone parent not employed	1,616	7.9	-	-
		P< 0.001		P<0.001
Education Level				
NVQ 1	1,075	5.2	561	11.8
NVQ 2	3,956	4.8	2,506	11.0
NVQ 3	2,132	4.7	1,484	9.5
NVQ 4	3,926	4.1	2,619	6.3
NVQ 5	1,111	4.4	1,152	6.1
Other/ overseas qualifications	329	4.8	357	12.0
None of the above	1,462	4.9	856	13.4
		P< 0.001		P< 0.001
Family Type				
Married natural parents	8,581	2.4	7,619	6.6
Cohabiting natural parents	2,671	8.1	2,150	18.3
Lone natural mother	2,756	8.0	-	-
		P< 0.001		P<0.001

Notes: Base: All mothers (including a few adoptive, step-mothers and foster mothers) who were main respondents. All fathers (including step-fathers) who were partner respondents. Table displays unweighted observations and weighted percentages. Unit non-response weights (Wave 2) used.

Depression and Serious Anxiety

At any one time around one in six people of working age has a mental health problem, most often anxiety or depression. Indeed, depression has been described as the 'common cold' of mental illness. Between 5 and 10 per cent of the population suffer from depression to some extent at any one time[3]. Over a lifetime adults have a one in five chance of suffering an episode of depression. Women are twice as likely to become depressed as men.

Depression can be more disabling than angina, arthritis, asthma and diabetes, World Health Organisation (WHO) research showed.[4] Those with depression plus a chronic illness, such as diabetes, can fare particularly badly. After taking into account factors such as other health conditions and poverty, depression has the largest adverse effect on health. Recent research supports the idea that there is a familial genetic link for depression[5].

A study estimating prevalence of depression across Europe (Ayuso-Mateos, et al., 2001) found levels of 17 per cent for adults in UK urban areas, which the researchers described as 'high prevalence' and 6 per cent in UK rural areas, contrasting with 'low prevalence' in, for example, urban Spain (3%).

Serious anxiety can take various forms, such as generalised anxiety disorder, a specific phobia or panic attacks[6]. It is characterised by extreme worry and anxiety that interferes with daily life. Much more than the normal anxiety people experience day-to-day, an anxiety disorder means anticipating tragedy or extreme worry about, for example, family, money or health. Minor issues such as chores or appointments can also cause huge anxiety. Generalised anxiety disorder is diagnosed when an individual spends at least six months worrying excessively about normal everyday problems. The disorder is often accompanied by depression, alcohol or drug abuse or another anxiety disorder.

Five per cent of adults experience generalised anxiety disorders, not including depression, at any one time[6]. A further 9 per cent have mixed anxiety and depression. The prevalence of mixed anxiety and depression is 11 per cent in women and 7 per cent in men.

The NSF for mental health was launched in 1999, and set out targets and guidance for how mental health services should be planned, delivered and monitored until 2009. The NSF listed seven standards that set targets for the mental health care of adults aged up to 65. These standards span five areas: health promotion and stigma, primary care and access to specialist services, needs of those with severe and enduring mental illness, carers' needs, and suicide reduction.

Mothers

Overall, almost 40 per cent of mothers had told this or a previous round of MCS that they had been advised by a doctor at some time that they were suffering from depression or serious anxiety. Eight per cent of all mothers were currently receiving treatment (summing the last two columns of Table 10. 6). This was the same rate (8%) as was reported for the mothers who took part in MCS 2, but there appears to have been an increase in the number of mothers saying they had ever been diagnosed for depression or anxiety. The proportion rose from 21 per cent among the MCS 2 mothers to 32 per cent of those interviewed at MCS 3. The longitudinal data confirm an increase over time, but it is exaggerated by changes in the way the question was asked at sweep 3. The MCS2 estimate did not automatically include all the episodes from sweep 1. This, and the comparison with other data, suggests that such episodes of depression and anxiety were common but transient, among mothers of young children, who are also particularly likely to be in contact with their doctors.

Almost half the mothers under 30 reported being given a diagnosis, with just under 10 per cent currently receiving treatment. Mothers over 35 reported lower incidence of a diagnosis, at just over one third, with around 7 per cent currently receiving treatment. This reflects the higher incidence of depression amongst the relatively younger mothers at earlier sweeps, and the generally more advantaged situation of the older mothers, which is also seen below.

There were significant differences by country. Mothers in Northern Ireland were most likely to be receiving treatment for depression or serious anxiety (12%), while mothers in England were least likely (7%), but mothers in Northern Ireland were also the least likely ever to have been diagnosed with depression or anxiety (40%) while mothers in Scotland reported the highest incidence (44%). White mothers (41%), and black Caribbean mothers (41%), reported the highest diagnosed incidence while black African mothers reported the lowest (14%).

At about 15 per cent each, lone mothers who did not work and mothers where both partners were not employed reported the highest levels currently in treatment of all demographic groups, and 36 per cent and 44 per cent of these mothers respectively had received a diagnosis in the past. Mothers in two-earner couples were least likely to report that they had ever been diagnosed with depression or serious anxiety. Lower education levels were associated with higher diagnosed depression or serious anxiety. Nearly half of mothers with

no or low education (48%) were either diagnosed but not in treatment or currently being treated.

More than half (55.5%) of lone mothers had been diagnosed, the highest prevalence of all demographic groups, and 13 per cent of them were being treated at the time of interview. Mothers in married partnerships reported the lowest levels of just under one third.

Table 10.6
Mothers' diagnosed depression or serious anxiety

	Observed sample numbers	Per cent Ever Diagnosed, Not Currently Being Treated†	Per cent Ever Diagnosed & Currently Being Treated†
Age			
Overall	14,771	31.6	8.0
Under 25	1,064	39.4	9.5
25 to 29	2,578	37.7	9.5
30 to 34	4,019	33.2	8.5
35 to 39	4,487	27.7	6.8
40 and over	2,623	27.4	7.1
			P< 0.001
Country			
England	9,340	31.5	7.4
Wales	2,145	32.4	10.2
Scotland	1,780	34.1	9.8
N. Ireland	1,506	28.5	11.8
			P< 0.001
Ethnicity			
White	12,672	32.7	8.4
Mixed	138	31.2	6.6
Indian	367	21.9	3.0
Pakistani	605	27.3	5.4
Bangladeshi	242	16.5	5.1
Black Caribbean	188	35.2	5.3
Black African	297	12.3	1.3
Other ethnicity	251	17.4	4.7
			P< 0.001
Employment			
Both partners employed	6,823	27.1	4.9
Main employed, partner not employed	256	38.2	6.4
Partner employed, main not employed	3,883	30.3	8.3

Table 10.6 (continued)
Mothers' diagnosed depression or serious anxiety

	Observed sample numbers	Per cent Ever Diagnosed, Not Currently Being Treated†	Per cent Ever Diagnosed & Currently Being Treated†
Neither employed	854	35.9	14.5
Lone parent employed	1,153	40.6	10.4
Lone parent not employed	1,783	43.5	15.4
			P< 0.001
Education Level			
NVQ 1	1,113	37.7	10.5
NVQ 2	4,042	35.5	9.6
NVQ 3	2,190	30.2	8.0
NVQ 4	3,984	26.7	5.3
NVQ 5	1,125	24.0	4.1
Other/ overseas qualifications	428	30.8	6.8
None of the above	1,862	37.3	11.3
			P< 0.001
Family Type			
Married natural parents	9,093	26.5	6.1
Cohabiting natural parents	2,728	36.7	8.3
Lone natural mother	2,936	42.3	13.3
			P< 0.001

† Groups are mutually exclusive.
Notes: Base: All mothers (including a few adoptive, step-mothers and foster mothers) who were main respondents. Table displays unweighted observations and weighted percentages. Unit non-response weights (Wave 2) used.

Psychological distress

Psychological distress was measured using the Kessler 6 scale, widely used in general-purpose health surveys (Kessler et al., 2002). Both main and partner respondents used a computerised self-completion form. The six questions asked how often in the past 30 days the respondent had felt i) 'so depressed that nothing could cheer you up' ii) 'hopeless' iii) 'restless or fidgety' iv) 'that everything you did was an effort' v) 'worthless' vi) 'nervous'. For each question respondents score four points if they answer 'all of the time', three points for 'most of the time', two points for 'some of the time', one point for 'a little of the time' and zero for 'none of the time'. The questions form a 24-point scale and the following cut-offs were used: 0-3 'no or low distress', 4-12 'medium', and 13 or over 'high'.

Mothers

Overall, approximately two thirds of mothers scored in the ‘no or low’ range, 29 per cent reported ‘medium’ levels and 3 per cent fell in the ‘high’ range of scores (Table 10.7). Older mothers were more likely to report lower levels of distress. Those under 30 were twice as likely to report high scores as those aged 35 and over (6 per cent versus 3 per cent).

Differences were not significant by country. More mothers in Northern Ireland and Scotland (both 72%) reported low scores (0 – 3) than mothers in England and Wales (both 67%). In the high score range (13+), there was only one percentage point between mothers in Scotland who were most prevalent (4%) and mothers in Northern Ireland who were least prevalent (3%).

White mothers reported lowest levels of psychological distress (69%), followed by black African mothers (65%). Pakistani mothers appeared to be the most distressed, over 50 per cent reporting medium and high scores, although item non-response bias may be contributing to these figures.

Mothers in a couple where neither partner was employed were 10 times more likely to report high levels than those where both partners were employed. Lone mothers who were not employed also reported relatively high levels (9%). Three quarters of mothers in a couple where both partners worked reported no or low distress. Higher education levels were also associated with lower distress.

Almost half of lone natural mothers reported medium or high scores, compared with just over one quarter of mothers in married partnerships.

Fathers

Overall, just over two thirds of fathers reported low or no distress, leaving around one third reporting medium and high levels (Table 10.7).

Unlike mothers. there were no significant differences in distress by age or country.

There were significant differences by ethnicity, couples’ employment, family type and education, in the same direction as for mothers, although the gradient by education was less steep.

Table 10.7
Mothers' and fathers' psychological distress

	Mothers				Fathers			
	Observed sample numbers	Per cent 0-3 No or Low	Per cent 4-12 Medium	Per cent 13+ High	Observed sample numbers	Per cent 0-3 No or Low	Per cent 4-12 Medium	Per cent 13+ High
Age								
Overall	14,019	67.7	29.0	3.3	9,789	68.7	29.2	2.2
Under 25	1,027	60.5	33.7	5.8	165	61.3	35.1	3.6
25 to 29	2,422	61.1	33.2	5.8	871	64.8	32.8	2.4
30 to 34	3,808	67.9	29.5	2.6	2,079	68.7	28.8	2.4
35 to 39	4,289	71.2	26.0	2.8	3,347	68.8	29.5	1.7
40 and over	2,473	70.1	27.6	2.3	3,326	69.7	27.8	2.5
				P<0.001				P= 0.1235
Country								
England	8,685	67.0	29.7	3.3	6,106	68.1	29.6	2.3
Wales	2,123	67.2	29.1	3.7	1,461	68.3	30.0	1.8
Scotland	1,762	72.0	24.2	3.8	1,246	73.0	25.2	1.8
N. Ireland	1,449	72.4	24.8	2.9	976	71.7	26.8	1.5
				P<0.001				P = 0.0250
Ethnicity								
White	12,464	68.6	28.2	3.1	8,708	69.5	28.4	2.1
Mixed	125	64.0	32.1	3.9	76	52.4	47.6	0
Indian	317	61.7	32.9	5.4	258	63.0	33.2	3.8
Pakistani	412	48.2	44.4	7.4	264	50.9	43.9	5.2
Bangladeshi	135	58.8	35.1	6.1	76	56.0	41.3	2.7
Black Caribbean	171	55.3	40.0	4.7	90	69.5	30.5	0
Black African	197	65.4	30.0	4.6	106	73.9	24.5	1.6
Other ethnicity	189	57.4	37.7	4.8	138	53.0	42.4	4.6
				P<0.001				P<0.001
Employment								
Both partners employed	6,723	75.3	23.3	1.4	6,001	71.2	27.5	1.3
Main employed, partner not employed	251	64.8	33.1	2.1	237	53.7	38.4	7.9
Partner employed, main not employed	3,559	66.7	30.1	3.2	2,970	69.0	29.4	1.6
Neither employed	722	53.8	35.2	10.9	581	43.9	42.6	13.5
Lone parent employed	1,141	58.8	38.5	2.7	-	-	-	-
Lone parent not employed	1,617	49.4	41.1	9.4	-	-	-	-
				P<0.001				P<0.001

Table 10.7 (continued)
Mothers' and fathers' psychological distress

	Mothers				Fathers			
	Observed sample numbers	Per cent 0-3 No or Low	Per cent 4-12 Medium	Per cent 13+ High	Observed sample numbers	Per cent 0-3 No or Low	Per cent 4-12 Medium	Per cent 13+ High
Education Level								
NVQ 1	1,075	62.4	32.1	5.5	562	67.4	29.8	2.8
NVQ 2	3,961	66.0	30.4	3.7	2,507	69.7	28.0	2.3
NVQ 3	2,132	68.5	28.6	2.9	1,485	69.4	29.0	1.6
NVQ 4	3,929	74.0	24.6	1.4	2,619	70.1	28.6	1.3
NVQ 5	1,112	73.3	25.4	1.3	1,153	70.2	28.8	1.0
Other/ overseas qualifications	329	54.3	38.0	7.7	357	62.1	33.9	3.9
None of the above	1,461	55.4	37.0	7.6	856	61.2	32.1	6.7
				P<0.001				P<0.001
	Mothers				*Fathers*			
	Observed sample numbers	Per cent 0-3 No or Low	Per cent 4-12 Medium	Per cent 13+ High	Observed sample numbers	Per cent 0-3 No or Low	Per cent 4-12 Medium	Per cent 13+ High
Family Type								
Married natural parents	8,586	73.3	24.6	2.1	7,621	69.5	28.7	1.9
Cohabiting natural parents	2,673	64.3	31.8	3.9	2,151	66.0	30.7	3.2
Lone natural mother	2,758	53.4	40.0	6.6	-	-	-	-
				P<0.001				P<0.001

Notes: Base: All mothers (including a few adoptive, step-mothers and foster mothers) who were main respondents.. All fathers (including step-fathers) who were partner respondents. Table displays unweighted observations and weighted percentages. Unit non-response weights (Wave 2) used.

Life Satisfaction

Life satisfaction can be a good measure of well-being; a global 'outcome' reflecting health, economic well-being, education and access to services (DEFRA, 2007). Such measures are widely used around the world. Life satisfaction is known to impact on health and is associated with key socio-economic outcomes.

In 2007, almost three quarters (73%) of people in England rated their satisfaction with life as 7 or more out of 10 according to preliminary results from a survey by the Department for the Environment, Food and Rural Affairs (DEFRA, 2007). The average overall life satisfaction rating for England was 7 out of 10. The European Social Survey 2007 used the same question, and also gave an average for Great Britain of around 7.

MCS parents were asked a global question on current life satisfaction, ranging from 1 = completely dissatisfied to 10 = completely satisfied. An arbitrary cut-off score of 7 and above was designated high life satisfaction at MCS 2 We report the same here. Responses tend to cluster around 8, and there are very few responses below 6.

Mothers

Overall, 75 per cent of mothers reported high life satisfaction (Table 10.8). This is consistent with levels found by DEFRA. Significant differences in life satisfaction were found by age, country, ethnicity, couples' employment, education level and family type.

Prevalence of high life satisfaction generally increased with age among MCS mothers, reaching 79 per cent among the 35-39 years group. High life-satisfaction was more prevalent among mothers where both partners were employed (83%), followed by mothers in couples where only the male partner was employed (72%). Lowest levels were among lone, non-employed mothers (49%) and lone employed mothers (52%).

Higher education level was associated with high life satisfaction. Eighty-one per cent of mothers with NVQ level 5 scored 7 or more, whereas only 66 per cent of mothers with no qualifications reported high satisfaction levels.

More mothers in married partnership families appeared satisfied (84%) than mothers in other family types. Lone mothers were the least satisfied (51%). A Chi2 test demonstrated that the difference between mothers in a couple (81%) and lone mothers (51%) was significant ($p<0.001$).

Fathers

Even more fathers than mothers - 79 per cent overall - scored their satisfaction with life at 7 or more (Table 10.8).

Life satisfaction for fathers generally appeared to increase with age, as for mothers. Fathers aged 35-39 were most likely to report high scores (81%). In contrast to mothers, there were significant differences by country. More fathers in Northern Ireland reported high satisfaction (82%) while fathers in England appeared to have a slightly lower rate (79%). Ethnicity showed different patterns, each significant between mothers and fathers. Bangladeshi fathers had among the lowest scores (67%) whereas Bangladeshi mothers (who completed this part of the survey) had the highest proportion reporting high life satisfaction. Parents were least satisfied where there was no earner in the couple. High life satisfaction went with high qualifications, again with slightly less contrast between fathers by education than within the group of mothers (which includes those without a partner). Lone mothers' chances of reporting high life satisfaction, or of having high qualifications, are particularly low.

Table 10.8
Mothers' and fathers' life satisfaction

	Mothers		Fathers	
	Observed sample numbers	Per cent Score = 7 +	Observed sample numbers	Per cent Score = 7 +
Age				
Overall	14,008	75.1	9,786	79.4
Under 25	1,025	62.7	165	75.0
25 to 29	2,419	68.3	870	76.5
30 to 34	3,807	76.9	2,079	79.3
35 to 39	4,287	78.9	3,346	81.4
40 and over	2,470	77.0	3,325	78.5
		P< 0.001		P = 0.02
Country				
England	8,678	74.9	6,104	78.9
Wales	2,123	75.1	1,461	81.2
Scotland	1,762	76.3	1,246	82.1
N. Ireland	1,445	78.7	975	82.3
		P = 0.0458		P = 0.023
Ethnicity				
White	12,456	75.6	8,706	80.2
Mixed	125	63.4	76	66.4
Indian	317	76.9	258	76.3
Pakistani	412	72.7	263	71.6
Bangladeshi	134	85.0	76	67.0
Black Caribbean	169	50.8	90	72.8
Black African	198	73.2	106	75.8
Other ethnicity	188	71.9	138	70.2
		P<0.001		P<0.001
Employment				
Both partners employed	6,721	83.4	6,000	81.2
Main employed, partner not employed	251	72.0	237	70.0
Partner employed, main not employed	3,557	79.8	2,968	80.2
Neither employed	718	66.8	581	59.3
Lone parent employed	1,139	52.0	-	-
Lone parent not employed	1,616	49.3	-	-
		P<0.001		P<0.001

Table 10.8 (continued)
Mothers' and fathers' life satisfaction

	Mothers		Fathers	
	Observed sample numbers	Per cent Score = 7 +	Observed sample numbers	Per cent Score = 7 +
Education Level				
NVQ 1	1,074	69.3	561	71.6
NVQ 2	3,955	71.9	2,506	78.8
NVQ 3	2,131	74.7	1,484	78.3
NVQ 4	3,926	81.7	2,619	82.9
NVQ 5	1,112	81.1	1,153	84.7
Other/ overseas qualifications	329	72.2	357	73.6
None of the above	1,462	66.0	856	73.1
		P<0.001		P<0.001
Family Type				
Married natural parents	8,580	84.0	7,620	82.0
Cohabiting natural parents	2,671	71.8	2,150	70.7
Lone natural mother	2,755	50.5	-	-
		P<0.001		P<0.001

Notes: Base: All mothers (including a few adoptive, step-mothers and foster mothers) who were main respondents. All fathers (including step-fathers) who were partner respondents. Table displays unweighted observations and weighted percentages. Unit non-response weights (Wave 2) used.

Body Mass Index

Obesity is possibly the major public health challenge of our times and can lead to increased risk of many illnesses. Government statistics state that 58 per cent of type 2 diabetes cases, 21 per cent of heart disease and between 8 per cent and 42 per cent of certain cancers are attributable to excess body fat. Obesity is responsible for 9,000 premature deaths each year in England, and reduces life expectancy by almost a decade.

The Government Foresight report 'Tackling Obesities: Future Choices' (DIUS, 2007) stated that in 2005, 22 per cent of English men and 24 per cent of women were classified as obese and predicted that by 2050, 60 per cent of men and 50 per cent of women may be clinically obese. Although the rise in obesity is not attributable to any single factor, it is the imbalance between energy in (through the food choices we make) and energy out (mainly through physical activity), which is the root cause. Obese people are more likely to suffer from social and psychological problems, such as depression, prejudice, discrimination, stigmatisation and low self-esteem.

The Foresight report estimated that the annual cost of obesity to the NHS is approximately £4.2 billion, which may rise to £10 billion by 2050. The cost to the economy is currently approximately £16 billion and without action could rise to £50 billion per year by 2050.

The National Audit Office predicted that one million fewer obese people in this country could lead to around 15,000 fewer people with coronary heart disease, 34,000 fewer people developing type 2 diabetes, and 99,000 fewer people with high blood pressure.

The Health Survey for England in 2006 (Natcen/UCL, 2008) reported a decrease between 1993 and 2006 in the proportion of adults with a normal Body Mass Index (BMI): from 41 per cent to 32 per cent among men and from 50 per cent to 42 per cent among women. Although overall change in the proportion of adults who were overweight was not significant, there was a marked increase in the proportion who were obese (BMI of 30 or more), increasing from 13 per cent of men in 1993 to 24 per cent in 2006 and from 16 per cent of women in 1993 to 24 per cent in 2006.

The impact on MCS children of their parents' attitudes, beliefs and behaviours regarding food, exercise and lifestyle choices may be far-reaching. Parents reported their height and weight, from which BMI was calculated. BMI is weight in kilograms divided by height in metres, squared, and is a widely used indicator of obesity. We followed classifications which DH adapted from WHO, 2004.

Mothers

Overall, just over half (56%) of MCS mothers had BMIs within the normal range (Table 10.9). This is not dissimilar to 50 per cent among all women aged 25-34 surveyed for the HSE in 2006. Approximately one quarter were overweight but not obese (hereafter 'overweight'). Fifteen per cent were obese and morbidly obese, and 9 per cent lower than the two sets of Government figures quoted above. This may be explained by differences in the populations sampled. Significant differences were found by age, country, ethnicity, employment, education and family type.

Younger mothers (up to 5% for those under 30) were more likely to be underweight than older mothers. Those most likely to be within the normal range were the under-25s (60%), followed by the over-40s (57%). Mothers aged 25 - 34 and the over-40s were more prevalent in the obese and above ranges (15% to 17%).

A higher proportion of mothers in England (16%) and Wales (15%) were obese than mothers in Scotland and Northern Ireland (13% and 13%). Black Caribbean mothers (28%) and black African mothers (26%) were most prevalent in BMI ranges of 30 and over. Mixed and Indian mothers were most likely to have normal-range BMIs (63% and 60% respectively).

Mothers in partnerships where both partners were not employed reported the highest prevalence of obesity or morbid obesity (27%), nearly twice that of mothers where both partners were employed (14%). Additionally, non-employed mothers reported higher levels of underweight (6%) than others.

Lower education level was associated with high BMIs. Mothers with no qualifications reported the highest levels (23%), compared to mothers with NVQ level 5, who had lowest levels (10%). Similar proportions (54% – 57% respectively) of married and cohabiting mothers had normal range BMIs and BMIs in the obese range (15% - 16%). Lone mothers were more than twice as likely to be underweight as married mothers.

Fathers

Overall, just over one third of fathers fell within the normal range of BMI (Table 10.10). This is similar to the 38 per cent found by the HSE for men age 25-34 in 2006. Seventeen per cent were obese, 5 per cent lower than the 2005 DH figures and 7 per cent lower than those found by HSE, 2006, which may be explained by differences in age and geographical

coverage. A much higher proportion of fathers (65%) fell within the overweight and above categories than mothers (41%).

Differences were significant by age, country, ethnicity, couples' employment, education level and family type. Higher prevalence in normal range BMI was associated with younger age. Obesity levels increased with age. Obesity and morbid obesity prevalence for fathers over 30 ranged from 18 to 19 per cent, compared to those under 30, at 12 to 16 per cent.

Fathers in Scotland were most likely to be in the normal range (38%), while fathers in Wales were least likely (30%). Almost one in five fathers in Wales and Northern Ireland was obese or morbidly obese.

Bangladeshi and 'other' ethnic group fathers were most likely to have normal-range BMIs (52% and 48% respectively), while black Caribbean and black African fathers were least likely (both 31%). Almost a quarter of black African fathers and one in five black Caribbean fathers were obese or morbidly obese. However, only 8.9 per cent of Bangladeshi fathers fell within obese ranges.

Fathers where neither partner was employed were, unlike their partners, most likely (44%) to have normal-range BMIs but also most prevalent in the obese ranges (20%). Only a third of the fathers in other employment situations fell within the normal range, and were mostly in the overweight range (45% to 49%).

Higher obesity rates were associated with lower education. Twenty-four per cent of fathers with NVQ level 1 and 20 per cent of fathers with no qualifications were obese, as opposed to 12 per cent of fathers with NVQ level 5. Again the differentials by education are not so steep as for mothers.

Table 10.9
Mothers' Body Mass Index

	Observed sample numbers	Per cent <18.5 Under weight	Per cent 18.5-25 Normal	Per cent 25-30 Over weight	Per cent 30-35 Obese	Per cent >35 Morbidly Obese
Age						
Overall	12,365	2.6	56.2	25.7	10.4	5.0
Under 25	799	4.2	60.2	22.5	9.7	3.5
25 to 29	2,010	4.6	53.0	25.6	11.2	5.6
30 to 34	3,356	3.1	53.8	25.9	12.0	5.2
35 to 39	3,892	1.6	58.5	26.3	9.2	4.5
40 and over	2,308	1.7	57.2	25.8	9.7	5.6
						P < 0.001
Country						
England	7,831	2.7	56.2	25.3	10.5	5.2
Wales	1,803	2.3	55.2	27.3	10.3	5.0
Scotland	1,492	2.3	57.5	27.0	9.3	3.9
N. Ireland	1,239	1.7	55.8	29.6	9.3	3.7
						P = 0.028
Ethnicity						
White	10,718	2.5	57.2	25.3	10.0	5.0
Mixed	114	2.6	63.0	21.7	7.8	5.0
Indian	311	3.6	59.5	27.6	8.4	0.9
Pakistani	460	6.2	43.0	29.7	16.3	4.9
Bangladeshi	176	5.6	42.8	33.0	14.2	4.5
Black Caribbean	147	1.6	37.4	33.0	19.3	8.7
Black African	208	1.9	33.9	38.3	17.3	8.5
Other ethnicity	224	4.8	53.8	25.1	12.9	3.3
						P<0.001
Employment						
Both partners employed	5,953	1.7	57.6	26.7	9.8	4.1
Main employed, partner not employed	217	4.9	50.5	27.6	10.2	6.8
Partner employed, main not employed	3,174	2.6	56.2	25.9	10.1	5.3
Neither employed	629	5.6	43.0	24.6	16.9	10.0
Lone parent employed	1,003	4.1	58.1	23.2	10.2	4.4
Lone parent not employed	1,381	4.4	55.1	23.0	11.1	6.5
						P<0.001

Table 10.9 (continued)
Mothers' Body Mass Index

	Observed sample numbers	Per cent <18.5 Under weight	Per cent 18.5-25 Normal	Per cent 25-30 Over weight	Per cent 30-35 Obese	Per cent >35 Morbidly Obese
Education Level						
NVQ 1	875	3.6	52.7	26.4	11.5	5.8
NVQ 2	3,431	2.6	53.6	26.9	11.4	5.5
NVQ 3	1,849	2.5	54.7	26.9	10.6	5.2
NVQ 4	3,440	1.7	62.3	24.1	8.1	3.9
NVQ 5	988	2.4	64.8	22.5	7.8	2.5
Other/ overseas qualifications	342	4.14	53.6	25	11.3	6.0
None of the above	1,419	4.95	45.4	27	14.9	7.7
						P<0.001
Family Type						
Married natural parents	7,778	1.9	56.8	26.4	10.0	4.9
Cohabiting natural parents	2,200	3.4	54.3	26.1	11.3	4.9
Lone natural mother	2,384	4.3	56.4	23.1	10.7	5.6
						P<0.001

*Excludes mothers who were pregnant at interview.
Notes: Base: All mothers (including a few adoptive, step-mothers and foster mothers) who were main respondents. Table displays unweighted observations and weighted percentages. Unit non-response weights (Wave 2) used.

Table 10.10
Fathers' Body Mass Index

	Observed sample numbers	Per cent <18.5 Under weight	Per cent 18.5-25 Normal	Per cent 25-30 Over weight	Per cent 30-35 Obese	Per cent >35 Morbidly obese
Age						
Overall	9,761	0.4	34.9	46.7	14.2	3.8
Under 25	158	3.1	53.9	30.6	10.0	2.4
25 to 29	883	1.8	46.3	36.3	10.8	4.8
30 to 34	2,070	0.6	35.5	44.5	14.9	4.4
35 to 39	3,332	0.1	31.8	49.8	14.6	3.6
40 and over	3,316	0.2	33.8	48.1	14.5	3.5
						P<0.001
Country						
England	6,166	0.4	35.0	46.4	14.2	3.9
Wales	1,435	0.4	29.8	49.9	16.7	3.1
Scotland	1,210	0.5	37.9	45.7	12.3	3.7
N. Ireland	950	0.5	30.0	50.2	15.6	3.8
						P<0.001

Table 10.10 (continued)
Fathers' Body Mass Index

	Observed sample numbers	Per cent <18.5 Under weight	Per cent 18.5-25 Normal	Per cent 25-30 Over weight	Per cent 30-35 Obese	Per cent >35 Morbidly obese
Ethnicity						
White	8,553	0.4	34.3	47.1	14.4	3.8
Mixed	75	0	43.0	40.6	13.5	2.9
Indian	270	0.8	37.3	42.1	14.5	5.3
Pakistani	363	1.8	41.4	43.2	10.1	3.6
Bangladeshi	139	2.1	51.8	37.1	8.4	0.5
Black Caribbean	85	0	31.0	48.3	17.3	3.4
Black African	115	0	31.0	45.2	19.6	4.2
Other ethnicity	151	0.8	48.0	38.6	10.5	2.2
						P = 0.035
Employment						
Both partners employed	5,867	0.2	33.0	48.5	15.0	3.3
Main employed, partner not employed	242	2.4	34.2	44.9	13.5	5.0
Partner employed, main not employed	3,028	0.3	36.9	45.6	13.0	4.2
Neither employed	624	3.2	43.6	33.5	13.0	6.7
						P <0.001
Education Level						
NVQ 1	574	1.8	33.9	40.8	15.8	7.8
NVQ 2	2,469	0.3	32	46.6	17.5	3.6
NVQ 3	1,449	0.2	32.6	49.5	14.0	3.8
NVQ 4	2,573	0.2	35.3	47.8	13.6	3.0
NVQ 5	1,124	0.2	39.4	48.1	9.8	2.4
Other/ overseas qualifications	384	1.4	38.3	44.4	11.9	4.0
None of the above	977	0.6	38.3	41.4	13.8	5.9
						P<0.001
Family Type						
Married natural parents	7,641	0.3	34.0	48.0	14.1	3.7
Cohabiting natural parents	2,103	1.0	37.9	42.0	14.7	4.3
						P<0.001

Notes: Base: All fathers (including step-fathers) who were partner respondents. Table displays unweighted observations and weighted percentages. Unit non-response weights (Wave 2) used.

Conclusions

In terms of reporting fair or poor general health, overall prevalence in MCS mothers (14%) and fathers (11%) was similar to levels of poor health reported by the General Household Survey (12%), although there were some differences in measurement. Reported fair/poor health appeared to decrease with age until around age 39, and increase again at age 40. There appeared to be wide variations in general health by education level and employment status. Poor general health seemed to be a particular problem for the non-employed, those with no qualifications and some minority ethnic groups.

MCS parents reported lower levels of longstanding illness than adults aged 16 to 64 in the GHS and HSE. There would have been systematic differences between the samples, such as younger average age and health status required for childbearing ability of the MCS parents. There was wide variation in prevalence of longstanding illness by education and employment, being particularly associated with lack of employment.

Smoking prevalence and heavy smoking appeared to remain particularly high among the non-employed, the unqualified, lone mothers and younger parents. While smoking prevalence was similar for men and women overall, there were strong differences by ethnicity. Bangladeshi fathers, for example, were the most likely to smoke, while Bangladeshi mothers were the least likely.

Alcohol use was associated with higher qualifications and being employed. More than one in five fathers and 13 per cent of mothers with the highest qualifications were drinking above recommended weekly frequencies. Prevalence of alcohol use increased with age, with around one in five fathers over 40 drinking above the recommended frequency limit.

A much higher proportion of fathers than mothers reported drug use in the previous year in many demographic groups. Drug use was also associated with lower education levels and lack of employment and being a lone mother. There was wide variation among ethnic groups, ranging from 0.5 to 24 per cent.

Forty per cent of MCS mothers overall had received a diagnosis of depression or serious anxiety, 8 per cent of whom were currently receiving treatment. Almost half of mothers under 30 had been diagnosed. If diagnosis and treatment are compared with scores for psychological distress (Table 10.7), unmet need may be an issue for mothers in some minority ethnic groups. Lone mothers and mothers where both partners were not employed were more likely than not to have received a diagnosis.

Prevalence of psychological distress as measured by the Kessler scale was similar, on average, for mothers and fathers, but among mothers it declined with age. Distress may be a particular problem in some minority ethnic groups, although caution should be applied because of potential item non-response bias. There seemed to be a strong association between lack of employment and high scores in distress.

Greater prevalence of high life-satisfaction scores was associated with increased age, higher education levels and being employed. Parents where both partners were not employed and lone mothers were at particular risk of lower life satisfaction.

Overall, mothers were more likely than fathers to have normal-range BMIs. Obesity appeared to be particularly prevalent in some minority ethnic groups, parents with lower education attainment and mothers in non-employed couples.

Differentials by education in mental health, life satisfaction and body mass were less marked among the sample of fathers than among the sample of mothers, which includes a

considerable group of lone parents, who tend to be younger and less educated that the mothers with partners.

Differences between countries are small, where significant, and not systematic. For instance, Wales had the most mothers who smoked at all, Northern Ireland the most mothers who smoked heavily, but Scotland had the highest smoking rates among fathers. England had the lowest rates of any, or heavy, alcohol drinking by either parent, probably partly accounted for by the Muslim minorities. Scotland recorded the highest proportion of mothers ever having been diagnosed with depression or serious depression, but also the highest proportion of parents with a body mass in the normal range

These are the introductory findings for key areas of health of the MCS parents. Longitudinal analysis and more sophisticated methods of investigation may reveal further significant findings.

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Chapter 11

PARENTS' EMPLOYMENT AND EDUCATION

Shirley Dex and Kelly Ward

Introduction

In this chapter we first examine mothers' employment and economic activity when the cohort child is age 5, followed by fathers' economic activity rates. Comparisons are also made with the employment rates of mothers and fathers who responded at earlier sweeps. A classification of MCS families is then provided which combines mothers' and their partners' employment statuses. Working at atypical times and use of employers' flexible working arrangements are described for mothers employed at MCS 3. Reasons for not working are also examined. Changes in families' combined employment status from earlier sweeps are described, which also show up changes in partnership status. Finally, we document the extent to which parents acquired new educational or vocational qualifications since MCS 2.

Mother's employment at MCS 3

By the spring of 2004, there were 7.3 million working-age families with dependent children across the UK, of which 5.5 million (75%) were headed by a married or cohabiting couple, and 1.9 million (25%) by a lone parent. Comparing the figures over time from the Labour Force Surveys (Walling, 2005), there had been an increase in employment for mothers and fathers over the previous decade. Of married and cohabiting mothers, 24 per cent worked full-time in 1994 compared with 28 per cent in 2004, and 40 per cent worked part-time in 1994 compared with 42 per cent in 2004. Of lone parents, 21 per cent were in full-time employment and 21 per cent were in part-time employment in 1994 compared with 28 per cent working full-time and 26 per cent part-time by 2004. These increases are in part a reflection of the government policy inducements to lone mothers in particular to take up paid work, as a route out of poverty. In the past the employment rates of lone parents have lagged considerably behind those of partnered mothers.

It is against this background that we can examine the employment behaviour of the parents of MCS children in 2005. These are mothers and fathers who had at least one child aged five, but approximately four out of ten MCS 3 families (see Chapter 3) also had a younger child, born since the cohort child. In total, across the UK, 57.8 per cent of MCS mothers were in employment when the cohort child was aged 5. For MCS partnered mothers the employment rate was 62 per cent and for lone mothers 41 per cent. In comparison, the 2004 Labour Force Survey (LFS) statistics for mothers in couples with a youngest child aged 0 to 4 show 59 per cent in employment. The figure for lone mothers was 34 per cent. This suggests the MCS mothers' employment behaviour is broadly in line with other UK labour-force statistics, especially since the definitions of the groups are not precisely the same.

At MCS 3, 14 per cent of mothers were working full-time and 44 per cent part-time. There were some differences across UK countries in the percentages of mothers working full-time. The proportion was highest in Northern Ireland (19%), as was also the case at MCS 2, and lowest in England (14%); see Table 11.1. Proportions of mothers working part-time were more similar across the UK countries, although Northern Ireland had a slightly lower percentage in this category to offset its higher percentage of those working full-time (Table 11.1).

Table 11.1
Mothers' economic activity status by country at sweep 3

Mothers' economic activity status	England	Wales	Scotland	Northern Ireland	All UK total
Currently working full-time	1222	357	304	292	2175
	(13.8)	(16.9)	(15.5)	(18.9)	(14.3)
Currently working part-time	3636	903	819	632	5990
	(43.4)	(44.2)	(44.8)	(41.8)	(43.5)
Looking after family and home	3767	732	550	551	5600
	(38.6)	(33.5)	(33.5)	(36.8)	(37.9)
Not employed and seeking work*	257	71	62	20	410
	(3.0)	(3.1)	(3.8)	(1.2)	(3.0)
In education or government training scheme	111	50	42	18	221
	(1.2)	(2.2)	(2.4)	(1.3)	(1.4)
Total per cent **	100	100	100	100	100
Unweighted sample size	8993	2113	1777	1513	14396
Weighted observations	*8352*	*2193*	*1928*	*1911*	*14473*
					P=0.000
Of current employees					
Works full-time	1111	315	265	266	1957
	(24.1)	(27.1)	(24.4)	(30.7)	(24.6)
Works part-time	3234	825	764	576	5399
	(75.9)	(72.9)	(75.6)	(69.3)	(75.4)
Total per cent	100	100	100	100	100
Unweighted sample size	4345	1140	1029	842	7356
Weighted observations	*4233*	*1250*	*1071*	*1042*	*7440*

Notes: Sample: All MCS 3 mothers (natural, adoptive, foster and step) who completed the main or partner interview. This table excludes any mothers who were eligible but not interviewed and any fathers or grandparents who completed the interview. *'Not employed and seeking work' also includes the very small number who had retired. ** self-employed included in 'currently working full-time or part-time'. Being 'on leave' from work is classified as 'currently working'.
Table displays unweighted observations, *weighted observations* and weighted percentages in parenthesis (using *weight1*, within country and using *weight2* for All UK). Unit non-response weight also used.

Over one third of MCS mothers at the sweep 3 interview were not employed and said they were at home looking after the family. This proportion varied slightly by UK country. Scotland and Wales had a lower percentage of mothers at home for this reason (34%) than England (39%) and Northern Ireland (37%); see Table 11.1. Of those MCS mothers who were employed, approximately three quarters worked part-time and one quarter worked full-time.

Mothers' employment by highest educational qualifications

Mothers' employment rates vary by their level of educational qualifications. Clearly mothers who are highly qualified would usually lose more income if they took time out of work and this is an incentive for them to stay in the labour market, and to work more hours. Of employed mothers at MCS 3, a high proportion, 45 per cent, had a degree-level qualification. Degree-qualified mothers constituted a higher proportion of the employed mothers at MCS 3 than they did at either MCS 2 or MCS 1. We consider later in this chapter the extent to which mothers gained new qualifications between MCS 2 and MCS 3.

Of those MCS mothers with a degree-level qualification, 23 per cent were employed full-time compared with only 4.7 per cent of mothers who had no qualifications (Table 11.2); 52 per cent of mothers with a degree were employed part-time compared with 18 per cent of those without any qualifications. The share of full-time employment in the total employed was also highest for mothers with degrees (31%) compared with approximately one in five of those without any qualifications (Table 11.2).

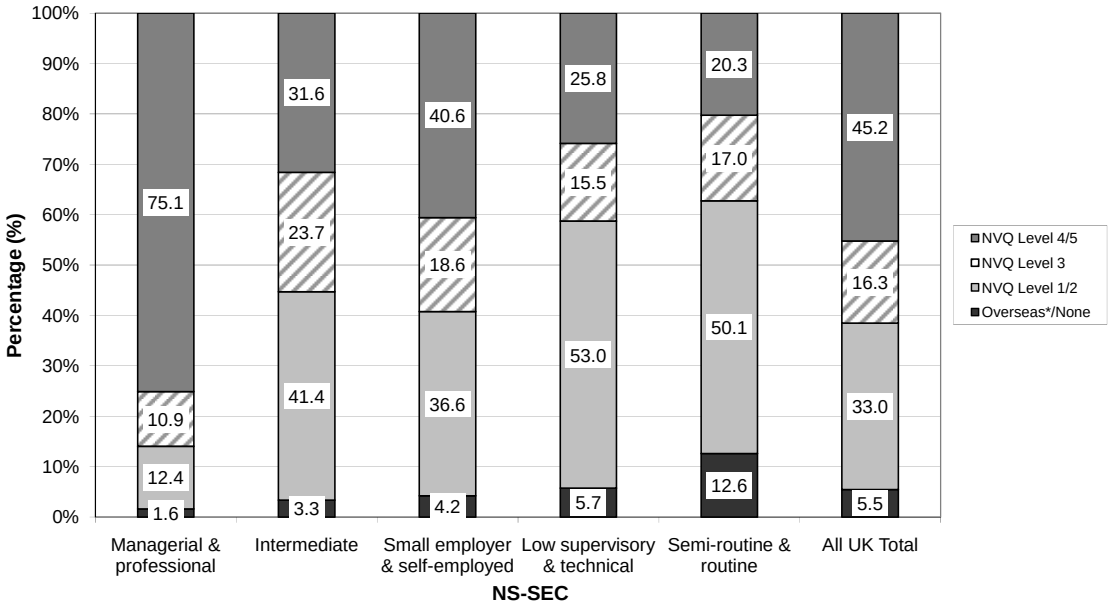
Table 11.2
Mothers' current economic activity by highest educational achievement at sweep 3

Mothers' economic activity status	Mothers' highest education qualification (academic or vocational) at sweep 3					All UK total
	NVQ 4/5 Degree +	NVQ 3 A-level	NVQ 1/2 O-level/ GCSE	Overseas and other unclassified qualifications	None of these	
Currently working full-time	1195	353	526	25	77	2176
	(23.2)	(16.1)	(10.7)	(6.8)	(4.7)	(14.3)
Currently working part-time	2528	1025	2054	86	298	5991
	(52.0)	(48.7)	(42.3)	(22.8)	(18.4)	(43.5)
Looking after family and home	1129	670	2174	272	1331	5576
	(21.1)	(30.3)	(42.2)	(62.5)	(72.8)	(37.8)
Not employed and seeking work*	112	49	171	22	56	410
	(2.2)	(2.3)	(3.4)	(6.8)	(3.5)	(3.0)
In education or government training scheme	82	54	69	3	13	221
	(1.5)	(2.6)	(1.4)	(1.2)	(0.7)	(1.4)
Total per cent **	100	100	100	100	100	100
Unweighted sample size	5046	2151	4994	408	1775	14374
Weighted observations	*5126*	*2148*	*5086*	*342*	*1628*	*14433*
						P=0.000
Of current employees:						
Works full-time	1074	302	466	26	89	1957
	(31.0)	*(24.0)*	*(19.3)*	*(25.7)*	*(21.5)*	*(25.5)*
Works part-time	2227	927	1892	74	280	5400
	(69.0)	*(76.0)*	*(80.7)*	*(74.3)*	*(78.5)*	*(74.5)*
Total per cent	100	100	100	100	100	100
Unweighted sample size	3301	1229	2358	100	369	7357
Weighted observations	*3400*	*1267*	*2446*	*89*	*357*	*7558*
						P=0.000

Notes: Sample: All MCS 3 mothers (natural, adoptive, foster and step) who completed the main or partner interview. This table excludes any mothers who were eligible but not interviewed and any fathers or grandparents who completed the interview. * 'Not employed and seeking work' also includes the very small number who had retired. ** self-employed included in 'currently working full-time or part-time'. Being 'on leave' from work is classified as 'currently working'.
Table displays unweighted observations, *weighted observations* and weighted percentages in parenthesis (using *weight2*). Unit non-response weight also used.

Mothers in managerial and professional jobs were also far more likely to have degree-level qualifications at NVQ 4 or 5 (75%) compared with those in intermediate occupations (32%), small employer or self-employed (41%), low supervisory and technical (26%), and semi-routine and routine occupations (20%); see Figure 11.1.

Figure 11.1
Employed mothers' NS-SEC (5) by highest education level at MCS 3



Notes: Sample: All employed MCS 3 mothers (natural, adoptive, foster and step) who completed the main or partner interview (excluding any others who completed these interviews). This table excludes any mothers who were eligible but not interviewed. *Overseas qualification includes other unclassified qualifications. Figure displays weighted percentages (using *weight2*). Unit non-response weight also used.
F=135.26, P=0.000

Mothers' employment by ethnicity

One of the benefits of the MCS was that it over-sampled families in areas with high minority ethnic populations and thus has the potential to inform us about minority ethnic children and their parents. However, higher rates of attrition among all minorities have led to a decrease in the sample sizes of minority ethnic families. Therefore, our analyses of MCS 3 required us to combine Pakistani and Bangladeshi groups, and black Caribbean and black African groups. Mothers' employment rates and their hours of work varied considerably by ethnicity (Table 11.3).

Table 11.3
Mothers' economic activity status at sweep 3 by ethnicity

Mothers' economic activity status	Mothers' ethnicity					All UK Total
	White	Indian	Pakistani/ Bangladeshi	Black Caribbean / Black African	Other	
Currently working full-time	1879 (14.0)	56 (19.7)	19 (2.3)	107 (25.9)	58 (17.8)	2119 (14.1)
Currently working part-time	5540 (46.3)	141 (43.0)	90 (12.0)	94 (23.3)	94 (26.1)	5959 (43.7)
Looking after family and home	4313 (35.5)	133 (33.6)	680 (83.2)	194 (40.5)	185 (48.5)	5505 (37.8)
Not employed and seeking work*	350 (3.0)	8 (2.5)	12 (1.4)	18 (4.0)	17 (4.5)	405 (3.0)
In education or government training scheme	170 (1.2)	5 (1.1)	7 (1.1)	23 (6.3)	13 (3.1)	218 (1.4)
Total per cent **	100	100	100	100	100	100
Unweighted sample size	12252	343	808	436	367	14206
Weighted observations	*12708*	*264*	*547*	*404*	*366*	*14297*
Of current employees						
Works full-time	1655 *(22.9)*	55 *(32.9)*	25 *(22.7)*	100 *(52.7)*	46 *(38.7)*	1881 *(24.1)*
Works part-time	4995 *(77.1)*	130 *(67.1)*	81 *(77.3)*	87 *(47.3)*	83 *(61.3)*	5376 *(75.9)*
Total per cent	100	100	100	100	100	100
Unweighted sample size	6650	185	106	187	129	7257
Weighted observations	*6821*	*152*	*75*	*186*	*135*	*7370*
						P=0.000

Notes: Sample: All MCS 3 mothers (natural, adoptive, foster and step) who completed the main or partner interview (excluding any others who completed these interviews). This table excludes any mothers who were eligible but not interviewed and any fathers or grandparents who completed the interview. *'Not employed and seeking work' also includes the very small number who had retired. ** self-employed included in 'currently working full-time or part-time'. Being 'on leave' from work is classified as 'currently working'. Table displays unweighted observations, *weighted observations* and weighted percentages in parenthesis (using *weight2*). Unit non-response weight also used.

On average, 14 per cent of the cohort children's mothers were working full-time at MCS 3 and this was the rate for white mothers. But rates of full-time employment among most minority groups of mothers were higher than average (Table 11.3); 26 per cent of black and 20 per cent of Indian mothers were working full-time. White mothers stood out as having far greater percentages of part-time employment than most other groups at 46 per cent although Indian mothers were quite close (43%). Black mothers had far lower rates of part-time employment (23%). Pakistani and Bangladeshi mothers stood out as being far less likely to be in employment either full-time (2%) or part-time (12%) at this point. However, interestingly, when they were employed, Pakistani and Bangladeshi mothers had the same high share of part-time employment as white mothers with three out of every four employed mothers in these groups working part-time. This compares with two in three Indian mothers working part-time but less than one in two black mothers.

These findings are reasonably consistent with a pooled sample of Labour Force Survey findings on the employment rates of mothers by ethnicity (Lindley et al., 2004). For example, 20 per cent of partnered white mothers with a child aged 0 to 4 were in full-time employment and 42 per cent were working part-time. The equivalent figures for other ethnic groups were: black Caribbean (39% and 28%), black African (36% and 20%), Indian (26 % and 27%), Pakistani/Bangladeshi (6% and 11%). These LFS figures, approximately two years earlier than our MCS statistics, are reasonably comparable in size, especially for Pakistani plus Bangladeshi and black mothers, also given the variations in group definitions. The extent of part-time employment among Indian MCS mothers and full-time employment among white MCS mothers are not as close in size to LFS statistics as those for other groups.

Mothers' employment by number of children

As expected, the rates of employment among MCS mothers declined as their number of children increased. However, the difference in mothers' employment rates between having only the cohort child and two children was small (Table 11.4); 69 per cent of mothers were employed when they had only one child compared with 65 per cent who had two children. The employment rate was substantially smaller when mothers had three children (43%). The rates of looking after the home increased as number of children increased. The trend in rates of full-time employment followed this decreasing pattern as numbers of children increased. However, rates of part-time employment increased from one child (43%) to two (51%) before declining markedly for three children (34%). This is more unexpected. It may be related to the third child more often being younger than the cohort child.

The full-time UK employment rate for married/cohabiting mothers with a dependent child of any age from the LFS in 2004 decreased from 37 per cent with one child, to 25 per cent with two and 18 per cent with three or more children (Walling, 2005). The overall UK employment rate of married/cohabiting mothers at the same time was 75 per cent for one child (69% in MCS 3), 73 per cent for two children (65% in MCS 3) and 56 per cent for three or more children (43% in MCS 3). Given that LFS figures include children who are older than those in MCS, there are reasonable parallels in these statistics. There is also notably less decline in employment when moving from one to two children, than from two to three or more children, evident in both LFS and MCS figures.

The share of part-time in total employment also tends to grow as number of children increases from 64 per cent for one child, to 78 per cent for both two and three or more children. It looks as if the majority of mothers who have more than one young child can only manage to work part-time hours while they are young (Table 11.4); 14.2 per cent of mothers with two children work full time and 9.4 per cent of mothers of three or more children.

Table 11.4
Mothers' economic activity status by number of children living in household at sweep 3

Mothers' economic activity status	Number of children living in household			All UK total
	Cohort child only	Two children	Three or more children	
Currently working full-time	601	1058	516	2175
	(25.6)	(14.2)	(9.4)	(14.3)
Currently working part-time	959	3315	1720	5994
	(43.1)	(50.9)	(33.6)	(43.5)
Looking after family and home	555	2103	2942	5600
	(22.7)	(31.3)	(53.4)	(37.9)
Not employed and seeking work*	128	171	111	410
	(6.1)	(2.5)	(2.3)	(3.0)
In education or government training scheme	64	91	66	221
	(2.5)	*(1.1)*	*(1.3)*	*(1.4)*
Total per cent **	100	100	100	100
Unweighted sample size	2307	6738	5355	14400
Weighted observations	*2312*	*6981*	*5202*	*14453*
				Sign. (Applied=Yes) F=109.17, P=0.000
Of current employees				
Works full-time	546	940	472	1958
	(36.2)	*(21.6)*	*(22.0)*	*(24.6)*
Works part-time	902	2979	1522	5403
	(63.8)	*(78.4)*	*(78.0)*	*(75.4)*
Total per cent	100	100	100	100
Unweighted sample size	1448	3919	1994	7361
Weighted observations	*1468*	*4028*	*1949*	*7445*
				P=0.000

Notes: Sample: All MCS 3 mothers (natural, adoptive, foster and step) who completed the main or partner interview (excluding any others who completed these interviews). This table excludes any mothers who were eligible but not interviewed and any fathers or grandparents who completed the interview. * 'Not employed and seeking work' also includes the very small number who had retired. ** self-employed included in 'currently working full-time or part-time'. Being 'on leave' from work is classified as 'currently working'.
Table displays unweighted observations, *weighted observations* and weighted percentages in parenthesis (using *weight2*). Unit non-response weight also used.

Changes in employment as children aged from 3 to 5

The percentages of mothers employed at each sweep, either full-time or part-time, have gradually increased as the cohort child has got older (Table 11.5). At MCS 1, when children were 9 to10 months old, 13 per cent of mothers were employed full-time and the rate has crept up to 14 per cent by MCS 3 when children were five. Similarly, the proportion of mothers employed part-time rose from 35 per cent at MCS 1 to 44 per cent by MCS 3. These increases are as expected, with mothers' employment rates rising as the age of children increases. These figures are not strictly comparable with official figures cited by age of youngest child. These MCS 3 figures are an average of employment rates for two groups of mothers; those whose youngest child (the cohort member) is aged five; and those who have an additional child younger than five.

Table 11.5
Mothers' economic activity status by MCS sweep

Mothers' economic activity status	Sweep of MCS – UK per cent		
	MCS 1	MCS 2	MCS 3
Currently working full-time	2440	2058	2175
	(13.0)	(13.2)	(14.3)
Currently working part-time	5815	5747	5990
	(35.0)	(41.1)	(43.5)
Looking after family and home	9890	6799	5600
	(51.1)	(42.0)	(37.9)
Not employed and seeking work*	101	401	410
	(0.4)	(1.2)	(3.0)
In education or government training scheme	146	225	221
	(0.7)	(1.2)	(1.4)
Total per cent **	100	100	100
Unweighted sample size	18392	15230	14396
Weighted observations	*18398*	*15013*	*14451*

Notes: Sample: All MCS 1 mothers (natural, adoptive, foster and step). All MCS 2 mothers (natural, adoptive, foster and step). All MCS 3 mothers (natural, adoptive, foster and step) who completed the main or partner interview (excluding any others who completed these interviews). Unit non-response weight also used. * 'Not employed and seeking work' also includes the very small number who had retired. ** self- employed included in 'currently working full-time or part-time'. Being 'on leave' from work is classified as 'currently working'.
Note: At MCS 1 the questions on which these codes are based were in a different section of the questionnaire (childcare section) which we know to have produced slightly different responses from those in the MCS 1 employment section. The main variable used here is NWRK (if not in paid work last week) – at MCS 1.

Comparing mothers in couples with lone parent mothers at each cross-sectional sweep we find that both groups increased their employment rates over time (Table 11.6). MCS lone parents' rates of working full-time increased from 6.1 per cent at MCS 1, to 9 per cent at MCS 2, to 12 per cent by MCS 3. Partnered mothers' rates of full-time work did not increase to the same extent, possibly because they had more children over this period. Lone parents' rates of part-time employment also increased dramatically from 15 per cent at MCS 1 to 26 per cent at MCS 2. It stood at 29 per cent by MCS 3, but the increase in full-time work meant that lone mothers' employment rate continued to rise to 41 per cent by MCS 3. Partnered mothers' rates of part-time employment were much higher and they increased substantially over the same period, but at a lower rate of growth than those of lone parents. The rates of increase in lone parents' employment rates over this period might be regarded as reflecting some success for government policy inducements to get lone parents into employment.

Table 11.6
Mothers' economic activity by sweep and by partnership status

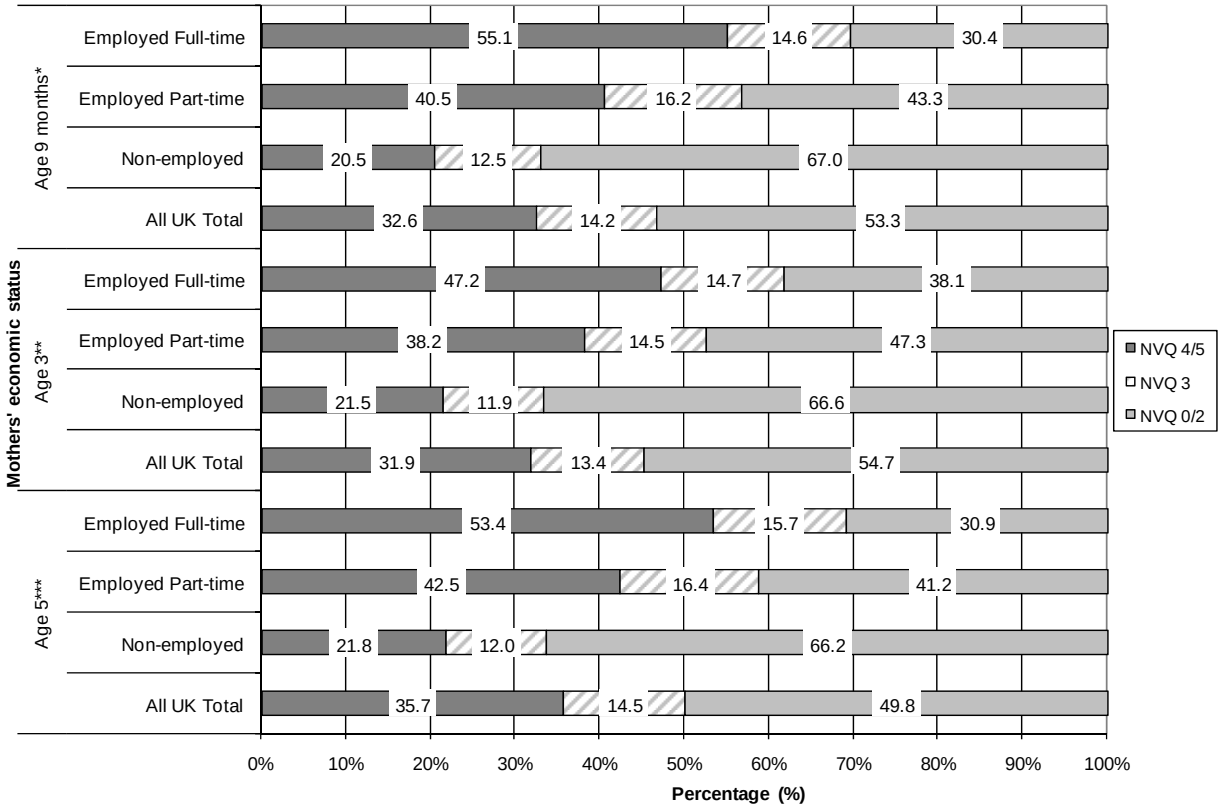
Mothers' economic activity status	Sweep of MCS – UK per cent		
	MCS 1	MCS 2	MCS 3
Couple mothers Currently working full-time*	2257 (14.0)	1818 (13.6)	1846 (14.9)
Currently working part-time*	5350 (38.2)	5131 (43.2)	5217 (46.9)
Total employed per cent**	52.2%	56.8%	61.8%
Unweighted sample size for 100% Weighted observations	7607 *8226*	6949 *7065*	7063 *6898*
Lone mothers Currently working full-time*	183 (6.1)	250 (9.0)	329 (12.0)
Currently working part-time*	465 (15.2)	632 (25.7)	773 (29.1)
Total employed per cent **	21.3%	34.7%	41.1%
Unweighted sample size for 100% Weighted observations	648 *566*	882 *887*	1102 *1151*

Notes: Sample: All MCS 1 mothers (natural, adoptive, foster and step). All MCS 2 mothers (natural, adoptive, foster and step). All MCS 3 mothers (natural, adoptive, foster and step) who completed the main or partner interview (excluding any others who completed these interviews). Unit non-response weight also used. * self-employed included in 'currently working full-time or part-time. Being 'on leave' from work is classified as 'currently working'.
** The other categories of not working are missed from the table but cell per cents are based on total sample.
F statistics on within sweep differences by partnership status are all significant at <0.05.

The full-time employment rate for mothers with a youngest child age 0 to 4 in 2004, from LFS figures, was 21 per cent for married/cohabiting mothers and 13 per cent for lone mothers. The part-time employment rate for mothers with a youngest child aged 0 to 4 in 2004, from LFS figures, was 38 per cent for married/cohabiting mothers and 21 per cent for lone mothers. Comparison with LFS figures suggests that MCS mothers' rates of full-time employment are below those in LFS, especially for mothers in couples, but MCS rates of part-time work are well above those in the LFS for both mothers living in couple and lone mothers.

When economic activity is broken down by highest level of educational qualifications we can see even more striking associations between being employed full-time and having a degree (Figure 11.2). When the cohort child was aged 9 to 10 months at MCS 1, 55 per cent of mothers working full-time had a degree. At age 5 at MCS 3, so did 53 per cent of mothers working full-time. The proportions of those working part-time who had a degree were also roughly the same, 41 per cent, at 9 to 10 months, 38 per cent at age 3 rising to 43 per cent at age 5). Of those who were not employed only 21-22 per cent had a degree, at any of the three surveys.

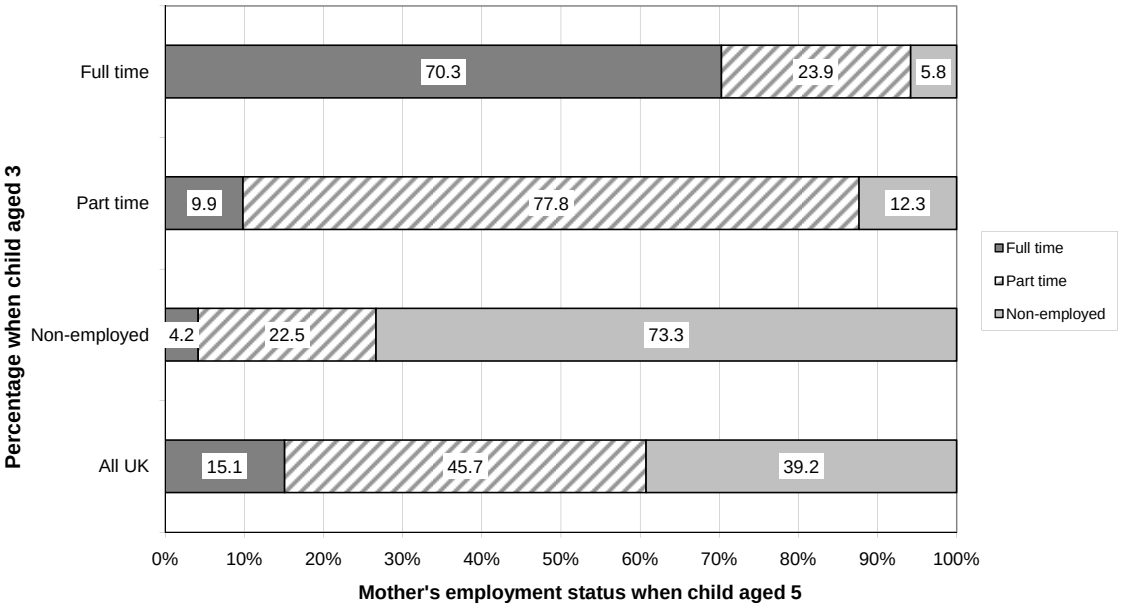
Figure 11.2
Mothers' economic activity status by educational achievements, at each sweep



Notes: Sample: * All MCS 1 mothers (natural, adoptive, foster and step). F=1607.04, P=0.000 ** All MCS 2 mothers (natural, adoptive, foster and step). F=2204.76, P=0.000 *** All MCS 3 mothers (natural, adoptive, foster and step) who completed the main or partner interview (excluding any others who completed these interviews). F=106.70, P=0.000. Figure displays weighted percentages in parenthesis (using *weight2*). Unit non-response weight also used.

Changes in weekly hours of work are also apparent for some mothers (Figure 11.3) although the majority of those employed at both MCS 2 (age 3) and MCS 3 (age 5) continued working the same weekly hours; 70 per cent of mothers working full-time at age 3, 78 per cent of those working part-time. Of those who were not working at MCS 2, 73.3 per cent remained out of employment at age 5. The biggest changes came from full-timers at age 3, 24 per cent of whom moved to part-time by age 5. Of those not working at age 3, 23 per cent moved to part-time work by age 5. The other changes were relatively small but occurred in all directions.

Figure 11.3
Changes in mothers' employment status and hours of work from age 3 to age 5



Notes: Sample: All mothers (natural, adoptive, foster and step) who had responded at both MCS 2 and MCS 3. This figure excludes any mothers who were eligible but not interviewed and any fathers or grandparents who completed the interview. Figure displays weighted percentages (using *weight2*). Unit non-response weight also used.
F=1620.56, P>F=0.000

Fathers' economic activity rates at MCS 3

Fathers' rates of economic activity and employment are far less variable than mothers' rates. Less than 10 per cent of fathers were not employed. This is consistent with Labour Force Survey figures that suggest 9 per cent of UK fathers living in couples who had a youngest child aged 0 to 4 were not in employment in 2004 (Walling, 2005). However, there were some variations by country (Table 11.7) with rates of non-employment being lower in Northern Ireland (7%) and Scotland (8%). Rates of self-employment among MCS fathers also varied and were the highest, as in previous sweeps, in Northern Ireland (25%) and lowest in Scotland (16%) but more similar in Wales (18%) and England (19%). A very small percentage of fathers worked part-time, between 4 and 6 per cent across the UK countries (Table 11.7).

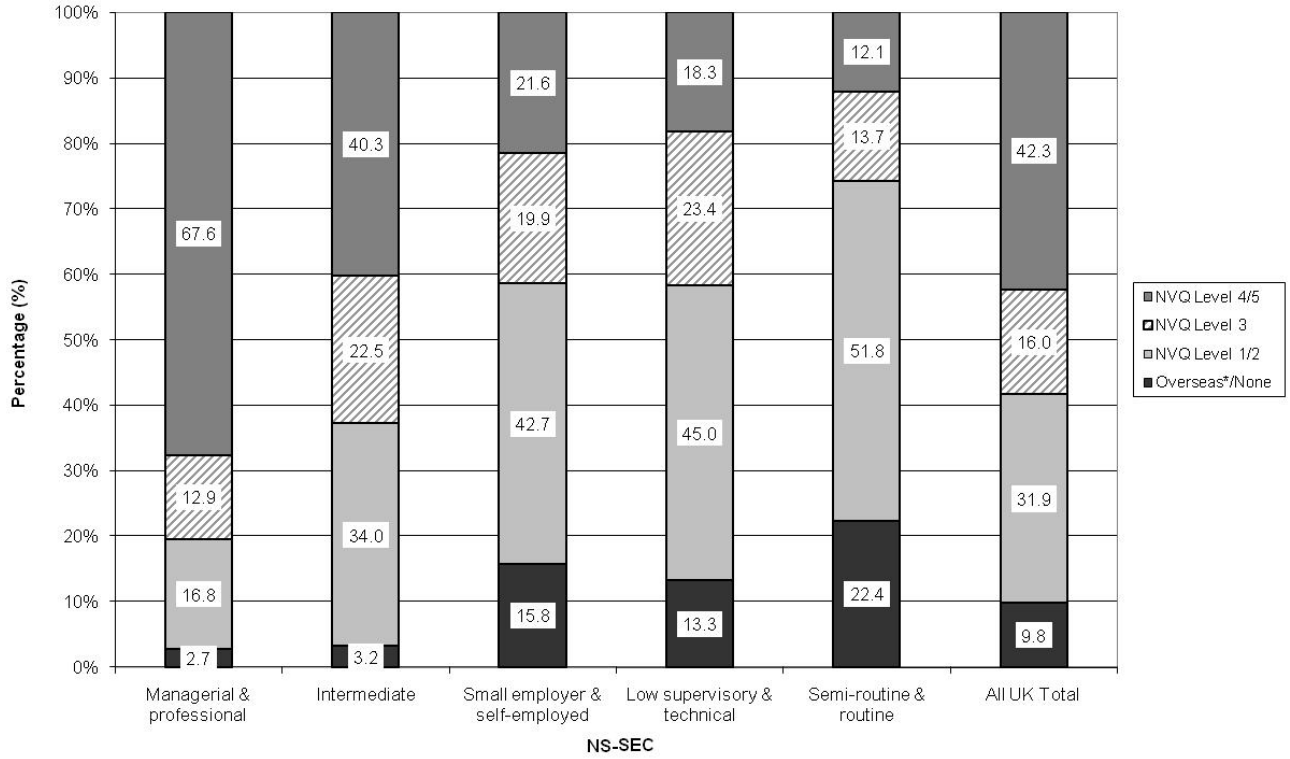
Table 11.7
Fathers' economic activity status by country at sweep 3

Fathers' economic activity status	Country				All UK total
	England	Wales	Scotland	Northern Ireland	
Employee	4564	1074	963	692	7293
	(71.7)	(73.3)	(75.5)	(68.0)	(72.0)
Self-employed	1247	247	209	258	1961
	(19.2)	(17.6)	(16.2)	(24.9)	(19.2)
Non-employed	648	153	103	77	981
	(9.0)	(9.2)	(8.4)	(7.1)	(8.9)
Total per cent	100	100	100	100	100
Unweighted sample size	6459	1474	1275	1027	10235
Weighted observations	*6059*	*1552*	*1339*	*1281*	*10385*
					Sign. (Applied=Yes) F=3.73, P=0.001
*Of those currently employee or self-employed**					
Works full-time	5268	1224	1095	900	8487
	(93.6)	(94.4)	(94.3)	(95.7)	(93.8)
Works part-time	458	75	62	46	641
	(6.4)	(5.6)	(5.7)	(4.4)	(6.2)
Total per cent	100	100	100	100	100
Unweighted sample size	5726	1299	1157	946	9128
Weighted observations	*5425*	*1381*	*1208*	*1186*	*9317*
					P=0.066

Notes: Sample: All MCS 3 fathers (natural, adoptive, foster and step) who completed the main or partner interview. This table excludes any fathers who were eligible but not interviewed (approximately 1,225 cases) and any mothers or grandparents who completed the interview. *Results are shown for those currently employed or self-employed and who provided hours of work. Table displays unweighted observations, *weighted observations* and weighted percentages in parenthesis (using *weight1* within country and *weight2* for All UK total). Unit non-response weight also used.

As with mothers, fathers' NS-SEC occupation classifications were associated with large variations in their highest qualification levels (Figure 11.4). Fathers with managerial or professional jobs were most likely to have degree-level qualifications (NVQ 4 or 5). Of fathers in semi-routine or routine occupations, only 12.1 per cent had a degree. Of fathers in managerial and professional jobs, only 3 per cent had no qualifications compared with 22 per cent of those in semi-routine or routine occupations.

Figure 11.4
Employed fathers' NS-SEC status by highest educational qualification at sweep 3



Notes: Sample: All MCS 3 fathers (natural, adoptive, foster and step) who completed the main or partner interview. This figure excludes any fathers who were eligible but not interviewed (approximately 1,225 cases) and any mothers or grandparents who completed the interview. Figure displays weighted percentages (using *weight2*). Unit non-response weight also used.
F=106.51, P>F=0.066

Fathers' economic activity status also varied by ethnicity (Table 11.8). As found in other studies, men of minority ethnic origin often suffer higher unemployment rates (Owen, 1997). In these MCS figures, Pakistani and Bangladeshi fathers had very much higher rates of non-employment (18%) than fathers in other ethnic groups. 'Non-employment' includes the unemployed and those who are economically inactive. Black fathers (11.0%) also had a higher rate of non-employment than white (8%) and Indian (7%) fathers.

A substantial minority (30%) of Pakistani/Bangladeshi employed fathers were working part-time, compared with the very low rates (8 to 11%) in the other minority ethnic groups. Clearly MCS Pakistani and Bangladeshi families, given mothers as well as fathers were far less likely to be in paid work, are far more likely to be non-earner or low-income households.

Fathers' rates of self-employment varied by ethnicity (Table 11.8). They were at their highest among Pakistani and Bangladeshi fathers (31%) and higher than average among Indian fathers (24%), but lower than average among black Caribbean plus black African fathers at (15%). The higher rate of self-employment among South Asian men is well known (Owen, 1997).

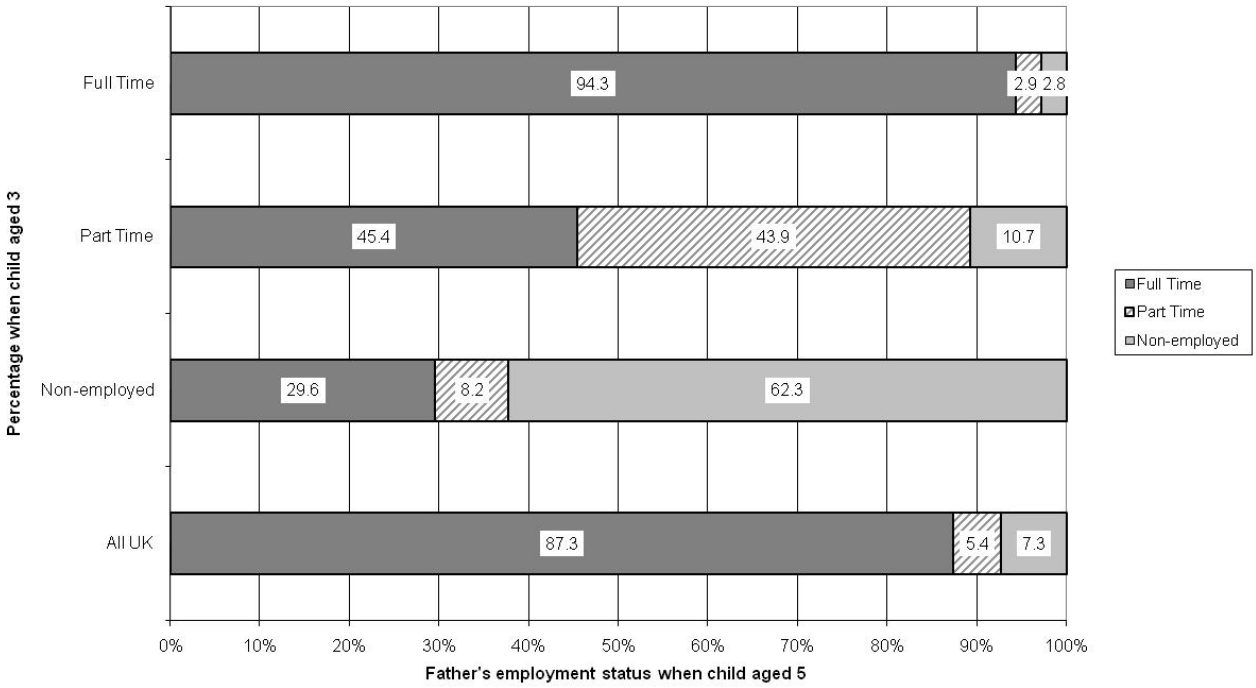
Table 11.8
Fathers' economic activity status by ethnicity at sweep 3

Fathers' economic activity status	Fathers' ethnicity					All UK total
	White	Indian	Pakistani/ Bangladeshi	Black Caribbean / Black African	Other	
Employee	6355 (73.7)	186 (69.1)	260 (51.0)	131 (74.3)	145 (66.9)	7077 (72.7)
Self-employed	1591 (18.7)	59 (23.7)	159 (30.8)	35 (14.8)	40 (20.4)	1884 (19.2)
Non-employed	702 (7.6)	19 (7.2)	89 (18.2)	30 (11.0)	34 (12.7)	874 (8.2)
Total per cent	100	100	100	100	100	100
Unweighted sample size	8648	264	508	196	219	9835
Weighted observations	*9075*	*204*	*335*	*189*	*220*	*10023*
						P=0.000
Of those currently employees or self-employed						
Works full-time	7466 (95.2)	224 (91.8)	281 (69.4)	154 (92.4)	158 (88.7)	8283 (94.1)
Works part-time	393 (4.8)	20 (8.2)	141 (30.6)	11 (7.6)	23 (11.3)	588 (5.9)
Total per cent	100	100	100	100	100	100
Unweighted sample size	7859	244	422	165	181	8871
Weighted observations	*8281*	*189*	*275*	*169*	*186*	*9101*
						P=0.000

Notes: Sample: All MCS 3 fathers (natural, adoptive, foster and step) who completed the main or partner interview. This table excludes any fathers who were eligible but not interviewed (approximately 1,225 cases) and any mothers or grandparents who completed the interview. Table displays unweighted observations, *weighted observations* and weighted percentages in parenthesis (using *weight2*). Unit non-response weight also used.

A few fathers changed their economic activity status between sweeps 2 and 3 of MCS, especially if they had been unemployed or working part-time at sweep 2 (Figure 11.5). Fathers who had been in full-time employment at sweep 2 tended mainly to be still employed full-time (94%) at sweep 3, with the rest being divided equally between moving to work part-time or becoming unemployed. However, only 44 per cent of fathers who had worked part-time at sweep 2 were still working part-time, 45% having moved to work full-time by sweep 3. Of those who had been out of work at sweep 2, 62 per cent were still out of work and 30 per cent had moved into full-time work.

Figure 11.5
Changes in fathers' employment status when child aged 3 to 5



Notes: Sample: All fathers (natural, adoptive, foster and step) who had responded at both MCS 2 and MCS 3. This figure excludes any fathers who were eligible but not interviewed and any mothers or grandparents who completed the interview. Figure displays weighted percentages (using *weight2*). Unit non-response weight also used. F=805.46, P>F=0.000.

Family employment status at MCS 3

Putting mothers' and fathers' economic activity together allows us to see families' levels of economic and time resources. At one end of the spectrum, families could have two full-time earners, and be relatively resource-rich but time-poor. At the other end of the spectrum, families could have no earners and be resource-poor but time-rich. Eleven per cent of MCS families were dual-earner full-time working families, 5 per cent were no-earner couple families and a further 13 per cent were no-earner lone parent families (Table 11.9). The proportions of workless couples and lone parents did not vary much by country (Table 11.9).

The LFS 2004 figures for rates of workless households among those with a youngest child aged 0 to 4 were 6 per cent of couple households and 64 per cent of lone parent households (Walling, 2004). Equivalent workless household figures from MCS families at sweep 3 are 6 per cent of couple households, identical to the LFS statistic, and 59 per cent of lone parent households, slightly lower than the LFS figure. Across all households with dependent children the LFS rate of worklessness was 18 per cent, which is reasonably close to the rate for MCS 3 families, at 16 per cent. Walling also showed from LFS figures that the rate of worklessness is considerably higher in families where no one has any educational qualifications.

Table 11.9
Parents' partnership and economic status by country at sweep 3

Parents' partnership and economic status	Country				All UK total
	England	Wales	Scotland	Northern Ireland	
Both employed full-time	836 **(10.1)**	242 **(13.1)**	190 **(10.7)**	208 **(15.3)**	1476 **(10.5)**
Both employed, father ft and mother pt	2606 **(34.6)**	639 **(35.4)**	587 **(35.4)**	426 **(32.1)**	4258 **(34.5)**
Both employed, father pt and mother ft	224 **(2.6)**	53 **(2.9)**	43 **(2.7)**	33 **(2.2)**	353 **(2.6)**
Mother employed, father not employed	195 **(2.2)**	47 **(2.1)**	35 **(2.0)**	23 **(1.5)**	300 **(2.1)**
Father employed, mother not employed	2053 **(24.2)**	382 **(19.7)**	334 **(21.7)**	275 **(20.9)**	3044 **(23.6)**
Both not employed	424 **(4.7)**	112 **(5.4)**	66 **(4.6)**	50 **(3.5)**	652 **(4.7)**
Lone parent employed	684 **(9.0)**	166 **(8.4)**	155 **(9.8)**	128 **(9.8)**	1133 **(9.1)**
Lone parent not employed	1064 **(12.7)**	264 **(13.1)**	175 **(13.1)**	188 **(14.6)**	1691 **(12.9)**
Total	100	100	100	100	100
Unweighted sample sizes Weighted observations	8086 *7605*	1905 *1976*	1585 *1708*	1331 *1678*	12907 *13097*
					P=0.001

Notes: Sample: All MCS 3 mothers and fathers (natural, adoptive, foster and step) who completed the main or partner interview. This table excludes any mothers or fathers who were eligible but not interviewed (approximately 50 mothers and 1,225 fathers) and any others who answered the main or partner interview. Mothers who were on leave are counted as 'employed'. 'Table displays unweighted observations, *weighted observations* and weighted percentages in parenthesis (using weight1 within country and *weight2* for ALL UK). Unit non-response weight also used.

The single largest family economy, at approximately one third of MCS families, was the dual-earner family where the father worked full-time and the mother worked part-time. This has been called the new traditional family type, replacing the older traditional type where fathers worked full-time and mother stayed at home. There was little variation by country in the extent of new traditional families, although Northern Ireland had a slightly lower rate of this family type (32%) than the UK average (35%), but Northern Ireland also had a higher rate of 'dual earner, both full-time' families (15%), consistent with it having a higher rate of mothers working full-time (Table 11.1). Traditional breadwinner families (father only working) constituted approximately one quarter of MCS families and were more common in England (24%) than in Wales (20%), Scotland (22%) or Northern Ireland (21%) (Table 11.9). The less traditional family economies where women worked more than men were very infrequent in all of the UK countries. Lone parents who were employed constituted 9 per cent of families, not varying by country. Lone parents who were not employed made up 13 per cent of UK families, and also varied relatively little by country, with the minor exception of a slightly higher average in Northern Ireland (15 %).

Again we can draw some comparisons with Labour Force Survey findings for UK families in 2004 (Walling, 2005). For families with a youngest child aged 0 to 4, LFS figures for 2004 suggest that 45 per cent of families have both parents working, 36 per cent have one parent working and 19 per cent have no parent/s working. The equivalent figures for MCS 3 families are 48 per cent, 35 per cent and 18 per cent. A third (34 %) of 2004 LFS couple families were 'father only working' families, compared with 31 per cent of MCS couple families; and 3 per cent of LFS couple families were 'mother only working' families as were 3 per cent of

MCS couple families. There is a difference in the dates of these statistics and slight differences in definitions which may help to close the gaps. But it may also be the case that MCS 3 families slightly over-represent two-earner families and slightly underestimate no-earner families compared with UK averages. However, the differences are fairly minor.

Family economies varied more when calculated according to mothers' ethnicity classifications (Table 11.10). Indian families stood out as having higher percentages of dual earner both full-time families, 18 per cent compared with the average of 10 per cent, which was also the rate for white families. For white families, the predominant type was the new traditional family with a full-time employed father and a part-time employed mother (37%). This type was also common among Indian families (36%) but fairly uncommon among Pakistani and Bangladeshi (8%) and black families (12%). Indian families also had the lowest rates of lone parents. The old traditional family economy of father employed full-time and a stay-at-home mother was the predominant type for Pakistani and Bangladeshi families (56%) but well below average among black families (10%). Pakistani and Bangladeshi families, as expected, had higher rates of 'no earner couple' families (13%), more than double the rate for other ethnic groups. For black families, the predominant type was non-employed lone parents (37%) followed by employed lone parents (20%).

Table 11.10
Parents' partnership and economic status by mothers' ethnicity

Parents' partnership and economic status	Mothers' ethnicity					All UK total
	White	Indian	Pakistani/ Bangladeshi	Black Caribbean / Black African	Other	
Both employed full-time	1246 **(10.2)**	43 **(17.5)**	14 **(1.8)**	46 **(12.3)**	38 **(12.8)**	1387 **(10.2)**
Both employed, father ft and mother pt	3996 **(37.0)**	98 **(36.2)**	44 **(8.4)**	41 **(12.1)**	58 **(18.5)**	4237 **(34.9)**
Both employed, father pt and mother ft	268 *270* **(2.3)**	11 *9* **(3.8)**	21 *10* **(2.5)**	11 *13* **(3.8)**	6 *8* **(2.4)**	317 *310* **(2.4)**
Mother employed, father not employed	226 **(1.9)**	7 **(2.2)**	12 **(2.8)**	4 **(0.6)**	10 **(2.2)**	259 **(1.9)**
Father employed, mother not employed	2472 **(23.1)**	91 **(26.3)**	348 **(55.6)**	41 **(10.4)**	90 **(26.0)**	3042 **(23.9)**
Both not employed	511 **(4.4)**	9 **(2.9)**	79 **(13.1)**	24 **(4.1)**	24 **(5.9)**	647 **(4.7)**
Lone parent employed	1005 **(9.1)**	9 **(5.5)**	13 **(2.1)**	64 **(19.5)**	27 **(9.1)**	1118 **(9.1)**
Lone parent not employed	1366 **(12.0)**	21 **(5.7)**	80 **(13.8)**	143 **(37.3)**	68 **(23.2)**	1678 **(12.9)**
Total	100	100	100	100	100	100
Unweighted sample sizes Weighted observations	11090 *11593*	289 *229*	611 *408*	374 *354*	321 *323*	12685 *12907*
						P=0.001

Notes: Sample: All MCS 3 mothers and fathers (natural, adoptive, foster and step) who completed the main or partner interview. This table excludes any mothers or fathers who were eligible but not interviewed (approximately 50 mothers and 1,225 fathers). Mothers who were on leave were counted as employed.Table displays unweighted observations, *weighted observations* and weighted percentages in parenthesis (using weight1 within country and *weight2* for All UK). Unit non-response weight also used.

Mothers working at atypical times

Working at atypical times of day has become more common in the UK over the past two decades (Dex and McCulloch, 1995; Dex, 2003). More recent statistics from the Labour Force Survey show that part-time work and shift-work rates have increased from 1993 to 2002 for men and women, but temporary work has declined slightly (McOrmond, 2004).

Of employed MCS mothers, 43 per cent regularly worked at an atypical time of day on a weekly basis, either after 6 pm, at night, or on Saturdays or Sundays. Of the specific patterns, 33 per cent of mothers worked after 6pm in the evening; 10 per cent worked at nights; 21 per cent worked on Saturdays; and 14 per cent worked on Sundays. Patterns of working at atypical times varied considerably by mothers' NS-SEC classifications (Table 11.11).

- Working at any of the atypical times was relatively uncommon in intermediate white-collar occupations.
- Managerial and professional workers were likely to work after 6pm (37%) but these were not the occupations with the highest percentage of working after 6pm. However, managerial and professional were less likely than many other groups to work in the any of the other atypical arrangements.
- Working nights was most common among semi-routine and routine workers, where one in five experienced night work.
- Working on Saturdays was most common among lower supervisory and technical (36%) and to a slightly lesser extent in semi-routine and routine occupations (31%) and small employer and self-employed occupations (31%).
- Sunday work was most common in lower supervisory (28%) and semi-routine and routine occupations (22%).

Table 11.11
Employed mothers working atypical hours on a weekly basis by NS-SEC at sweep 3

Mothers' atypical working patterns	Mothers' NS-SEC					All UK total
	Managerial & professional	Intermediate	Small employer & self-employed	Low supervisory & technical	Semi-routine & routine	
Works after 6pm	1037 **(36.6)**	302 **(17.9)**	259 **(43.7)**	144 **(45.4)**	792 **(36.1)**	2534 **(33.2)**
						P=0.000
Works nights	292 **(10.0)**	101 **(5.4)**	60 **(9.8)**	70 **(20.3)**	291 **(13.6)**	814 **(10.4)**
						P=0.000
Works Saturdays	429 **(14.6)**	218 **(12.5)**	200 **(31.3)**	118 **(35.7)**	703 **(31.1)**	1668 **(21.0)**
						P=0.000
Works Sundays	323 **(11.3)**	117 **(6.1)**	81 **(12.9)**	91 **(27.9)**	498 **(21.6)**	1110 **(13.8)**
						P=0.000
Works at any atypical time (any of the above)	1193 **(42.1)**	416 **(24.4)**	342 **(56.6)**	190 **(59.7)**	1176 **(53.2)**	3317 **(43.2)**
						P=0.000
Maximum unweighted sample size	2871	1728	620	323	2207	7749

Notes: Sample: All employed MCS 3 mothers (natural, adoptive, foster and step) who completed the main or partner interview. This table excludes any mothers who were eligible but not interviewed and any fathers or grandparents who completed the interview. Columns do not add up to 100 per cent as multiple responses allowed. Table displays unweighted observations, *weighted observations* and weighted percentages in parenthesis (using *weight2*). Unit non-response weight also used. Mothers included if they said they worked at these times on a weekly basis.

Family-friendly working arrangements

Mothers were asked about their use of a set of family-friendly employer provisions, some of which were statutory entitlements for mothers who were eligible and others were non-statutory employer provided provisions. For a positive response, the mother would have had to have access to the provision and to be using it. (We do not know from MCS 3 how many mothers had access to such arrangements but were not using them.) Of all MCS mothers, 32 per cent responded that they were not using any of the list of statutory or non-statutory provisions asked about. In some cases the use of the statutory provision, for example maternity leave, would signal the mother had an additional child since the cohort child so that rates would be expected to vary according to which mothers had additional children by MCS 3.

Statutory provisions of having time off for family emergencies, which became an employee right in 2000, had been used by 39 per cent and maternity leave by 34 per cent of MCS 3 mothers. Use of other statutory and non-statutory provisions were very low by comparison. The use of statutory family-friendly provisions varied considerably by mothers' NS-SEC occupational classification (Table 11.12). Mothers in managerial and professional occupations had the highest usage of this set of statutory provisions; the gaps between NS-SEC groups' usage were very wide in the case of maternity leave and time off for family emergencies but narrow in the less used provisions on leave for adoption and parental leave.

Table 11.12
Percentage of employed mothers in each NS-SEC group who reported at MCS 3 they were using statutory arrangements.

Flexible working arrangements	NS-SEC				All UK total
	Managerial & professional	Intermediate	Small employer/self-employed/low supervisory/technical	Semi-routine & routine	
Time off for family emergencies	1277 **(46.1)**	756 **(42.9)**	126 **(35.0)**	595 **(26.0)**	2754 **(38.5)**
					P =0.000
Maternity leave	1329 **(47.8)**	657 **(36.5)**	120 **(31.8)**	404 **(16.0)**	2510 **(34.3)**
					P=0.000
Adoptive leave	4 **(0.2)**	2 **(0.1)**	0 **(0.0)**	5 **(0.2)**	11 **(0.2)**
					P=0.871
Parental leave	165 **(6.2)**	87 **(5.1)**	14 **(4.4)**	40 **(1.6)**	306 **(4.4)**
					P=0.000
Maximum unweighted sample sizes	2701	1728	369	2207	7005

Question: Which if any of these arrangements have you made use of in your current job?
Note to Tables 11.12: Sample: All employee MCS 3 mothers (natural, adoptive, foster and step) who completed the main or partner interview. This table excludes any grandparents or fathers who answered these questions. This table is based only on mothers who were employed, therefore does not include self-employed mothers. Employees were asked 'which, if any, of these arrangements have you made use of in your current main job?'. *Workplace nursery or crèche also includes other nurseries supported by employer and help with finding childcare facilities away from the workplace. Table displays unweighted observations, *weighted observations* and weighted percentages in parenthesis. Unit non-response weight also used.

Table 11.13
Percentage of employed mothers in each country who reported using at MCS 3 statutory arrangements

Flexible working arrangements	Country				All UK total
	England	Wales	Scotland	Northern Ireland	
Time off for family emergencies	1673 **(38.5)**	456 **(40.8)**	431 **(40.9)**	326 **(38.5)**	2886 **(38.9)**
					P=0.458
Maternity leave	1481 **(34.3)**	408 **(37.2)**	411 **(38.0)**	402 **(46.3)**	2702 **(35.4)**
					P=0.000
Adoptive leave	8 **(0.2)**	1 **(0.1)**	1 **(0.1)**	1 **(0.0)**	11 **(0.1)**
					P=0.643
Parental leave	194 **(4.3)**	40 **(3.6)**	63 **(6.2)**	25 **(3.0)**	322 **(4.4)**
					P=0.006
Maximum unweighted sample sizes	4284	1133	1030	840	7287

Question: Which if any of these arrangements have you made use of in your current job?
Notes: Sample: All employee MCS 3 mothers (natural, adoptive, foster and step) who completed the main or partner interview. This table excludes any grandparents or fathers who answered these questions. This table is based only on mothers who were employed, therefore does not include self-employed mothers. Employees were asked 'which, if any, of these arrangements have you made use of in your current main job?'. *Workplace nursery or crèche also includes other nurseries supported by employer and help with finding childcare facilities away from the workplace. Table displays unweighted observations, *weighted observations* and weighted percentages in parenthesis (using *weight2) and weight 1 for within-country columns of Table 11.13*. Unit non-response weight also used.

The use of statutory provisions varied significantly by country in the case of maternity leave and parental leave (Table 11.13), but did not vary significantly by country in the cases of time off for emergencies or adoption leave. Taking maternity leave was considerably higher in Northern Ireland than in the other UK countries, and lowest in England. This partly reflects differences in rates of new births over this period. Taking parental leave was highest in Scotland.

Use of non-statutory provisions offered by employers was much lower. The proportions of mothers who used each single provision was mostly very small (for example, 7% had used financial help for childcare; 4% had used a workplace nursery or crèche; 6% had used after-school childcare; 3% had used career breaks). There was a tendency in the rates of many provisions for those employed in managerial and professional occupations to have higher rates of usage than those in other occupations (Table 11.14). The size of the difference between managerial and professional and other NS-SEC occupations was large in the case of financial help with childcare vouchers, and working at or from home occasionally. It was not uncommon for the frequency of using one of these provisions by professional and managerial employees to be more than double the size of the use by semi-routine and routine employees, and somewhere between the extremes for the other intermediate NS-SEC occupations. Semi-routine and routine occupations tended, therefore, to have the lowest percentages of mothers using such arrangements. This difference in use across occupations is likely to have arisen in part from employers being less likely to offer family-friendly provisions to lower-paid employees. Also, where they were offered, employees on low earnings cannot always afford to take up unpaid provisions.

The extent of use of these non-statutory family-friendly provisions also varied by country (Table 11.15), although the cell sizes of some provisions are small in the smaller UK

countries. One area of difference between countries is in childcare provision, where employers in the private and public sectors of the UK countries may have their own distinctive policies and arrangements.

- Use of financial help for childcare, workplace nursery/crèche, school term-time contracts and working at or from home occasionally were highest in England.
- Use of career breaks were much higher in Northern Ireland.
- Use of job sharing and a telephone for family reasons were higher in Scotland.
- Use of out-of-school care for children was not significantly different across countries. [1]

However, a similar proportion of mothers in each country was not using any of these provisions (about 31%). So despite potential differences in provisions between UK countries and in cultural patterns of working, overall families are benefiting approximately to the same extent in each country across the combination of statutory and non-statutory provisions.

[1] The phrasing of this coded option does not make it clear whether the employer has provided financial help or other assistance with care for children after school or during the school holidays or whether the respondent has arranged this herself.

Table 11.14
Percentage of employed mothers in each NS-SEC group who reported using non-statutory flexible working arrangements and provisions at sweep 3

Flexible working arrangements	NS-SEC				All UK total
	Managerial & professional	Intermediate	Small employer/self-employed/low supervisory/technical	Semi-routine & routine	
Financial help with childcare vouchers	275 **(11.7)**	105 **(6.6)**	11 **(3.3)**	50 **(2.8)**	441 **(7.2)**
					P=0.000
Workplace nursery or crèche*	132 **(5.5)**	59 **(3.9)**	7 **(2.3)**	36 **(1.8)**	234 **(3.8)**
					P=0.000
Care for child after school hours or during school holidays[2]	181 **(7.2)**	98 **(5.3)**	19 **(5.0)**	99 **(4.8)**	397 **(5.9)**
					P=0.017
Career breaks for personal reasons	82 **(2.9)**	63 **(3.7)**	11 **(2.5)**	39 **(1.5)**	195 **(2.6)**
					P=0.000
Job-sharing	280 **(10.5)**	179 **(9.9)**	15 **(3.4)**	52 **(2.1)**	526 **(7.4)**
					P=0.000
Working at or from home occasionally	675 **(26.5)**	180 **(11.5)**	25 **(7.7)**	32 **(1.5)**	912 **(14.0)**
					P=0.000
School term-time contracts	166 **(6.9)**	143 **(8.9)**	30 **(7.5)**	196 **(9.5)**	535 **(8.2)**
					P=0.040
Telephone to use for family reasons	819 **(30.1)**	488 **(27.6)**	87 **(25.2)**	344 **(15.0)**	1738 **(24.6)**
					P=0.000
None of the statutory or non-statutory arrangements used	496 **(18.1)**	472 **(28.2)**	146 **(38.1)**	1097 **(50.1)**	2211 **(31.6)**
					P=0.000
Maximum unweighted sample sizes	2701	1728	369	2207	7005

Question: Which if any of these arrangements have you made use of in your current job?
Notes: Sample: All employee MCS 3 mothers (natural, adoptive, foster and step) who completed the main or partner interview. This table excludes any grandparents or fathers who answered these questions. This table is based only on mothers who were employed, therefore does not include self-employed mothers. Employees were asked 'which, if any, of these arrangements have you made use of in your current main job?'. *Workplace nursery or crèche also includes other nurseries supported by employer and help with finding childcare facilities away from the workplace. Table displays unweighted observations, *weighted observations* and weighted percentages in parenthesis. Unit non-response weight also used.

[2] The phrasing of this coded option unfortunately does not make it clear whether the employer has provided financial help or other assistance with care for children after school or during the school holidays or whether the respondent has arranged this herself.

Table 11.15
Percentage of employed mothers in each country who reported using at MCS 3 non-statutory flexible arrangements

Flexible working arrangements	Country				All UK total
	England	Wales	Scotland	Northern Ireland	
Financial help with childcare vouchers	332 **(8.1)**	47 **(4.1)**	61 **(5.5)**	25 **(3.2)**	465 **(7.4)**
					P=0.000
Workplace nursery or crèche*	177 **(4.2)**	37 **(3.3)**	22 **(2.3)**	11 **(1.6)**	247 **(3.9)**
					P=0.000
Care for child after school hours or during school holidays	259 **(6.2)**	75 **(6.9)**	41 **(3.9)**	34 **(4.2)**	409 **(5.8)**
					P=0.070
Career breaks for personal reasons	102 **(2.5)**	28 **(2.8)**	33 **(3.4)**	50 **(5.8)**	213 **(2.7)**
					P=0.000
Job-sharing	300 **(7.0)**	88 **(8.3)**	109 **(10.2)**	53 **(6.3)**	550 **(7.4)**
					P=0.016
Working at or from home occasionally	636 **(15.1)**	128 **(11.8)**	118 **(11.0)**	80 **(9.3)**	962 **(14.2)**
					P=0.000
School term-time contracts	361 **(8.6)**	72 **(6.1)**	65 **(6.1)**	53 **(5.7)**	551 **(8.1)**
					P=0.004
Telephone to use for family reasons	1027 **(24.2)**	293 **(25.8)**	302 **(28.7)**	202 **(25.0)**	1824 **(24.9)**
					P=0.089
None of these non-statutory or statutory arrangements	1320 **(30.9)**	361 **(30.9)**	308 **(31.5)**	257 **(31.5)**	2246 **(30.9)**
					P=0.982
Maximum unweighted sample sizes	4284	1133	1030	840	7287

Question: Which if any of these arrangements have you made use of in your current job?
Notes: Sample: All employee MCS 3 mothers (natural, adoptive, foster and step) who completed the main or partner interview. This table excludes any grandparents or fathers who answered these questions. This table is based only on mothers who were employed, therefore does not include self-employed mothers. Employees were asked 'which, if any, of these arrangements have you made use of in your current main job?'. *Workplace nursery or crèche also includes other nurseries supported by employer and help with finding childcare facilities away from the workplace. Table displays unweighted observations, *weighted observations* and weighted percentages in parenthesis (using *weight2 ore weight 1 for within-country columns of Table 11.15*). Unit non-response weight also used.

Mothers' reasons for not working

As noted above, 41 per cent of MCS mothers at sweep 3 were not employed (including 3 per cent who were looking for work and classifiable as unemployed). A further 1 per cent were undertaking training or education. Mothers who were not working were asked about their

reasons for not working and they could give more than one reason. The reasons with the higher percentages of non-employed mothers' responses were:

- Prefer to be at home with the family rather than working (51%);
- Prefer to look after my children myself (53%);
- No jobs with the right hours for me (14%);
- Have a new baby (8%); and
- Cannot earn enough to pay for childcare (8%).

Only 3.2 per cent of these non-employed MCS mothers said that they were unable to find suitable childcare.

There were variations by country in some of these responses (Table 11.16). However, the cell sizes are very small in the case of some total UK and country responses. So we should not make too much of many of these differences. Of the reasons for not working with the largest response there are marked differences by country. For example, 63 per cent of non-employed mothers in Northern Ireland chose the reason 'Prefer to be at home with the family rather than working', compared with 41 per cent of mothers in Wales. However, 'I prefer to look after my children myself' was chosen most often by non-employed mothers in England (55%) and Scotland (50%). It is possible that these two reasons may be provoking essentially similar responses, although with the nuances in the wording of the reasons appealing to mothers in England and Scotland slightly differently from mothers in Northern Ireland. Mothers in Wales more systematically give the smallest responses to both these reasons. However, when these two categories are combined we find that 81 per cent of non-employed mothers in Northern Ireland, 71 per cent in England, 65 per cent in Scotland and 61 per cent in Wales gave these reasons. If anything, this accentuates the country differences and still leaves mothers in Wales with the lowest and mothers in Northern Ireland with the highest responses.

Table 11.16
Non-employed mothers' reasons for not looking for paid employment by country

Reasons why not looking for work	Country				All UK total	
	England	Wales	Scotland	Northern Ireland		
No jobs in right places for me	183 **(6.2)**	38 **(5.2)**	22 **(4.5)**	8 **(1.8)**	251 **(5.8)**	P=0.000
No jobs with right hours for me	431 **(14.5)**	87 **(12.3)**	57 **(10.8)**	26 **(6.3)**	601 **(13.7)**	P=0.000
No jobs available to me	63 **(2.1)**	9 **(1.5)**	4 **(0.9)**	6 **(1.3)**	82 **(2.0)**	P=0.197
In full-time education	90 **(2.7)**	42 **(5.7)**	35 **(6.8)**	11 **(2.2)**	178 **(3.2)**	P=0.000
On a training course	97 **(2.8)**	23 **(2.9)**	17 **(3.2)**	6 **(1.0)**	143 **(2.8)**	P=0.044
My family would lose benefits if I was earning	189 **(6.2)**	44 **(6.6)**	29 **(5.8)**	18 **(3.6)**	280 **(6.0)**	P=0.069
I am caring for an elderly or ill relative or friend	88 **(3.0)**	26 **(3.2)**	16 **(2.9)**	12 **(2.6)**	142 **(2.9)**	P=0.943
I cannot work because of poor health	154 **(4.7)**	57 **(8.0)**	50 **(9.2)**	32 **(6.0)**	293 **(5.3)**	P=0.000
I prefer not to work	153 **(4.7)**	16 **(2.0)**	22 **(3.9)**	15 **(2.7)**	206 **(4.4)**	P=0.008
Prefer to be at home with the family rather than working	1740 **(50.9)**	290 **(41.2)**	251 **(48.3)**	323 **(63.0)**	2604 **(50.8)**	P=0.000
I prefer to look after my children myself	1828 **(54.8)**	334 **(46.1)**	258 **(49.9)**	205 **(40.5)**	2625 **(53.4)**	P=0.000
I cannot earn enough to pay for childcare	241 **(8.0)**	61 **(9.7)**	42 **(8.3)**	37 **(7.9)**	381 **(8.1)**	P=0.598
I cannot find suitable childcare	98 **(3.3)**	26 **(3.9)**	19 **(3.0)**	11 **(2.4)**	154 **(3.2)**	P=0.598
My husband/partner disapproves	64 **(1.9)**	2 **(0.4)**	4 **(0.7)**	1 **(0.2)**	71 **(1.6)**	P=0.000
I have a new baby	277 **(8.3)**	57 **(8.7)**	34 **(6.7)**	24 **(4.8)**	392 **(8.1)**	P=0.055
Maximum unweighted sample sizes	3364	699	513	515	5091	

Multi-coded reasons
Notes: Sample: All MCS 3 mothers (natural, adoptive, foster and step) who were looking after the family and home or taking part in an apprenticeship course or in education; and were not currently looking for paid work.. This table excludes any grandparents or fathers who answered these questions. Table displays unweighted observations, *weighted observations* and weighted percentages in parenthesis (using *weight1* for within country and *weight2* for ALL UK). Unit non-response weight also used.

Reasons for not working also varied by household-income status of MCS families (Table 11.17). Non-employed mothers with low incomes were significantly less likely to give the following reasons than families with higher incomes:

- No job in the right places for me;
- No jobs with the right hours for me;
- I prefer not to work;
- Prefer to be at home with the family rather than working;

- I prefer to look after my children myself.

Non-employed mothers with low incomes were significantly more likely to give the following reasons than families with higher incomes:

- My family would lose benefits if I was earning;
- I am caring for an elderly friend or relative;
- I cannot work because of poor health.

Reasons related to access and paying for childcare were not significantly different according to household-income levels.

Table 11.17
Non-employed mothers' reasons for not looking for paid employment by income poverty status

Reasons why not looking for work	Income poverty status		All UK total	P value
	Above 60% median income	Below 60% median income		
No jobs in right places for me	130 **(7.6)**	97 **(4.7)**	227 **(6.1)**	P= 0.002
No jobs with right hours for me	311 **(18.0)**	240 **(11.0)**	551 **(14.4)**	P= 0.000
No jobs available to me	32 **(1.9)**	42 **(2.1)**	74 **(2.0)**	P= 0.780
In full-time education	67 **(3.2)**	90 **(3.4)**	157 **(3.3)**	P= 0.731
On a training course	55 **(2.6)**	78 **(3.4)**	133 **(3.0)**	P= 0.137
My family would lose benefits if I was earning	83 **(4.7)**	179 **(8.0)**	262 **(6.4)**	P= 0.000
I am caring for an elderly or ill relative or friend	44 **(2.1)**	82 **(3.7)**	126 **(2.9)**	P= 0.008
I cannot work because of poor health	87 **(3.9)**	173 **(6.7)**	260 **(5.3)**	P= 0.000
I prefer not to work	112 **(6.3)**	63 **(2.7)**	175 **(4.5)**	P= 0.000
Prefer to be at home with the family rather than working	1059 **(54.8)**	1201 **(46.1)**	2260 **(50.4)**	P= 0.000
I prefer to look after my children myself	1049 *1194* **(56.0)**	1245 *1153* **(51.7)**	2294 *2347* **(53.8)**	P= 0.039
I cannot earn enough to pay for childcare	153 **(8.2)**	201 **(8.9)**	354 **(8.6)**	P= 0.451
I cannot find suitable childcare	55 **(2.8)**	80 **(3.5)**	135 **(3.2)**	P= 0.268
My husband/partner disapproves	39 **(2.5)**	20 **(0.6)**	59 **(1.6)**	P= 0.000
I have a new baby	165 **(8.5)**	191 **(8.2)**	356 **(8.3)**	P= 0.806
Maximum unweighted sample sizes	1955	2471	4426	

Notes: Sample: All MCS 3 mothers (natural, adoptive, foster and step) who were looking after the family and home or taking part in an apprenticeship course or in education; and were not currently

looking for paid work. This table excludes any grandparents or fathers who answered these questions. Table displays unweighted observations, *weighted observations* and weighted percentages in parenthesis (using *weight1* for within country and *weight2* for ALL UK). Unit non-response weight also used.

Changes in MCS family economy and partnerships from age 3 to age 5

Parents could change their joint economic status between the interview if either of them changed their employment status, their hours of work, or their partnership status. Although the most common experience was to stay in the same partnership and working arrangements, sizeable changes did occur (Table 11.18). The most stable arrangements were:

- the new traditional family economy (father working full-time, mother part-time); 72 per cent stayed in this status;
- non-employed lone parents, 70 per cent stayed in this status group;
- employed lone parents, 66 per cent stayed in this status;
- old traditional family (father employed mother not employed), 61 per cent stayed in this status; and
- in the case of no-earner MCS families at sweep 2, 53 per cent were still in this position by sweep 3.

The flows out of being in one of the non-traditional family categories at sweep 2 were the largest in percentage terms. Partnerships where mothers did more paid work than fathers were less stable between MCS 2 and MCS 3, therefore, than other types. Since lone parents are a focus of government policy efforts to induce them into employment, it is notable that 14.7 per cent of the lone parents not employed at sweep 2 were employed by sweep 3. However, there was a similar-sized flow in the opposite direction with 14 per cent of employed lone parents at sweep 2 being not employed by sweep 3.

Partnership status changes also took place. In aggregate terms, 20 per cent of employed lone parents at MCS 2 and 15 per cent of non-employed lone parents had moved into partnerships by sweep 3. Around 6 to 7 per cent of the first three MCS 2 family types containing at least one employed parent dissolved into lone parenthood by MCS 3, and the majority of these flowed into being employed lone parents. Where fathers were not working at MCS 2 or it was a no-earner family the flows into lone parenthood by MCS 3 were considerably higher; 16 per cent flowed out of mother employed/father not employed families, and 18 per cent flowed out where neither partner was employed at MCS 2. These results suggest partnerships may be less stable where men are not employed or the whole family is living off benefits.

Table 11.18
Parents' partnership and economic status when child aged 5 according to their status when child aged 3

Parents' partnership and economic status at age 3	Parents' partnership and economic status at age 5								Total	Observations Unweighted Weighted
	Both employed full-time	Both employed, father ft and mother pt	Both employed, father pt and mother ft	Mother employed, father not employed	Father employed, mother not employed	Both not employed	Lone parent* employed	Lone parent* not employed		
Both employed full-time	729 **(61.5)**	253 **(22.4)**	37 **(3.2)**	23 **(1.7)**	46 **(4.0)**	3 **(0.2)**	72 **(6.8)**	3 **(0.1)**	100	1166 *1110*
Both employed, father ft and mother pt	285 **(8.0)**	2482 **(71.8)**	78 **(2.4)**	48 **(1.3)**	349 **(10.7)**	11 **(0.4)**	150 **(4.5)**	33 **(1.0)**	100	3436 *3717*
Both employed, father pt and mother ft	35 **(16.2)**	72 **(26.7)**	87 **(32.5)**	17 **(6.1)**	29 **(10.1)**	4 **(2.1)**	12 **(5.3)**	2 **(1.0)**	100	258 *241*
Mother employed, father not employed	27 **(11.7)**	43 **(19.6)**	22 **(9.1)**	65 **(29.8)**	25 **(7.0)**	23 **(9.4)**	17 **(8.6)**	10 **(4.9)**	100	232 *247*
Father employed, mother not employed	124 **(3.6)**	610 **(23.8)**	50 **(1.6)**	32 **(1.0)**	1736 **(60.7)**	109 **(3.7)**	47 **(1.9)**	111 **(3.8)**	100	2819 *2992*
Both not employed	7 **(1.1)**	19 **(3.5)**	6 **(0.9)**	35 **(6.4)**	100 **(16.9)**	279 **(53.2)**	10 **(2.4)**	78 **(15.6)**	100	534 *439*
Lone parent * employed	35 **(5.2)**	48 **(8.2)**	9 **(1.4)**	11 **(1.8)**	21 **(3.1)**	5 **(0.7)**	434 **(65.7)**	83 **(13.9)**	100	646 *655*
Lone parent * not employed	8 **(0.6)**	25 **(2.8)**	0 **(0.0)**	3 **(0.2)**	84 **(7.4)**	51 **(4.0)**	170 **(14.7)**	925 **(70.3)**	100	1266 *1261*
All UK total	1250 **(11.2)**	3552 **(36.0)**	289 **(2.7)**	234 **(2.1)**	2390 **(23.3)**	485 **(4.4)**	912 **(9.0)**	1245 **(11.4)**	100	10357 *10679*
										P= 0.000

Notes: Sample: All MCS 3 mothers and fathers (natural, adoptive, foster and step) who completed the main or partner interview. This table excludes any mothers or fathers who were eligible but not interviewed (approximately 50 mothers and 1,225 fathers) and any grandparents who answered these questions. Mothers who were on leave were counted as employed. Table displays unweighted observations, *weighted observations* and weighted percentages in parenthesis (using weight1 within country and *weight2* for ALL UK). Unit non-response weight also used.
* Lone parent includes lone mothers and lone fathers

Parents' additional qualifications by MCS 3

A sizeable minority of MCS mothers and fathers indicated they had gained additional qualifications since they were last interviewed; 18 per cent of mothers and 14 per cent of fathers. These proportions varied significantly by country (Tables 11.19 and 11.20). Mothers in Wales (20%) were the most likely to acquire new qualifications, compared with mothers in England (18%), Northern Ireland (16.7%) and Scotland (14%) (Table 11.19). In the case of mothers who had gained a new qualification, 31 per cent said it was an NVQ level 4 or 5 qualification.

Table 11.19
Whether mothers had acquired new qualifications by sweep 3, by country

Acquired new qualification since last interview	Country				All UK total
	England	Wales	Scotland	Northern Ireland	
Yes	1557 **(17.9)**	433 **(20.3)**	255 **(14.4)**	258 **(16.7)**	2503 **(17.6)**
No	7136 **(82.1)**	1647 **(79.7)**	1494 **(85.6)**	1228 **(83.3)**	11505 **(82.4)**
Total	100	100	100	100	100
Unweighted sample sizes Weighted observations	8693 *8176*	2080 *2161*	1749 *1896*	1486 *1876*	14008 *14152*
					P= 0.000

Notes: Sample: All MCS 3 mothers (natural, adoptive, foster and step) who completed the main or partner interview. This table excludes any mothers who were eligible but not interviewed and any fathers or grandparents who completed the interview. Table displays unweighted observations, *weighted observations* and weighted percentages in parenthesis (using *weight1* within country and *weight2* for All UK). Unit non-response weight also used.

Fathers in Wales (18%) were also more likely to gain new qualifications than fathers in England (15%), Scotland (12%) and Northern Ireland (11%); see Table 11.20.

Table 11.20
Whether fathers had acquired new qualifications by sweep 3, by country

Acquired new qualification since last interview	Country				All UK total
	England	Wales	Scotland	Northern Ireland	
Yes	806 **(14.5)**	227 **(17.7)**	134 **(11.8)**	98 **(11.1)**	1265 **(14.3)**
No	4763 **(85.5)**	1062 **(82.3)**	991 **(88.2)**	781 **(88.9)**	7597 **(85.7)**
Total	100	100	100	100	100
Unweighted sample sizes Weighted observations	5569 *5299*	1289 *1341*	1125 *1160*	879 *1087*	8862 *9060*
					P= 0.004

Notes: Sample: All MCS 3 fathers (natural, adoptive, foster and step) who completed the main or partner interview. This table excludes any fathers who were eligible but not interviewed (approximately 1,225 cases) and any mothers or grandparents who completed the interview. Table displays unweighted observations, *weighted observations* and weighted percentages in parenthesis (using *weight1* within country and *weight2* for All UK total). Unit non-response weight also used.

Conclusions

Mothers at MCS 3 were slightly more likely to be employed by the time the cohort child reached the age of 5 than at earlier years, but part-time hours dominated this employment. The employment gap between partnered and lone mothers can be seen to have narrowed due to a much larger growth occurring in lone mothers' employment rates by age 5. However, there was still a sizeable gap between employment rates of partnered and lone mothers at this time. Among fathers, the high unemployment rates and high rates of part-time hours among Bangladeshi and Pakistani fathers were very striking.

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Chapter 12

INCOME AND POVERTY

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Introduction

This chapter takes a preliminary look at the income data, as reported in bands at this and previous sweeps. One objective, as in the report on sweep 2 of the Millennium Cohort Study (MCS 2), was to calculate an approximate equivalent to the Government's official rate of child poverty derived from the Family Resources Survey, and published in the Households Below Average Income Statistics (Department for Work and Pensions, 2007). We adopt from the 2005-6 Households Below Average Income Statistics (HBAI) a 'poverty line' representing 60 per cent of the national median before housing costs The data collected on income in a multi-purpose survey like MCS can never be as detailed or accurate as those collected in a survey focusing on collecting income data. As noted in the report on MCS 2 and below, there are several other reasons why estimates of poverty rates from MCS are not completely comparable with the official source. This chapter mostly relies on availability of income data which were collected in 18 bands at sweep 3 of the MCS. For this report we have made an effort to reduce the bias there may be from relying on the midpoint of grouped data when assigning cases to the poverty group. We have also sought to reduce biases due to the families who did not answer income questions or who did not respond at all.

The technical Appendix to this chapter reports on these adjustments for dealing with banded data, some people not giving a valid answer on income (item non-response) and some not taking part at all (unit non-response, or 'attrition'). Section 1 looks at some of the characteristics of families in different parts of the reconstructed income distribution. Section 2 focuses on the cases assigned to the 'poverty' category and section 3 examines changes in poverty status over time.

1. Distribution of families over the equivalised income distribution

The distribution of equivalised family income over five equally sized-groups (quintiles) is presented in this section. The estimates of take-home income include the adjustments described in the Appendix, such as an allowance ('equivalisation') for varying numbers of children and adults in these families using the modified OECD scale. It is apparent from Tables A12. 2 and A12. 3 that lone parents in this survey typically received much lower incomes than the couple families. Lone mothers' responses clustered in the range £5,000-£10,000 per annum, around £100-£200 per week. Couples were most likely to report net incomes in the range £20,000-£35,000, or £400-£700 weekly. The equivalisation, which allows for the fact that the couple's income has to provide for an additional adult (and, on average, more children), reduces some of the contrast. Putting both lone parent and couple families together, and allowing for sampling and attrition weighting, the distribution of equivalised income is reported in Table 12.1. The mean equivalised income (expressed in terms of the needs of a couple with no children) ranges from £120.46 per week for the bottom fifth of the distribution to £734.61 per week for the top fifth. That is to say, average income in the top fifth, adjusted for number of children and partner, is about six times higher than the average income in the bottom fifth. The average weekly income in the second lowest 20 per cent is £216.86, which, as we will see below, happens to coincide with the value of weekly equivalised income at 60 per cent of the national median in HBAI. The observed sample sizes in each quintile are not the same because the lower income groups include more over-represented cases which are weighted by factors under 1.

Table 12.1
Quintile distribution of modified OECD equivalised weekly net family income at MCS 3

Quintiles	Weighted percentages	[95% CI]	Mean £ [95%CI]		Observed sample	*Weighted n*
Bottom	20	(18.6, 21.5)	120.46	[118.94,121.98]	3400	*3038*
Second	20	(18.9, 21.1)	216.86	[215.51,218.22]	3298	*3038*
Middle	20	(19.0, 21.0)	318.50	[317.19,319.82]	2964	*3036*
Fourth	20	(19.0, 21.1)	443.54	[441.47,445.62]	2901	*3038*
Top	20	(18.2 , 21.9)	734.61	[717.38,751.84]	2665	*3036*
Total	100	-	366.75	[354.00,379.50]	15228	*15186*

Table 12.2 shows the income quintiles by country of interview. Wales is slightly more likely to have families in the bottom 20 per cent of the UK-wide MCS families (21%). The differences are greater, though still modest at the top: Scotland and England have somewhat more than proportional shares of families in the UK top fifth (22% each) while Wales has 16.5 per cent of families with income in the top fifth and Northern Ireland only 15 per cent.

Table 12.2
Distribution of equivalised net family income at MCS 3 by country of interview per cent

Variable	Categories	Quintiles					Base (unweighted)	Base (unweighted)
		Bottom	Second	Middle	Fourth	Top		
UK country of interview at sweep 3	England	19.9	19.3	19.4	19.8	21.5	9746	8941
	Wales	21.0	21.5	19.0	22.1	16.5	2139	2223
	Scotland	19.3	18.7	20.2	19.7	22.2	1804	1935
	Northern Ireland	20.1	22.8	23.6	18.8	14.8	1534	1908
	Total	20	20	20	20	20	15223	15007
								P(F)=0. 0035

Notes: Sample: MCS3 main respondents
Percentage weighted by weight1 adjusted for attrition to Wave 2 (bovwt1)

Table 12.3 breaks the families down into the strata within the countries from which they were originally sampled. As expected, the incidence of low and high income is more variable across strata. Families sampled in the 'advantaged' (or non-disadvantaged) stratum have only around a one-in-ten chance of being observed in the bottom fifth income class at MCS 3, whereas the families sampled in ethnic minority wards of England had a 45 per cent chance of being in the bottom 20 per cent and those sampled in the other disadvantaged wards around a one–in-four chance. The respondents in the wards of England with high minority ethnic populations and the disadvantaged wards of Northern Ireland had the lowest chance of top quintile income (6 per cent). The other disadvantaged wards in England and Wales had 11 per cent each, in the top income group, and the disadvantaged wards in Scotland 13 per cent. Scotland also had the highest proportion of families in non-disadvantaged wards with the top quintile of income (31%), followed by England (30%), and Northern Ireland and Wales (24%). Although high-income families are less common among those originally sampled in disadvantaged areas, they do exist. Further research will be needed to see whether they were still living in these original locations and how long their high income dates back.

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Table 12.3
Quintile of equivalised income by sampling stratum

row percentages

Categories	Quintiles					Base
	Bottom	Second	Middle	Fourth	Top	
England – Non disadvantaged	10.35	14.43	20.72	24.66	29.84	4068
England - Disadvantaged	26.93	25.17	20.20	16.76	10.94	3758
England – Ethnic minority	45.18	29.38	11.23	8.09	6.12	1879
Wales - Non disadvantaged	11.68	16.02	18.56	29.94	23.80	668
Wales- Disadvantaged	26.97	26.24	20.08	15.77	10.93	1509
Scotland - Non disadvantaged	10.81	14.08	20.74	23.36	31.00	916
Scotland - Disadvantaged	24.30	22.30	20.51	19.62	13.27	897
Northern Ireland - Non disadvantaged	8.59	17.34	24.41	25.25	24.41	594
Northern Ireland - Disadvantaged	28.22	29.61	21.83	14.70	5.64	939
						Chi2(32)=2400, P<0.001

Notes: Sample: MCS3 main respondents
Weighted percentages adjusted for non-response at MCS 2

Family income and the age of the mother were positively associated. Table 12.4 shows that nearly half of the families where the mother was under 26 at MCS 3 were in the bottom quintile – these were mothers who would have been 20 or under at the cohort child's birth. At the other extreme, not quite symmetrical, over one third of the oldest group of mothers (41 and above at MCS 3) were in the top income quintile, as were almost as many of those aged 36-40, i.e. age 30 or more at the child's birth.

Table 12.4
Distribution of modified OECD equivalised net family income at MCS 3 by mother's age

row percentages

Variable	Categories	Quintiles					Unweighted base	*Weighted base*
		Bottom	Second	Middle	Fourth	Top		
Mother's age at MCS 3	Under 26	48.9	29.5	15.1	5.15	1.4	1565	*2555*
	26-30	30.3	28.7	21.2	13.8	6.12	2697	*4455*
	31-35	15.7	19.4	23.0	24.1	17.8	4442	*4209*
	36-40	10.8	13.3	20.0	24.8	31.2	4114	*2046*
	41 and above	11.6	15.9	16.7	21.4	34.3	1995	*14819*
								P(F)<0.001

Notes: Sample: MCS3 main respondents
Percentage weighted by weight2 and adjusted for unit non-response (bovwt2)

The most important sources of family income are parents' earnings. Couples where both were earning were over-represented in the top three quintiles, and very rare in the lowest fifth of family incomes (Table 12.5). Conversely, three quarters of the couples with no earners were in the lowest income group. Couples where the main informant was not earning but the partner was earning were relatively uncommon at both the bottom and the top ends of the income distribution, with the highest proportion (31%) in the second lowest income group. Couples where the main informant was the sole earner have a lower income profile than the other one-earner couples, a profile which is not far removed from that of earning lone parents. The latter had a small (5%) chance of top quintile income, and an average chance (20%) of being in the overall bottom 20 per cent. This contrasts with the

poorest group, lone parents with no earnings. Almost none of them had top quintile income and 81 per cent had income in the bottom group

Table 12.5
Quintile distribution of modified OECD equivalised net family income at MCS 3 by parents' labour-market status

row percentages

Categories	Quintiles					Unweighted base	*Weighted base*
	Bottom	Second	Middle	Fourth	Top		
Couple: Both in work or on leave	2.94	10.6	23.7	30.8	31.9	6926	*7094*
Couple: Main in work or on leave, partner not in work nor on leave	27.2	44.0	14.6	6.29	7.79	367	*314*
Couple: Partner in work or on leave, main not in work nor on leave	12.1	31.2	23.3	16.6	16.8	3959	*3925*
Couple: Both not in work nor on leave	74.7	20.0	3.22	1.02	1.03	920	*811*
Lone parent: working	20.0	37.7	25.0	11.9	5.38	1191	*1243*
Lone parent: not working	80.6	16.4	1.96	0.657	0.417	1820	*1753*
							P(F)<0.001

Notes: Sample: MCS 3 main respondents
Percentage weighted by weight2 and adjusted for unit non-response (bovwt2)

Education levels are associated with earning power and the chances of being employed. We therefore expect to see a gradient in family income by the education of each parent in Table 12.6. In the top income group we find half of the fathers with postgraduate qualifications, 41 per cent of the fathers with first degree level qualifications and only 5 per cent of those with no formal qualifications, either academic of vocational. The two graduate groups of fathers are correspondingly absent from the lowest quintile (4 per cent). The pattern is similar for the somewhat larger sample of mothers, though marginally less favourable. Relatively high proportions of mothers with NVQ level 5 and NVQ level 4 are in the top income group (49 and 38 per cent respectively) and around 6 per cent in the lowest. Only 2 per cent of mothers with no qualifications are in the top income group and over half (53%) in the bottom 20 per cent.

Table 12.6
Quintile distribution of equivalised net family income at MCS 3 by parents' education

row percentages

		Quintiles					Unweighted base	*Weighted base*
		Bottom	Second	Middle	Fourth	Top		
Father's education	NVQ level 1	15.9	30.4	25.0	19.5	9.18	661	*679*
	NVQ level 2	9.69	21.8	28.9	24.6	15.0	2861	*2914*
	NVQ level 3	8.11	18.4	24.6	29.7	19.2	1620	*1657*
	NVQ level 4	4.0	8.73	18.0	28.0	41.3	2845	*3022*
	NVQ level 5	4.07	7.83	13.8	23.8	50.5	1254	*1285*
	Overseas & other qualifications	22.2	28.8	23.8	14.3	10.8	473	*415*
	None of these	32.6	30.5	18.8	13.5	4.54	1262	*1089*
								P(F)<0.001
Mother's education	NVQ level 1	32.9	32.7	19.1	10.7	4.67	1120	*1131*
	NVQ level 2	22.0	23.4	24.0	20.6	9.93	4050	*4218*
	NVQ level 3	13.7	20.9	25.6	25.2	14.6	2192	*2150*
	NVQ level 4	5.8	10.8	18.0	27.1	38.3	3991	*4140*
	NVQ level 5	6.63	8.31	14.9	20.8	49.3	1128	*1123*
	Overseas & other qualifications	38.1	30.1	18.2	8.34	5.31	433	*388*
	None of these	52.5	28.5	12.9	3.94	2.18	1878	*1648*
								P(F)<0.001

Notes: Sample: MCS3 main (or partner) respondents
Percentage weighted by weight2 and adjusted for unit non-response (bovwt2)
Father's education excludes partner respondents who are not fathers of the cohort child,
Mother's education excludes main respondents who are not mothers of the cohort child

Table 12.7 shows some of the sources of state benefit income received by MCS families. All families in the study, by virtue of the way they were recruited, would be recipients of child benefit, so this benefit is not shown in the table. Almost all (98%) reported receiving it. Receipt of tax credits was reported in all income quintiles, but particularly the middle three. High earners might not qualify for working tax credits, nor would families with no earner at all. The latter would often be eligible for income support. Over 90 per cent of those receiving Income Support were in the bottom two net income groups. There is a similar pattern for housing benefit which is also means-tested. Disability and incapacity benefits are means-tested .Claimants have to show that they have some form of impaired capacity that is likely to affect earning power, but the disabled living allowance is not conditional on being out of paid work. Relatively few of the families in the top two income fifths reported receiving either disability or incapacity benefits (13 per cent and 7 per cent respectively) but this is still more than reported receiving income support or housing benefit at these top levels of family income. Nearly two thirds of families claiming at least one of these health-related benefits are in the bottom two income groups (27 per cent in the lowest and 30 per cent in the second quintile) showing an association of ill health, with low income.

Table 12.7
Selected sources of income by quintile of equivalised net family income at MCS 3

Type of benefit	Receipt	Quintiles					Unweighted base	*Weighted base*
		Bottom	Second	Middle	Fourth	Top		
Main respondent receiving child tax credit	Yes	13.7	25.0	26.0	23.8	11.4	6552	*6466*
	No	24.9	16.3	15.4	17.4	26.4	8382	*8489*
								P(F)<0.001
Main respondent receiving working tax credit	Yes	14.9	38.5	23.7	16.2	6.6	2883	*2642*
	No	21.2	16.1	19.2	20.7	22.8	12045	*12313*
								P(F)<0.001
Main receiving income support	Yes	70.9	24.8	3.54	0.384	0.373	710	*598*
	No	17.9	19.9	20.7	20.8	20.8	14218	*14357*
								P(F)<0.001
Main receiving housing benefit	Yes	62.3	30.6	5.96	0.74	0.47	971	*874*
	No	17.4	19.4	20.8	21.1	21.2	13957	*41081*
								P(F)<0.001
Main receiving disability living /attendance allowance or incapacity benefit *	Yes	27.4	30.9	21.0	13.5	7.3	940	*873*
	No	19.6	19.4	19.9	20.4	20.7	13988	*114082*
								P(F)<0.001

Notes: Sample: MCS3 main respondents who have a resident partner
Row percentage weighted by bovwt2 and which also adjusts for unit non-response
* The majority (75.8%) of incapacity benefit recipients also receive disability living or attendance allowance

1.1. Subjective and objective indicators of poverty

We now compare the 'objective' estimate of income relative to needs with the subjective experience of poverty or affluence as reported by the mothers in answer to a question about how they were managing financially. Nearly all those in the top income quintile said they were either living comfortably (55%) or 'doing all right' (34%). The proportion claiming to be living comfortably falls to 6 per cent in the bottom quintile, where the most common response is 'just about getting by' (42.5%), though 17 per cent of this group were 'finding it quite difficult' and 7 per cent 'very difficult'. Looking at the families giving some indication of income inadequacy ('just about getting by' to 'finding it very difficult'), the row percentages show that well over half of such families are in the bottom two income groups. There are a few better-off families who do not feel financially comfortable, just as there are some on low incomes who report managing well. So on this basis, subjective and objective measures of poverty do not completely coincide, but there is a strong association. The anomalous cases might be explained by current income being transitory, or those with high income facing particularly high costs or debts, for example, but they could also reflect different psychological adaptation to given objective circumstances or what is reported about them.

The respondent's rating of life satisfaction is another measure of well-being, which one might expect to reflect the family's material standard of living. Table 12.8 shows that the least satisfied group, who rated their lives at 6 or below out of 10, were over-represented among the low income respondents, and the most satisfied group (scoring 9 or 10) were more likely to be in the top two income bands. The gradients are not, however, as marked as for the specific question of ease or difficulty of coping with their income.

Table 12.8
Quintile of equivalised net family income at MCS 3 by main respondent's reports on managing financially and by life satisfaction

Row percentages with (Column percentages) in parentheses

Categories	Quintiles					N	*Weighted base*
	Bottom	Second	Middle	Fourth	Top		
How well would you say you (and your partner) are managing financially these days?							
Living comfortably	5.25 (6.39)	9.67 (11.7)	14.4 (17.3)	24.7 (29.4)	46 (54.9)	3435	*3549*
Doing all right	14.2 (27.0)	19.6 (37.1)	23.9 (44.9)	24.4 (45.5)	18.0 (33.5)	5622	*5553*
Just about getting by	30.2 (42.5)	27.3 (38.2)	20.8 (28.9)	14.4 (19.9)	7.21 (9.94)	4128	*4099*
Finding it quite difficult	43.5 (16.9)	25.0 (9.69)	17.5 (6.72)	10.8 (4.11)	3.25 (1.24)	1150	*1135*
Finding it very difficult	50.7 (7.22)	23.4 (3.32)	15.3 (2.14)	7.63 (1.06)	2.97 (0.414)	402	*415*
							P(F)<0.001
Life satisfaction *i.One to 10 scale, 10 is most satisfied*							
Lowest Up to 6	31.4 (43.3)	24.5 (31.7)	19.7 (24.4)	14.6 (17.9)	9.77 (11.9)	3633	*3647*
Medium 7-8	14.4 (32.5)	18.6 (39.6)	21.4 (43.6)	22.9 (45.9)	22.7 (45.3)	5764	*5984*
High 9-10	13.5 (24.2)	17.0 (28.7)	19.7 (31.9)	22.7 (36.2)	27.0 (42.8)	4758	*4752*
							P(F)<0.001

Notes: Sample: MCS3 main respondents
Percentage weighted by weight2 and adjusted for unit non-response (bovwt2)

The regression reported in the Appendix Table A12. 6 puts several of these variables into a model which is then used to predict the level of net family income. In this context, workless couples and workless lone parents are the strongest indicators of low income, but non-employed partners, minority ethnicity (especially Pakistani/ Bangladeshi ethnicity), along with having been sampled in a ward with a high minority ethnic population or some other disadvantaged areas and regions, are also significant negative predictors of net family income. Having a degree and living in London are independently associated with high family income.

2. Families below national 'poverty line'

The threshold for income poverty used in most of this chapter, the equivalent of £217 net per week for a childless couple, corresponds to 60 per cent of the national median in the official 2005-6 HBAI tables. This threshold divides the MCS 3 income distribution at 30.4 per cent of families lying below this level. We apply the same modified OECD equivalence scale as now used in HBAI, and give the full treatment of imputing values within bands and adjusting for item and unit non-response (as explained in the Appendix to this chapter). The estimate applies nationally to families with a child in the MCS who was close to their fifth birthday during the fieldwork period in 2006. This level of MCS families in poverty seemed rather high in relation to estimates we had published for MCS 1 and MCS 2, not to mention the national child poverty rates discussed in the next paragraph. Table 12.9 reveals that one reason our estimate of a child poverty rate for MCS 3 appeared to have gone up is that this is the first time we have attempted to correct for non-response bias. This table incorporates an adjustment for non-response (but not the adjustment for missing income data from those who took part), and shows that at each MCS sweep the non-respondents were more likely to be below the 'poverty line' than others. Corrected for non-response, the estimate for MCS 1

is 29.4 per cent, for MCS 2, 28.9 per cent, and for MCS 3, 30.7. Without this correction the first row of Table 12.9 shows them to be 28.0, 25.6 and 27.6 respectively. All these estimates are within each other's sampling error, so we could say that, on our best estimates to date, the actual incidence of income poverty for the cohort families had not changed much over the three survey sweeps in either direction. This is disappointing, given the Government's objective to reduce the numbers of children in poverty. We are cautious about drawing firm conclusions because we are not measuring income in exactly the same way as the official indicator, and would still like to understand if comparability between sources can be improved. As far as the time path is concerned, MCS estimates for children growing up from 9 months to age 5 are very similar to those estimated nationally for children of all ages in HBAI. Child poverty in all families nationally has gone from 23 per cent in 2001/2, down to 21 per cent in 2004/05 and then back up to 22 per cent in both 2005/06 and 2006/07.

Table 12.9
Estimates of families below 'poverty line' in Sweeps 1, 2 and 3, each with and without adjustment for unit non-response

Weight used	Sweep 1 [2001-2]		Sweep 2 [2003-5]		Sweep 3 [2006]	
	% below 'poverty line' [95% CI]	Base (Obs)	% below 'poverty line' [95% CI]	Base (Obs)	% below 'poverty line' [95% CI]	Base (Obs)
Sampling weight only	**28.0** [26.3,29.9]	**16941**	**25.6** [23.9, 27.1]	**13024**	**27.6** [25.7,29.0]	**13617**
Unit non-response weight (incorporating sampling weight)	29.4 [27.5,31.2]		28.9 [27.2, 30.7]		30.7 [28.9,32.5]	

Notes: Sample: MCS 3 main respondents
Band midpoint used throughout. Percentage below `poverty line' estimated using modified McClements scale (Ref: MCS1 User Guide to Initial Findings)

Table 12.9 used the band midpoint estimate of income for all three surveys for comparability, but the difference between midpoint and the imputed continuous variable at MCS 3 is trivial, as shown in Table 12.10. We proceed with the analysis taking a 'poverty rate' of 30.4 per cent for MCS 3, urging caution about direct comparison with other sources.

The HBAI poverty threshold, before housing costs, was set at 60 per cent of median equivalised income in the Family Resources Survey (FRS) which collected data between April 2005 and March 2006. Twenty-two per cent of all dependent children were in households that fell below this line, as were 24 per cent of all children living in households with a youngest child under 5. We need to point out that although the periods of data collection overlap in the last three months of the HBAI 2005-6 figures, we were unable to look at the HBAI for 2006-7 whose publication did not take place until after this work was done. Another, perhaps more fundamental, difference between the two sources is the different population involved -- all dependent children in HBAI, whereas in MCS 3 we have families with a five-year-old child. There is far greater attention and effort paid to collecting accurate income details in the FRS. There is also the possibility that the flexible reference periods for which MCS parents were asked to report income could have distorted the comparison. HBAI counts all household income, whereas MCS only asks about the income of up to two parents. It is possible that some apparently poor families in MCS would not appear poor in the HBAI if there are other income-earners in the household. However, there are too few families in households with other adults for this to explain much of the difference. We also suspected that the estimate of poverty might be exaggerated by taking midpoints of grouped income, but we have established that this exaggeration is minor (Table 12.10). So we recognise that there is a difference between the level of income poverty, as measured here, and the official indicator which has been seen before and may have arisen for several

reasons. Another possibility still to be investigated is that some MCS respondents may not have perceived their housing benefit as part of their net income, particularly social tenants whose benefit is paid direct to the landlord. The source of income may be more completely recorded in the HBAI. In the discussion of the following tables we make some comments about whether the relative risks of poverty apply to similar groups in the two sources.

Table 12.10
UK poverty estimates at sweep 3: Band midpoint versus imputed continuous income

	Band midpoint			Interval regression imputed income		
	Estimate (%)	[95% CI]	Observed sample (weighted)	Estimate (%)	[95% CI]	Observed sample (weighted)
Above 'poverty line'	69.3	(67.5 , 71.1)	9031 (9512)	69.6	(67.8,71.5)	10102 (10577)
Below 'poverty line''	30.7	(28.9, 32.5)	4586 (4205)	30.4	(28.5,32.2)	5126 (4609)
UK total	100	NA	13617 (13717)	100	NA	15228 (15186)

Notes: Sample: MCS 3 main respondents
Percentage weighted by weight2 and adjusted for unit non-response (bovwt2)

Our estimated rate of 'poverty' for MCS families is 30 per cent for the whole of the UK and England, 33 per cent for Northern Ireland, 31 per cent of Wales and 28 per cent for Scotland (Table 12.11). This reflects the relativities of child poverty rates in HBAI to the extent that Northern Ireland and Wales have the first and second highest rates of children living under the 60 per cent median household income, but in HBAI, Scotland is on a par with England rather than 2 points below (although within sampling error). Within England, the region with the highest rate of poverty in MCS 3 is the North East (40%) and the lowest the South East (21%). London has a poverty rate of 35 per cent. The regional relativities are similar to those found in HBAI.

Table 12.11
Prevalence of income poverty at sweep 3 by country and region

Government Office Region	Per cent below 'poverty line' income	Observed sample below 'poverty line'	Observed base (N)	Weighted base
Northern Ireland	32.6	519	1534	1908
Scotland	27.7	466	1804	1935
Wales	31.4	720	2139	2223
England	30.3	3420	9746	8941
Regions within England and UK total : using weight 2 (bovwt2)				
North East	39.8	180	440	554
North West	39.2	534	1246	1601
Yorkshire and Humberside	37.0	488	1104	1316
East Midlands	28.9	251	801	1105
West Midlands	34.1	500	1139	1218
East of England	23.9	305	1063	1444
London	34.6	639	1652	1696
South East	21.0	314	1495	2295
South West	25.6	209	805	1231
UK total	30.4	5126	15228	15186
			P(F)= 0.0036	

Notes: Sample: MCS 3 main respondents
Percentage weighted by weight2 and adjusted for unit non-response (bovwt2)

The families most likely to be below the 'poverty line' are those with the largest number of children (for whom the equivalence scale recognised more need). Among those with four or more children under 14, 58 per cent were below the line (Table 12.12). The families least likely to be below the line were not those with only the cohort child by MCS 3, but those with two children, where the poverty rate was 23 per cent. HBAI produces the same ranking. The demographic characteristics of families who only have one five-year-old are somewhat different from those who only have a teenager or a young baby, and this may be adding to the difficulties of drawing a simple comparison.

MCS families with only one parent had very high chances of income poverty (70%), which again reflects relativities in HBAI, but is twice as high as the HBAI household poverty rate for lone parents (35% of children of all ages). Poverty rates among couples are lower and closer to HBAI, where the rate for all couples with children is 18 per cent. The MCS 3 rate is lowest for couples who are married -- 17 per cent compared to 32 per cent for couples who are cohabiting. This disparity probably reflects a number of differences such as age and education between these two sets of couples, rather than any income-enhancing properties of marriage itself.

Table 12.12
Incidence of income poverty by number of children, number of parents and the marital status of couples

		Per cent below 'poverty line'	Observed sample below 'poverty line'	Observed base (N)	Weighted base
Number of children under 14 years old	One (Cohort member only)	30.7	959	3020	*3006*
	Two	23.1	1377	7473	*7617*
	Three	36.2	1377	3371	*3310*
	Four or more	58	880	1364	*1252*
				P(F)<0.001	
Partnership status at MCS 3	Married	17.1	1997	9385	*9248*
	Cohabiting	31.8	935	2773	*2887*
	Lone parent	69.8	2183	3021	*3006*
					P(F)<0.001

Notes: Sample: MCS 3 main respondents
Percentage weighted by weight2 and adjusted for unit non-response (bovwt2)

Table 12.13 shows the estimated poverty rates in the three types of ward from which the families were originally sampled. Two thirds of those in wards with high minority ethnic populations had poverty-level incomes at MCS 3, those sampled in other disadvantaged areas had an intermediate poverty rate above average at 43 per cent. Those sampled in the rest of the country (non-disadvantaged) had a poverty rate of 19 per cent. The gradient is in a plausible direction, but the incidence in the areas with high minority ethnic populations is notable. We turn next to the ethnicity of individual respondents, regardless of where they were living at the time the sample was drawn. Table 12.14 shows that the highest rates of poverty were reported by families in the Pakistani and Bangladeshi combined group – 74 per cent on the basis of mother's ethnic group, and 75 per cent on the basis of the child's. Black families have the next highest rate, at around 50 per cent, while all non-white groups are more likely than whites to have poverty-level income. The HBAI estimate for all children in 2005-6 was 58 per cent for Pakistani and Bangladeshi groups combined, 33 per cent for black children and 19 per cent for whites.

Table 12.13
Incidence of income below the 'poverty line' by type of ward originally sampled at MCS 1

	Per cent below 'poverty line'	Observed sample below	Observed base (N)	*Weighted base*
Ethnic	66.4	1189	1879	*852*
Disadvantaged	43.2	2853	7103	*5380*
Non-disadvantaged	19.2	1084	6246	*8954*
				P(F)<0.001

Notes: Sample: MCS 3 main respondents
Percentage weighted by weight2 and adjusted for unit non-response (bovwt2)

Table 12.14
Incidence of income below the 'poverty line' at MCS 3 by ethnicity

	Ethnic group	Per cent below 'poverty line'	Observed sample below 'poverty line'	Observed base (N)	*Weighted base*
Mother's ethnicity (i.e. excluding main respondents who are not mothers of the cohort child)	White	27.1	3679	12697	*13173*
	Mixed	49.8	76	138	*147*
	Indian	28.8	122	367	*278*
	Pakistani/Bangladeshi	74.1	666	863	*567*
	Black or black British	50.8	285	512	*436*
	Other including Asian	36.7	95	228	*208*
					P(F)<0.001
Cohort member's ethnicity	White	26.8	3629	12697	*13164*
	Mixed	43.0	207	441	*495*
	Indian	31.2	131	382	*278*
	Pakistani/Bangladeshi	74.7	764	982	*634*
	Black or black British	52.5	292	513	*426*
	Other including Asian	46.8	103	210	*185*
					P(F)<0.001

Notes: Sample: MCS 3 main respondents with an ethnicity classification or MCS children with ethnicity classification
Percentage weighted by weight2 and adjusted for unit non-response (bovwt2)

Table 12.15 lists poverty rates for several indicators of the family economy. As with the broader income distribution shown in Table 12.6, dual-earner couples are at low risk of poverty (7%) and 'workless couples' at high risk (89%). This compares with a poverty rate for workless couples in HBAI of 64 per cent. The other type of no-earner family is 'lone parents without employment'. In MCS 3, their poverty rates reach the pinnacle of 92 per cent, considerably above the 56 per cent for 'lone parents of children of all ages without jobs' in HBAI. Employed lone parents in MCS 3 have a poverty rate of 39 per cent, also considerably above HBAI (7% for lone parents with full-time jobs and 17% with part-time employment). It will be necessary to see whether the age and partnership history of lone parents in MCS 3 reveal differences between parents of five-year-olds and families with dependent children of all ages. The education and age differences also shown in Table 12.15 confirm the gradients seen in section 2 of this chapter for the wider income distribution. The poor families tend to have young and the least educated parents, who tend to be the same people. Housing tenure also shows the expected social polarisation, with tenants of social housing being five times as likely to be below the 'poverty line' (68%) as owner-occupiers (13%). HBAI shows a similar ranking of child poverty rates by housing tenure, though the categories reported are not exactly comparable.

Table 12.15
Incidence of income poverty at MCS 3 by parent's labour-market status, education, mother's age and housing tenure

Variable	Categories	Per cent below 60%	Observed sample (n)	Unweighted base (N)	*Weighted base*
Combined labour-market status of the main and partner respondents	Couple: Both in work or on leave	7.36	549	6926	*7094*
	Couple: Main in work or on leave, partner not in work nor on leave	51.7	199	367	*314*
	Couple: Partner in work or on leave, main not in work nor on leave	27.9	1353	3959	*3925*
	Couple: Both not in work nor on leave	89.2	834	920	*811*
	Lone parent: working	38.5	488	1191	*1243*
	Lone parent: not working	92.4	1693	1820	*1753*
				P(F)<0.001	
Father's education (excluding non-father partner respondent)	NVQ level 1	30.5	230	661	*679*
	NVQ level 2	19.4	609	2861	*2914*
	NVQ level 3	16.1	298	1620	*1657*
	NVQ level 4	8.23	266	2845	*3022*
	NVQ level 5	8	134	1254	*1285*
	Overseas and other qualifications	38.3	217	473	*415*
	None of these	50.8	685	1262	*1089*
				P(F)<0.001	
Mother's education	NVQ level 1	49.6	600	1120	*1131*
	NVQ level 2	34.1	1483	4050	*4218*
	NVQ level 3	24.4	593	2192	*2150*
	NVQ level 4	10.5	492	3991	*4140*
	NVQ level 5	10.8	125	1128	*1123*
	Overseas and other qualifications	56.6	271	433	*388*
	None of these	69.2	1351	878	*1648*
				P(F)<0.001	
Mother's age at MCS 3	Under 26	66	1045	1565	*1555*
	26-30	44.9	1279	2697	*2555*
	31-35	25.7	1298	4442	*4455*
	36-40				*4209*
	41 and above	19.5	431	1995	*2046*
				P(F)<0.001	
Housing tenure	Own	12.8	1532	9721	*9777*
	Rent privately	52.5	761	1322	*1329*
	Rent from LA/HA*	68.1	2596	3686	*3605*
	Other	46.6	215	419	*407*
				P(F)<0.001	

Notes: Sample: MCS 3 main respondents
* LA/HA: Local authority/Housing association
Percentage weighted by weight2 and adjusted for unit non-response (bovwt2)

The standard procedure to adjust for the income needs of different families through equivalence scales does not allow for the extra needs of families with a disabled person, be they a child or a parent (Burchardt and Zaidi, 2008). If we approximate having the sort of problems that are officially classified as disability with being reported as having a

longstanding illness which limits activities, then 6 per cent of the MCS children and 20 per cent of the families have at least one disabled parent at age 5. The poverty rates for these families, even before allowing for the extra expenses associated with disability, are 35 and 38 per cent respectively (Table 12.16).

Table 12.16
Poverty rates for families with health problems

Variable	Categories	Per cent below 'poverty line'	Observed sample-base (N)	*Weighted base*
Whether cohort child has longstanding illness	Yes	34.6	2979	*2972*
	No	29.4	12172	*12145*
				P(F)<0.001
Whether cohort child's illness limits activity (sub-sample of families whose child has a longstanding illness)	Yes	39.7	949	*894*
	No	32.5	2030	*2078*
				P(F)= 0.0004
Main or partner has a longstanding illness limiting activity	Yes	37.6	3178	*3089*
	No	28.6	12002	*12054*
				P(F)<0.001

Notes: Sample: MCS 3 main respondents
Responses apply to the first cohort child in a family with twins or triplets
Percentage weighted by weight2 and adjusted for unit non-response (bovwt2)

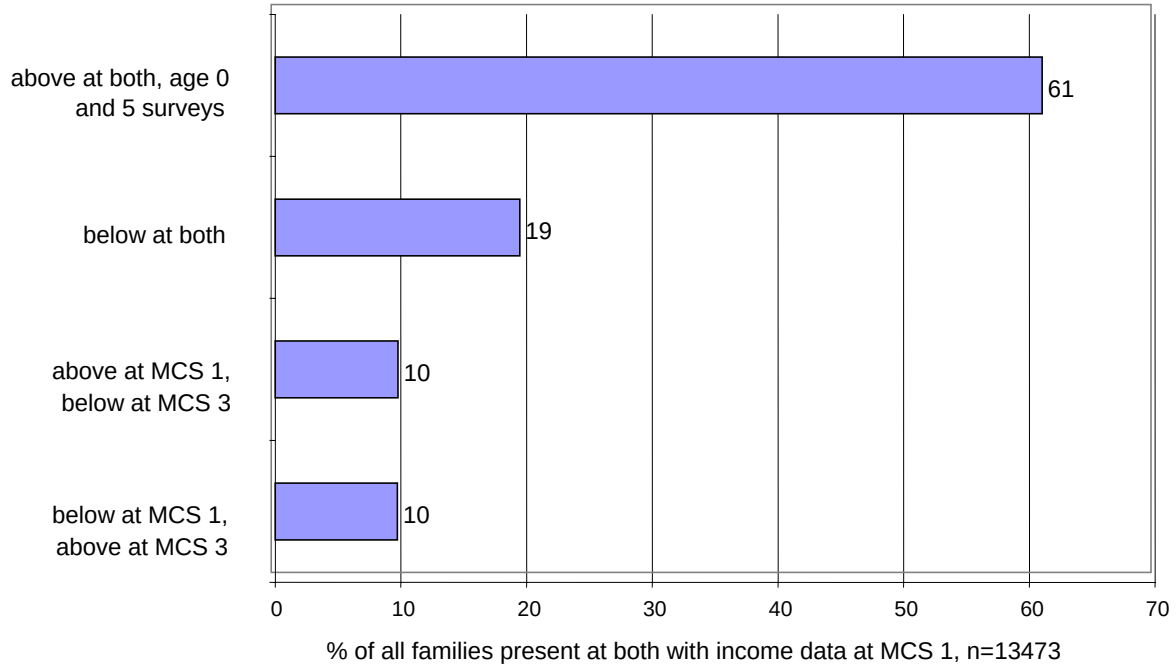
To give an idea of multiple disability we report that 10 per cent of cohort children with Limiting Longstanding Illness also have at least one parent with such an illness. About 43 per cent of these families with disabilities in two generations are below the 'poverty line' (not shown in table).

3. Income poverty over time

In this chapter we offer a very brief indication of the enormous possibilities for longitudinal analysis - of poverty dynamics - with two simple depictions of the experience of income below the 'poverty line' at MCS 3 and at each of the two previous surveys. In both cases, the earlier surveys' income, as in Table 12.9, is adjusted by the modified OECD equivalence scales used in MCS 3, but in neither case is there an adjustment (yet) for item non-response. There are 13,473 cases which can be compared between the first and third survey, ie between the cohort child at age 9 months and 5 years. For the comparison between MCS 2 (at age 3) and the current survey the sample numbers are down to 11,646, because of more item non-response and non-response to the age 3 survey of informants who were included at age 5. Nevertheless, the pictures are very similar. The numbers moving over or under the 'poverty line' between the two pairs of time points are more or less evenly matched within each analysis and at a fairly similar level across them. In the -r analysis across four years about 10 per cent of families are in each of the changed statuses, and in the two-year analysis 8 per cent have moved into and 9 per cent out of 'poverty'.. Behind the apparent stability in the average level of low income, there seems to be a fair degree of churning, as is also known from the analyses done of the smaller-sample British Household Panel Survey for the HBAI statistics. For both MCS analyses, 19 per cent of all families were below the 'poverty line' on both occasions and somewhat over 60 per cent

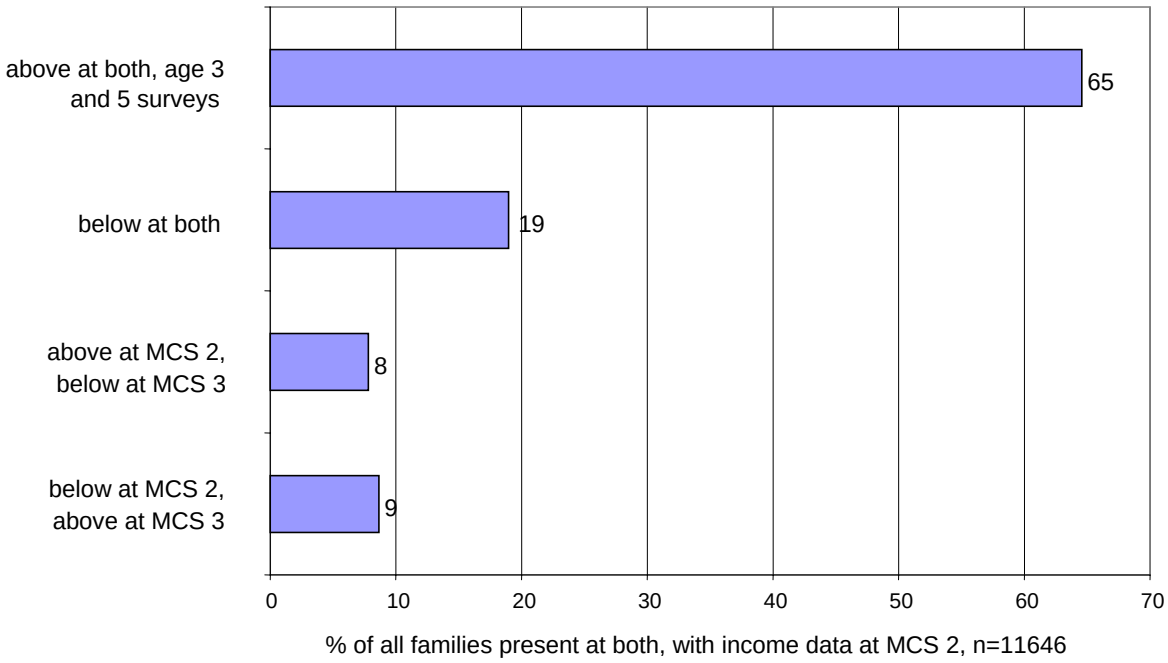
were above it both times. The pattern shown in Figures 12.1 and 12.2 is very similar to the comparison of MCS 1 and MCS 2 not shown here. The cross-sectional evidence reported in sections 1 and 2 of this chapter suggests that the movements across the 'poverty line' are likely to be associated with gaining or losing a job or a partner. How far this is borne out in the longitudinal data will be interesting to see.

Figure 12.1
Percentage of all families above or below 60% poverty line at both MCS 1 and MCS 3



Notes: Sample: MCS 3 main respondents also productive at MCS 1.

Figure 12.2
Percentage of all families above or below 60% poverty line at both MCS 2 and MCS 3



Notes: Sample: MCS 3 main respondents also productive at MCS 2.

Conclusions

Before summarising the findings reported here, we should point out that MCS 3 produced further information on income and poverty that is not within the scope of this chapter. There is more detail about sources and amounts of income and earnings than explored here. We did not cover the responses to some detailed questions attempting to quantify components of income. Neither did we explore the indicators of deprivation in terms of items that the household may not have and cannot afford. There are also unreported questions about problems with bills, and about saving. This chapter is clearly not the last word.

Among the many avenues for further research would be to bring these other variables into play, to investigate longitudinal pathways in an out of poverty, and to exploit cross-domain dynamics between income, health, education, family structure, migration and so on. The puzzle about why poverty rates for children aged 5 appear to be higher than the official figures for children of all ages clearly warrants even more investigation than it has received from us so far.

What we have been able to present is the first attempt to adjust the data for biases introduced by attrition and item non-response, which, we have established, are noticeable in the case of income data. We have shown that the practice of taking midpoints of these grouped income data provides plausible and reasonable estimates. Armed with adjusted data we have found wide gaps in the top and bottom income, those in the top fifth had an average net income, adjusted for family composition, which was six times higher than those in the bottom 20 per cent. The bottom 30 per cent had incomes below that corresponding to a commonly used yardstick of below 60 per cent of equivalised net income (before housing costs).

A large minority (3 in 10) of the cohort appear to have reached age 5 in poverty (as defined here). The ‘poverty’ rates for this cohort do not appear to have declined since 2001. Over and above the 30 per cent, a further group (around 1 in 10) were in families that had experienced poverty-level income in at least one of the two earlier surveys. Lone parents, workless couples, some, but not all, ethnic minorities, young mothers and tenants in social housing were at particularly high risk of reporting poverty-level incomes, in MCS, as in the official HBAI estimates. On the whole, the mothers in the low income families were more likely than those with the highest incomes to be feeling financial stress, poor health and generally lower life satisfaction, but many of them also reported good levels of coping and satisfaction. Future research and data will help us to understand how far poverty in the early years adds to children’s vulnerability and resilience.

Appendix to Chapter 12: Methods used to adjust income data

This chapter mostly relies on availability of income data which were collected in 18 bands at sweep 3 of the MCS (MCS 3). Bands of different sizes were used for lone and 'couple' families, as was the case in the previous MCS sweeps. Respondents were shown a card with weekly, monthly and annual bands of total take-home income from all these sources and earnings after tax and other deductions. These bands can be seen in Tables A12. 2 and A12. 3. These 'sources' implicitly included state benefits, which had been the subject of more detailed previous questions. Note that, unlike other state benefits, there was no attempt to ascertain the amounts of housing benefit and council tax benefit received as separate components, so they may well have been omitted from estimates of total net income as reported. An alternative approach to collecting income data in the survey, component by component, has been left outside the scope of this chapter.

Missing income data (item non-response)

Analysis of the collected data shown in Table A.12.1 indicated that over 7.5 per cent of respondents did not provide a valid income band by either refusing to give the information or by saying that they did not know their income. Item non-response for income was similar in sweeps 1 and 3, but was twice as high in sweep 2. It had been 7.5 per cent [with a 95% confidence interval (C) of 6.65, 8.55] out of the 18,552 families responding to sweep 1 {weighted % adjusting for unit non-response}. The corresponding estimate for MCS 2 is 14.5 per cent [13.5, 15.7] out of 15,590.

Table A12. 1
Completeness of MCS 3 banded household net income data

	Weighted percentages	[95% CI]	Observed sample	*Weighted N*
No missing income data	92.5	(91.7,93.2)	13617	*14933*
Missing income data (refusal, don't know)	7.5	(6.83,8.33)	1629	*1219*
Total			15246	*16152*

Notes: Weights throughout this chapter, unless otherwise stated, incorporate the original sampling weights and attrition weight (unit non-response) from sweep 2.
Sample: MCS 3 main respondents.

In reports on previous sweeps, we computed the income based on complete cases only (i.e. ignoring missing data) using the band midpoint whereby each individual within the band was assigned the same value. Clearly, this approach has some problems, especially when the proportion of families with missing or invalid income data is fairly large. Coupled with the overall unit non-response (or attrition), item non-response is increasingly difficult to ignore. Moreover, our ongoing assessment of unit non-response indicates that characteristics that predict unit non-response also predict income item non-response (not reporting a valid income). Evidently, analysing complete cases only would not have been the best option this time around.

Imputation of missing and continuous income from banded data

We imputed income for the 1,629 cases where it was missing using interval regression (Stewart, 1983). This method allowed us also to impute a continuous value within a band where income band was available, rather than assuming that all cases in a band had the same midpoint income. This was achieved using Stata's INTREG command (StataCorp, 2007; Conroy, 2005). INTREG fits a model of *y=[dependent variable 1, dependent variable 2]* on *independent variables* where in our case, *dependent variable 1* was the log lower

income band and *dependent variable 2* was log upper band. The bounds of the lowest and topmost band are respectively considered to be left and right censored. The predictors were main respondent's age at sweep 3, stratum within country, main respondent's NVQ (highest level across all sweeps), main and partner combined labour-market status at sweep 3, main respondent's ethnic group, region of sweep 3 interview and type of accommodation. Model estimates are presented at the end of this Appendix in Table A12. 6.

Comparison of band midpoint and imputed income

The correlation between imputed and band midpoint net family income for the 13,617 families with complete income data was 0.9906 (weighted), but the imputation was consistent with the suspicion that taking midpoints would understate income at the bottom of the distribution and overstate it at the top. Tables A12. 2 and A12.3 show a comparison of average net family income from imputation and band midpoint. The first two columns compare income as reported (non-equivalised) and the next two adjusted for the number and age of people in the family, using the modified equivalence scales (explained below) produced by the Organisation for Economic Co-operation and Development (OECD). Results in both tables are as expected i.e. weighted imputed means are higher than band midpoint in lower bands and the other way round for the top bands.

We have not attempted to allow for another possible problem, that the bands of income, where reported, may not be accurate. It seems likely that benefit income was under-reported in the small number of families who indicated that they had income in the lowest two or three bands, but this remains to be investigated. For present purposes, families with the lowest reported income are treated as having income below the 'poverty line', although we are not certain that the depth of their poverty is reliably estimated.

Table A12. 2
Band midpoint versus imputed net family income for MCS 3 lone parents

Weekly net family income band	Lone parent's average (mean) net weekly family income (weighted) £				Observed sample (unweighted)
	Band midpoint	Imputed	Equivalised (modified OECD) Band mid-point)	Equivalised (modified OECD) Imputed	
Less than £20	20.19	20.19	19.52	19.52	15
£20 less than £40	30.29	40.35	29.75	39.64	22
£40 less than £60	50.00	59.07	45.31	53.46	41
£60 less than £80	70.19	78.91	72.95	81.98	92
£80 less than £100	90.38	96.10	94.85	100.81	176
£100 less than £135	117.31	124.10	119.20	126.05	403
£135 less than £165	150.00	151.77	142.57	144.37	441
£165 less than £200	182.69	181.66	165.67	164.97	369
£200 less than £235	217.31	213.85	203.93	200.97	329
£235 less than £265	250.00	245.78	235.31	231.53	231
£265 less than £335	300.00	289.10	286.54	276.68	260
£335 less than £400	367.31	350.93	331.60	317.11	138
£400 less than £465	432.69	414.15	414.84	397.02	89
£465 less than £535	500.00	476.54	472.79	450.69	51
£535 less than £600	567.31	544.27	511.24	490.51	25
£600 less than £665	632.69	605.03	577.75	552.26	23
£665 less than £1,000	832.69	675.83	834.28	677.17	23
£1,000 or more	1000.00	1004.87	1007.77	1013.00	10
Don't know	NA	196.62	NA	181.18	185
Refused	NA	235.85	NA	215.44	85

Notes: Weights throughout this chapter, unless otherwise stated, incorporate the original sampling weights and attrition weight (unit non-response) from sweep 2.
Sample: MCS 3 lone parents

Table A12. 3
Band midpoint versus imputed net family income for couples

Weekly net family income band	Couple's average (mean) net weekly family income (weighted) £				Observed sample (unweighted)
	Band midpoint	Imputed	Equivalised (modified OECD) Band mid-point)	Equivalised (modified OECD) Imputed	
Less than £30	30.77	30.77	21.00	21.00	30
£30 less than £60	45.19	59.55	30.61	40.33	51
£60 less than £90	75.00	90.07	50.67	60.85	62
£90 less than £120	104.81	117.69	74.06	83.18	120
£120 less than £150	134.62	145.23	94.09	101.46	168
£150 less than £200	175	188.60	121.07	130.47	389
£200 less than £250	225	236.40	149.73	157.54	590
£250 less than £300	275	283.78	184.27	190.48	683
£300 less than £350	325	334.42	220.72	227.37	817
£350 less than £400	375	382.98	258.20	263.87	894
£400 less than £500	450	458.72	310.37	316.64	1,611
£500 less than £600	550	550.75	381.56	382.14	1,325
£600 less than £700	650	642.19	453.15	447.72	1,039
£700 less than £800	750	736.73	522.17	513.00	775
£800 less than £900	850	831.31	591.01	577.99	531
£900 less than £1,000	950	925.49	666.42	649.26	512
£1,000 less than £1,550	1269.23	1072.43	879.93	743.61	845
£1,550 or more	1538.46	1573.79	1044.13	1068.25	437
Don't know	NA	539.93	NA	367.03	973
Refused	NA	586.87	NA	399.40	306

Notes: Sample: MCS3 main respondents who have a resident partner.

Weighting

Analyses in this chapter use sweep 2 unit non-response (attrition) weights unless otherwise stated (Hansen, 2008). Weighting adjusts for original sampling weight as well as unit non-response at sweep 2. Further adjustments for unit non-response at sweep 3 are under preparation, but complicated by the recovery of nearly as many cases at sweep 3 which were absent at sweep 2 as the number present at sweep 2 but absent at sweep 3. For the time being the presumption is that the near zero net survey loss between the two sweeps has not much changed the biases introduced by survey loss between sweeps 1 and 2. All sweep 3 respondents who participated in sweep 1 are given an attrition weight here based on their characteristics at sweep 1, whether or not they participated in sweep 2. 'New Families', recruited for the first time at sweep 2, are weighted solely by their original sampling weight.

Equivalisation

This chapter uses modified OECD scales for equivalisation rather than McClements (HBAI team, 2005), which were used in earlier HBAI tables and in previous MCS reports. Each scale sets the family's needs relative to those of a couple with no children whose scale is set equal to 1. In the modified OECD scale, a family of one parent and one child under 14 has a

scale of 0.87, one parent and two such children 1.07 and so on. A comparison of the two scales is shown in Table A12. 4 and an illustration of how they are applied is given in Table A12. 5, which shows that the two scales produce very similar results: 30.4 per cent below the 'poverty line' on the modified scale and 30.6 per cent on McClements.

Table A12. 4
OECD and McClements household equivalence scales

Equivalence scales before housing cost	OECD	McClements*
First adult (Main respondent)	0.67	0.61
Spouse	0.33	0.39
Dependent child age between 14<=18 years old (16<=18 for McClements)	0.33	0.36
Child aged under 14 years (<16 for McClements)	0.20	0.09-0.27

Notes: * The user guides to initial findings of MCS 1 and MCS 2 used a simplified version of this scale where all children under 16 years were given a score of 0.23

Table A12. 5
Comparison of modified OECD and McClements equivalence scales in estimates of families above and below the 'poverty* line' in MCS 3

			McClements		
			Above 'poverty line'	Below 'poverty line'	Total
Modified OECD	Above	row percentages	99.1	0.9	100
		column percentages	99.4	2.1	69.6
		Observed sample (unweighted)	9987	115	10102
		Observed sample (weighted)	*10478*	*98.9*	*10577*
	Below	row percentages	1.4	98.6	100
		column percentages	0.6	97.9	30.4
		Observed sample (unweighted)	72	5054	5126
		Observed sample (weighted)	*65.7*	*4543*	*4609*
	Total	row percentages	69.4	30.6	100
		column percentages	100	100	100
		Observed sample (unweighted)	10059	5169	15228
		Observed sample (weighted)	*10544*	*4642*	*15186*

Notes: *Where the 'poverty line' = £217 per week, 60 per cent of the national median, before housing costs, equivalised on modified OECD scales, in HBAI statistics for 2005-6. N is unweighted number of observations, percentages weighted.

Table A12. 6
Interval regression estimates of log net family income

Covariate	Categories	Coef.	Std. Err.	P>t	[95% Conf. Interval]
Main respondent's age in years at sweep 3	Main respondent's age at sweep 3	0.021	0.001	0.00	[0.018,0.023]
UK stratum sweep 3 (England – Advantaged is the reference category)	England - Disadvantaged	-0.117	0.016	0.000	[-0.148,-0.085]
	England – Ethnic minority	-0.167	0.033	0.000	[-0.231,-0.102]
	Wales-Advantaged	-0.011	0.057	0.852	[-0.122 ,0.101]
	Wales-Disadvantaged	-0.077	0.055	0.165	[-0.185,0.032]
	Scotland-Advantaged	0.097	0.073	0.185	[-0.047,0.242]
	Scotland-Disadvantaged	0.016	0.074	0.826	[-0.130,0.163]
	Northern Ireland-Advantaged	-0.015	0.066	0.822	[-0.145,0.115]
	Northern Ireland-Disadvantaged	-0.146	0.061	0.018	[-0.266,-0.025]
Main respondent's education (NVQ level 1 is the reference category)	NVQ level 2	0.061	0.020	0.003	[0.021,0.101]
	NVQ level 3	0.1341	0.021	0.000	[0.093,0.175]
	NVQ level 4	0.333	0.021	0.000	[0.291,0.375]
	NVQ level 5	0.416	0.027	0.000	[0.363,0.470]
	Overseas and other qualifications	0.028	0.044	0.522	[-0.059,0.116]
	None of these	-0.022	0.025	0.381	[-0.070,0.027]
Combined labour-market status of the main and partner respondents (Couple: Both in work or on leave is the reference)	Couple: main in work or on leave, partner not in work nor on leave	-0.472	0.040	0.000	[-0.550,-0.395]
	Couple: partner in work or on leave, main not in work nor on leave	-0.144	0.017	0.000	[-0.178,-0.109]
	Couple: both not in work nor on leave	-0.724	0.028	0.000	[-0.779,-0.669]
	Lone parent: working	-0.789	0.023	0.000	[-0.833,-0.744]
	Lone parent: not working	-1.107	0.019	0.000	[-1.144,-1.070]
	Partner non-response	-0.457	0.085	0.000	[-0.625,-0.289]
Ethnicity (of main respondent) (white is the reference ethnicity)	Mixed	-0.120	0.037	0.001	[-0.192,-0.048]
	Indian	-0.182	0.062	0.003	[-0.304,-0.061]
	Pakistani/Bangladeshi	-0.281	0.038	0.000	[-0.356,-0.206]
	Black or black British	-0.226	0.040	0.000	[-0.305,-0.147]
	Other including Asian	-0.235	0.060	0.000	[-0.353,-0.117]

Table A12. 6 (continued)
The interval regression model estimates

Covariate	Categories	Coef.	Std. Err.	P>t	[95% Conf. Interval]
Region: government office region at Sweep 3 interview (North East is the reference region)	North West	-0.022	0.027	0.409	[-0.074,0.030]
	Yorkshire and the	0.004	0.032	0.911	[-0.060,0.067]
	East Midlands	-0.008	0.033	0.811	[-0.074,0.058]
	West Midlands	0.042	0.023	0.067	[-0.003,0.086]
	East of England	0.089	0.041	0.030	[0.009,0.170]
	London	0.199	0.039	0.000	[0.122,0.276]
	South East	0.116	0.028	0.000	[0.061,0.171]
	South West	-0.057	0.030	0.057	[-0.115,0.002]
	Wales	-0.031	0.058	0.593	[-0.146,0.084]
	Scotland	-0.103	0.072	0.153	[-0.246,0.039]
	Northern Ireland	-0.013	0.061	0.838	[-0.133,0.108]
Type of accommodation (reference: house / bungalow)	A flat or maisonette	0.052	0.014	0.000	[0.0254,0.079]
	A studio flat, room(s) or a bedsit	-0.118	0.024	0.000	[-0.165,-0.071]
	Constant/intercept	5.485	0.045	0.000	[5.396,5.573]
Model characteristics	/ln sigma	-0.647	0.015	0.000	[-0.676,-0.617]
	sigma	0.524	0.008		[0.509,0.539]
	F(39,351)=257.48, Prob > F<0.001				
N(weighted N)	13576 (13676.611)				

Notes: Sample: MCS 3 main respondents who answered the question on net family income
There were 45 left-censored, 446 right-censored and 13,085 observations within the interval

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Chapter 13

HOUSING, NEIGHBOURHOOD AND RESIDENTIAL MOBILITY

Sosthenes C. Ketende and John W. McDonald

Introduction

This chapter focuses on residential mobility between MCS 2 and MCS 3. We look at reasons for moving residence and correlates of residential mobility such as type of housing. We also look at families' perception of their area in terms of whether it is a good area for raising children and how safe they feel the area is.

Families with young children have relatively high rates of residential mobility (Plewis, Ketende, Joshi and Hughes, forthcoming). Obviously, many families will move to larger accommodation or to a better area after a child is born, but families move for many reasons. Moving will often benefit both adults and children. However, moving residence, as well as possibly simultaneously moving job or school, can also be a very stressful life event for both adults and children. It can result in the disappearance of a supportive social network of friends and/or neighbours and this loosening of the 'ties that bind' may have untoward consequences. Couples who move frequently have been found to have a high risk of union dissolution and when a union, either married or cohabiting, dissolves at least one partner will almost surely move (Boyle, Kulu, Cooke, Gayle and Mulder, 2008).

Does moving disrupt children's lives? Verropoulou, Joshi and Wiggins (2002) examined the relationship between moving home, family structure and children's well-being using the second generation of the UK National Child Development Study, where in 1991 information was collected on the children of one third of the 1958 cohort members. Child well-being was measured using attainment in mathematics and reading and on two behavioural assessments of aggression and anxiety. They found little to no association between moving home and children's well-being. Moving during pregnancy and early childhood can potentially disrupt the relationships with healthcare professionals and make access to healthcare services more difficult. Moving has been found to be negatively associated with the uptake of childhood immunisations (Pearce, Elliman, Bedford and Law, 2008). MCS cohort children who lived in families which moved during pregnancy or more frequently were more likely to have received only some of the primary immunisations and be unimmunised against measles, mumps and rubella. So the effects of moving are mixed and might be positive, negative or neutral depending on the outcome measures used.

Residential mobility poses a major challenge for the conduct of longitudinal studies, especially for birth cohort studies such as the MCS. The residentially mobile are more likely to be non-respondents, even after controlling for a range of background variables (Plewis et al., forthcoming). This mobility poses a major challenge for fieldwork and analysis. Analysts are concerned that those who are lost from the study, either temporarily or permanently, are systematically different from those that remain and any inferences made on the observed sample will differ from those that would have been made if there had been no non-response or sample loss.

Residential mobility in the UK is related to job mobility as workers changing jobs may need to move residence in order to live within commuting distance of their new workplace and the unemployed may move to areas with better employment prospects (Boheim and Taylor, 2002). Residential mobility can be related to school choice with families relocating themselves close to 'good' or popular schools (Gibbons and Machin, 2006).

Plewis et al. (forthcoming) compared main respondent's self-report of mobility with the survey administration data on residential mobility and found that 9 per cent of all MCS 2 productive families had moved home according to the survey administration tracing records, but did not mention it at the interview.

Residential mobility at sweep 2

Residential mobility, based on our address records, between sweeps 2 and 3, when the cohort child was between around three years old and around five years old, was substantially lower than residential mobility between sweeps 1 and 2 (24% versus 38%). See Chapter 2 in Hughes, Ketende and Plewis (2007) for figures regarding MCS 2.

Reasons for residential mobility

The most popular reason for moving given by interviewed movers at sweep 3 was wanting a larger home (42%), followed by wanting to move to a better area (22%) and wanting a better home (21%). See Table 13.1 for other reasons and percentages. Overall, the ordering of the reasons given and the percentage distribution are very similar to the ordering and percentage distribution at MCS 2; see Table 2.9 in Hughes, Ketende and Plewis (2007). This similarity partially explains the reduction in the percentage of movers between sweep 2 and 3. If a family had moved between sweep 1 and 2 to seek more spacious accommodation, better area or better home, having found it, the family is less likely to move again in the near future.

Table 13.1
Reason for moving between MCS 2 and MCS 3 for self-reported movers

	Weighted per cent	Observed sample (n)	Observed base (N)
Wanted larger home	42.0	1010	2477
Wanted to move to better area	22.3	557	
Wanted better home	20.8	505	
For children's education	13.0	316	
To be nearer relative(s)	12.8	322	
Relationship breakdown	9.9	248	
Wanted to buy	8.3	210	
School catchment area	7.6	178	
Wanted place of my own	7.0	181	
Job change/nearer work	6.4	136	
Moving away from crime	4.8	124	
Spouse or partner job change	4.4	90	
Just wanted a change	4.3	113	
Problem with neighbours	4.1	105	
New relationship	3.4	66	
Previous accommodation temporary or no longer available	2.8	60	
Could no longer afford last home	2.8	71	
Evicted/repossessed from last home	2.8	71	

Notes: Weighted percentages, unweighted sample numbers, observed sample numbers. Weighting allows for unit non-response at sweep 2.

Correlates of residential mobility

Residential mobility is related to many factors and, in this section, we describe some socio-economic and socio-demographic correlates of mobility. The base number for Tables 13.1 to

13.12 is the 15,426 families productive at sweep 3, regardless of their participation status at sweep 2.

There were substantial differences in mobility by UK country of interview at sweep 1 (Table 13.2). Northern Ireland, which had the lowest mobility between sweeps 1 and 2 (33%), had the highest mobility between sweeps 2 and 3 (30%). Scotland, which had the highest mobility between sweeps 1 and 2 (41%), had the second highest mobility between sweeps 2 and 3 (28%). Wales had low mobility, but not the lowest mobility, between sweeps 1 and 2 (35%) and the lowest mobility between sweeps 2 and 3 (19%). Mobility in England between sweeps 1 and 2 was 38 per cent and between sweeps 2 and 3 was 23 per cent.

Table 13.2
Residential mobility between MCS 2 and MCS 3 by UK country of interview at MCS 1

UK country of interview	Mover %(n)	Base (N)
England	23.4 (2278)	9759
Wales	18.9 (421)	2143
Scotland	27.6 (487)	1804
Northern Ireland	29.7 (459)	1535
Total	24.1 (3645)	15241
		P=0.0074

Notes: Weighted percentages, (unweighted sample numbers), observed base numbers, five families were excluded because their country of interview was unknown. Weighting allows for unit non-response at sweep 2.

Residential mobility between sweeps 2 and 3 varied by the ethnicity of the main respondent. Table 13.3 presents mobility by main respondent's ethnicity, using the six-category UK Census classification of ethnicity. Indian, Pakistani/Bangladeshi as well as Other ethnic group families were slightly less mobile than the black/ black British and white ethnic groups. The mixed ethnic group had the highest mobility, 35 per cent, and also had the highest mobility between sweeps 1 and 2.

Table 13.3
Residential mobility between MCS 2 and MCS 3 by main respondent's ethnicity (six-category UK Census classification)

Main respondent's ethnic group	Mover %(n)	Base (N)
White	23.6 (3053)	12805
Mixed	35.3 (48)	140
Indian	20.3 (82)	377
Pakistani/Bangladeshi	21.9 (205)	912
Black/Black British	23.9 (135)	524
Other*	21.3 (55)	242
Total	23.6 (3578)	15000
		P=0.0330

Notes: Weighted percentages, (unweighted sample numbers), observed base numbers , *Other includes Chinese and other Asian; 246 families were excluded because ethnicity was not known or the respondent refused to answer. Weighting allows for unit non-response at sweep 2.

Homeowners were less likely to move (18%) between sweeps 2 and 3 than tenants (range 28% to 52%); see Table 13.4. Just over half of those renting privately (52%) moved, with those in social housing, i.e., renting from a local authority or housing association, less likely to move (28%). Families in houses or bungalows were much less likely to move (22%) than those in a flat or maisonette (34%) or other types of accommodation, such as studio flats, rooms or bedsits (46%); see Table 13.5.

Table 13.4
Residential mobility between MCS 2 and MCS 3 by family tenure at MCS 2

Tenure	Mover % (n)	Base (N)
Own	17.8 (1757)	9725
Renting privately	51.7 (702)	1322
Renting social housing*	27.6 (1006)	3688
Other	39.4 (158)	420
Total	23.7 (3578)	15155
		P<0.001

Notes: Weighted percentages, (unweighted sample numbers), observed base numbers, 91 families were excluded because family tenure was not known or the respondent refused to answer, *social housing is renting from a local authority or a housing association. Weighting allows for unit non-response at sweep 2.

Table 13.5
Residential mobility between MCS 2 and MCS 3 by type of accommodation at MCS 2

Tenure	Mover %(n)	Base (N)
House or bungalow	22.4 (3073)	13602
Flat or maisonette	33.7 (497)	1442
All other*	45.8 (37)	79
Total	23.6 (3607)	15123
		P<0.001

Notes: Weighted percentages, (unweighted sample numbers), observed base numbers, *All other includes studio flat, rooms or bedsit, etc. 123 families were excluded because type of accommodation was not known or the respondent refused to answer. Weighting allows for unit non-response at sweep 2.

Table 13.6 presents residential mobility between MCS 2 and MCS 3 by combined labour-market status of the main respondent and partner at MCS 3. Families where both the main respondent and their partner were in work or where one or other parent was in work were much less likely to move between MCS 2 and MCS 3 than families with no earner or where the main respondent (usually the mother) was a lone parent (either in work or not). When both parents were in work only 19 per cent moved compared with 29 per cent moving when both were not in work; see Table 13.6. When one member of the couple was in work, but the other not, the percentage mobile was 24 per cent. Approximately one third of lone parents moved between sweeps 2 and 3, with very little difference in the percentage mobile by whether the lone parent was in work (33%) or not (35%).

Table 13.6
Residential mobility between MCS 2 and MCS 3 by combined labour-market status of main respondent and partner at MCS 3

Combined labour-market status	Mover % (n)	Base (N)
Couple - both in work or on leave	18.7 (1322)	6928
Couple - main in work or on leave, partner not in work nor on leave	23.6 (80)	367
Couple - partner in work or on leave, main not in work nor on leave	23.6 (921)	3962
Couple - both not in work nor on leave	29.0 (262)	921
Lone parent, working	32.7 (402)	1193
Lone parent, not working	34.9 (648)	1828
Total	23.7 (3650)	15199
		P<0.001

Notes: Weighted percentages, (unweighted sample numbers), observed base numbers, 47 families were excluded due to partner non-response or there was no parental interview. Weighting allows for unit non-response at sweep 2.

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Area

In this section, we look at families' perception of their current area of residence in terms of whether they think it is a good area for raising children and how safe they feel it is.

One reason for residential mobility is to move to a better area after a child is born, so perceptions of the quality of the current area for raising children are important for future mobility. There were small differences in whether the current area of residence was a poor or very poor area for raising children or fairly unsafe or very unsafe by country of interview. Few respondents reported their current area as a poor or very poor area for raising children (from 4 to 7%, see Table 13.7) or fairly unsafe or very unsafe (from 3 to 6%, see Table 13.10). Earlier analyses of MCS 2 suggest this is likely to be related to living in rural as opposed to urban areas, with those living in urban areas more likely to perceive their current area as fairly unsafe or very unsafe (Dex, 2007). Northern Ireland is perceived as the best and safest place to bring up children.

Families where the main respondent is white (33%) or Indian (29%) are more likely to perceive their area as being excellent for raising children compared to mixed (15%), Pakistani/Bangladeshi (15%) or black/ black British (12%) families of origin; see Table 13.8. The last three ethnic groups are more likely to perceive the area they live in as a very poor area to raise children (4 to 6%). Families where the main respondent is white (34%), Pakistani/Bangladeshi (32%) or Indian (29%) are more likely to perceive their area as very safe compared to families of mixed (23%), or black/ black British (23%) or Other origins (26%); see Table 13.11. These last groups also are more likely to perceive the area they live in as very unsafe (2 to 5%).

Table 13.7
'Good area for raising children?' by UK country of interview at MCS 3

		UK country of interview (using overall weight 1)				Total (using overall weight 2)
		England	Wales	Scotland	N Ireland	
'Good area for raising children'	Excellent	29.8 (2508)	35.1 (654)	39.8 (680)	47.6 (699)	31.6 (4542)
	Good	41.4 (3971)	41.0 (894)	37.0 (677)	36.4 (566)	40.7 (6112)
	Average	21.7 (2342)	17.9 (441)	18.1 (348)	12.1 (204)	20.9 (3335)
	Poor	4.9 (598)	4.7 (108)	3.7 (70)	2.9 (44)	4.8 (820)
	Very poor	2.2 (264)	1.3 (32)	1.3 (24))	1.0 (16)	2.0 (336)
Total		100 (9683)	100 (2129)	100 (1799)	100 (1529)	100 (15145)
		P<0.001				

Notes: Weighted percentages, (unweighted sample numbers), observed base numbers, 101 families were excluded because the respondent did not know or refused to answer. Weighting allows for unit non-response at sweep 2.

Table 13.8
'Good area for raising children?' at MCS 3 by main respondent's ethnicity (six-category UK Census classification)

		White	Mixed	Indian	Pakistani and Bangladeshi	Black or Black British	Other*	Total
Whether 'good area for raising children'	Excellent	33.4 (4164)	15.0 (19)	29.1 (82)	15.2 (120)	12.4 (54)	23.2 (52)	31.6 (4491)
	Good	40.4 (5078)	36.2 (53)	45.8 (167)	47.0 (400)	38.1 (197)	44.6 (113)	40.7 (6008)
	Average	20.1 (2670)	34.4 (45)	18.8 (96)	25.6 (243)	32.5 (168)	24.6 (54)	20.8 (3276)
	Poor	4.4 (603)	9.2 (16)	5.2 (24)	8.1 (83)	10.7 (62)	5.0 (15)	4.8 (803)
	Very poor	1.8 (232)	5.2 (7)	1.1 (8)	4.0 (42)	6.3 (33)	2.6 (8)	2 (330)
Total		100 (12747)	100 (140)	100 (377)	100 (888)	100 (514)	100 (242)	100 (14908)
								P<0.001

Notes: Weighted percentages (unweighted sample numbers), observed base numbers, *Other includes Chinese and other Asian; 246 families were excluded because ethnicity was not known, and a further 92 families were excluded because the respondent refused to answer or missing data. Weighting allows for unit non-response at sweep 2.

Table 13.9
'Good area for raising children?' by combined labour-market status of main respondent and partner at MCS 3

		Excellent	Good	Average	Poor	Very poor	Total
Combined labour market status	Both in work or on leave	37.8 (2584)	43.5 (2973)	15.6 (1129)	2.2 (176)	0.5 (43)	100 (6905)
	Main in work or on leave, partner not in work nor on leave	25.9 (84)	37.3 (134)	27.6 (110)	6.9 (27)	2.3 (12)	100 (367)
	Partner in work or on leave, main not in work nor on leave	32.6 (1171)	40.8 (1601)	20.7 (901)	3.9 (191)	1.6 (76)	100 (3940)
	Both not in work nor on leave	14.8 (127)	38.2 (351)	30.7 (284)	9.5 (91)	6.3 (60)	100 (913)
	Lone parent, working	26.9 (301)	36.8 (443)	25.3 (318)	6.9 (87)	3.7 (40)	100 (1189)
	Lone parent, not working	15.2 (274)	32.6 (603)	33.0 (590)	13.1 (248)	5.9 (105)	100 (1820)
Total		31.4 (4541)	40.5 (6105)	20.8 (3332)	4.8 (820)	2.0 (336)	100 (15134)
							P<0.001

Notes: Weighted percentages, (unweighted sample numbers), observed base numbers, 101 families were excluded because the respondent did not know or refused to answer, and a further 11 families were excluded because the partner was not resident. Weighting allows for unit non-response at sweep 2.

Families where both the main respondent and their partner were not in work or where a lone parent was not in work were less likely to perceive their area as being excellent for raising children compared to families where someone was in work or a lone parent was in work; see Table 13.9. Families were more likely to perceive their area as poor or very poor when both were not in work (16%) or a lone parent was not in work (19%). Families where both the main respondent and their partner were not in work or where a lone parent was not in work were less likely to perceive their area as being very safe compared to families where someone was in work or a lone parent was in work; see Table 13.12. Families were more likely to perceive their area as fairly unsafe or very unsafe when both were not in work (12%) or a lone parent was not in work (14%).

Table 13.10
How 'safe you feel this area is' by UK country of interview at MCS 3

		England	Wales	Scotland	N Ireland
How 'safe you feel this area is'	Very safe	31.6 (2915)	38.4 (765)	40.4 (701)	54.3 (803)
	Fairly safe	54.0 (5194)	49.6 (1074)	49.6 (903)	39.7 (629)
	Neither safe nor unsafe	8.6 (901)	7.3 (175)	6.8 (130)	3.3 (55)
	Fairly unsafe	4.4 (513)	3.8 (88)	2.7 (53)	2.1 (33)
	Very unsafe	1.4 (165)	1.1 (27)	0.5 (12)	0.6 (9)
Total		100 (9688)	100 (2129)	100 (1799)	100 (1529)
					P<0.001

Notes: Weighted percentages, (unweighted sample numbers), observed base numbers, 96 families were excluded because the respondent did not know or refused to answer, and five families were excluded because their country of interview was unknown. Weighting allows for unit non-response at sweep 2.

Table 13.11
How 'safe you feel this area is' at MCS 3 by main respondent's ethnicity (six-category census classification)

		White	Mixed	Indian	Pakistani and Bangladeshi	Black or Black British	Other*	Total
How 'safe you feel this area is'	Very safe	34.4 (4514)	23.4 (31)	29.3 (101)	32.3 (281)	22.7 (115)	26.3 (67)	33.6 (5109)
	Fairly safe	52.8 (65)	52.1 (75)	54.6 (203)	51.3 (450)	49.3 (246)	57.7 (135)	52.7 (7680)
	Neither safe nor unsafe	7.8 (998)	15.3 (20)	11.5 (49)	7.1 (73)	15.5 (80)	11.9 (25)	8.2 (1245)
	Fairly unsafe	3.9 (521)	4.4 (9)	3.9 (19)	6.9 (60)	9.0(49)	2.3 (8)	4.1 (666)
	Very unsafe	1.1 (151)	4.7 (5)	0.7 (5)	2.4 (22)	3.5 (23)	1.8 (7)	1.3 (213)
Total		100 (12755)	100 (140)	100 (377)	100 (886)	100 (513)	100 (242)	100 (14913)
								P<0.001

Notes: Weighted percentages, (unweighted sample numbers), observed base numbers, *Other includes Chinese and other Asian; 246 families were excluded because ethnicity was not known, and a further 96 families were excluded because the respondent refused to answer or missing data. Weighting allows for unit non-response at sweep 2.

Table 13.12
How 'safe you feel this area is' by combined labour-market status of main and partner respondents

		Very safe	Fairly safe	Neither safe nor unsafe	Fairly unsafe	Very unsafe	Total
Combined labour market status of respondents	Both in work or on leave	37.9 (2704)	54.0 (3608)	5.9 (422)	1.9 (153)	0.3 (23)	100 (6910)
	Main in work or on leave, partner not in work nor on leave	33.2 (119)	50.0 (182)	9.5 (32)	5.8 (28)	1.6 (6)	100 (367)
	Partner in work or on leave, main not in work nor on leave	34.8 (1347)	52.1 (2035)	7.9 (324)	4.1 (177)	1.1 (57)	100 (3940)
	Both not in work nor on leave	21.1 (202)	54.5 (484)	12.2 (114)	8.6 (80)	3.5 (31)	100 (911)
	Lone parent, working	30.7 (374)	51.9 (610)	9.4 (116)	6.2 (69)	1.8 (21)	100 (1190)
	Lone parent, not working	21.6 (438)	49.3 (876)	15.3 (253)	9.9 (179)	4.0 (75)	100 (1821)
Total		33.6 (5184)	52.7 (7795)	8.2 (1261)	4.2 (686)	1.3 (213)	100 (15139)
							P<0.001

Notes: Weighted percentages, (unweighted sample numbers), observed base numbers, 96 families were excluded because the respondent did not know or refused to answer, and a further 11 families were excluded because the partner was not resident. Weighting allows for unit non-response at sweep 2.

Conclusion

While residential mobility between sweeps 2 and 3 was substantially lower than mobility between sweeps 1 and 2, it still remains an important feature of the lives of families with young children. Approximately one quarter of families who participated in MCS 3 had changed address since the previous sweep two years or so earlier. There were substantial differentials in residential mobility by country of interview, with Northern Ireland having the lowest level between sweeps 1 and 2 and the highest level between sweeps 2 and 3. Residential mobility between sweeps 2 and 3 varied by ethnicity of the main respondent. Indian, Pakistani and Bangladeshi families were less mobile than the other ethnic groups. Homeowners were less likely to move between sweeps 2 and 3 than tenants. Families living in houses were much less likely to move than those in other types of accommodation. Lone parents and couples where both partners were not in work were much more likely to move between sweeps than couples where one or both partners were in work. There were small differences in whether the current area of residence was perceived as a poor or very poor area or fairly unsafe or very unsafe area for raising children by country of interview. Few respondents reported their current areas as poor or very poor areas for raising children or fairly unsafe or very unsafe. However, these perceptions varied by ethnicity and whether someone in the family was in work. Although Northern Ireland and Scotland appear to be perceived as better and safer places to bring up children, earlier analyses of MCS 2 suggest this is likely to be related to living in rural as opposed to urban areas.

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Chapter 14

SOCIAL CAPITAL AND ETHNICITY

Alice Sullivan

Introduction

‘Race’ or ethnicity, nationality and religion are distinct yet intertwined. This chapter examines the significance of these factors in the lives of the mothers of the millennium cohort children, focusing on indicators of social capital in their families, neighbourhoods and wider social participation.

The Social Capital Perspective

The concept of social capital has been influential in policy circles, but is contested, and has been used for varying purposes by various theorists. For Coleman, social capital refers to 'the set of resources that inhere in family relations and in community social organisation and that are useful for the cognitive or social development of a child or young person' (Coleman, 1994, p. 300). Social capital in the family consists of the time and attention given to the child by family members, while social capital within the school and the community consists of social networks which allow social norms to be established and enforced (Coleman, 1988).

For Putnam, social capital describes 'features of social organisation, such as trust, norms and networks’ (Putnam,1993). Putnam is particularly concerned with a perceived decline in sociability, associational life, and political participation. He uses a wide range of measures of social capital, including measures of community organisational life, engagement in public affairs, community voluntarism, informal sociability and social trust (Schuller et al., 2000). As such, he has been criticised for overstretching the concept of social capital (Portes, 1998).

Social capital has been seen as particularly important for minority ethnic groups, because economic disadvantages, and even a lack of education, may be counter-balanced by high levels of social capital within the home and community (Lauglo, 2000), so it is possible for economically disadvantaged minority ethnic communities to promote educational success (Gibson, 2000; Portes and Rumbaut, 2001). Conversely, the ability of strongly bonded social groups to enforce social norms can have negative consequences if anti-achievement norms prevail. Portes puts forward a model of ‘segmented assimilation’, suggesting that assimilation by immigrant groups into the norms of the native community is not always positive. Strong ethnic minority communities and families can act together to protect children against ‘downward assimilation’ into the under-class norms of gangs, crime, teen pregnancy, and resistance or indifference to schooling. Some Asian communities, in particular, are often perceived as maintaining norms of parental authority, and of good behaviour and discipline (Portes and Rumbaut, 2001). The gendered nature of such norms has been noted, and, in contrast to other ethnic groups, there are more Pakistani and Bangladeshi men than women in higher education in Britain (Bhattacharyya et al., 2003; Dwyer et al., 2006).

Putnam draws a distinction between bonding and bridging social capital. Bonding social capital implies strong ties within a group, while bridging social capital implies weak ties between heterogenous groups. Bonding and bridging social capital can be seen as conflicting, as strongly bonded groups may have fewer links to the wider society. Wider social networks may be particularly important in gaining access to information and resources, such as labour-market opportunities (Granovetter, 1973). Thus, a lack of

'bridging' ties to other ethnic groups may contribute to the labour-market penalties suffered by minority ethnic groups. This is relevant to current policy debates regarding 'integration'.

Indicators of Social Capital

Homogamy refers to marriage between individuals from the same group (e.g. in terms of religion, ethnicity or class), and is a powerful indicator of social closure. Attitudes to outmarriage vary substantially between ethnic groups. Consanguineous marriage (i.e. marriage to blood relations, typically cousins) is the norm among South Asian Muslims, for example. These marriages are often transnational, and arranged. Peach outlines the way in which notions of honour which stress the importance of 'protecting' women from contact with unrelated men lead South Asian Muslim groups to maintain a high degree of social closure (Peach, 2006). Clearly, within these communities, barriers to social and economic participation for women are high. It has been suggested that the relative economic success of Sikhs in Britain can be attributed to outmarriage and to the higher status of women within this group (Ballard, 1990). Ethnic minority men and women who marry whites are more likely to experience upward occupational mobility, which may be because of access to valuable social networks (Muttarak, 2007). Peach argues that British Muslims are socially strong, with arranged marriages and extended families being common, and children born within wedlock. The other side of this coin is that Muslim women marry young, which contributes to fewer years of education and larger numbers of children. Muslim women also have low levels of labour-market activity (Peach, 2006).

Family structure and size are seen as key indicators of social capital. Research has consistently found a negative effect of larger family size on children's educational attainment and test scores (Blake, 1989; Nisbet, 1953; Powell and Steelman, 1990). This is likely to be because both parental attention and economic resources are spread more thinly in larger families (Downey, 2001; Van Eijck and De Graaf, 1995). However, the negative association (even controlling for other factors) between the number of siblings and educational outcomes is not present in every culture, and may be a function of the nuclear family form (Shavit and Pierce, 1991). Single and step-parent families have consistently been found to be associated with lower levels of educational performance for children than 'intact' two-parent families, controlling for other factors, although the reasons for this association are debated (Painter and Levine, 2000).

Spatial patterns of segregation and social patterns of segregation are linked (Peach, 2006). Concerns regarding the ethnic segregation of neighbourhoods and schools may reflect a liberal concern to promote tolerance and remove barriers to social inclusion, but recently the issue has been presented in terms of immigrant groups' failure to integrate. Since 9-11 and the London tube bombings, this concern has focused on Muslims. Following the 2001 race riots in Oldham, Burnley and Bradford, concerns were raised (notably by Trevor Phillips, chair of the Equality and Human Rights Commission) that residential ethnic segregation was increasing in Britain, and that this was leading to a deeply divided society. This view was challenged by scholars working in this area. Peach[i] pointed out that segregation was actually declining across the country as a whole, while Simpson suggested that increasing segregation was a myth (Simpson, 2007). It must be stressed that it would be quite wrong to characterise Britain as having US style ghettoes, although the Pakistani and Bangladeshi populations show quite high rates of 'encapsulation' (Peach, 1996). It is recognised that ethnic minority groups may have positive reasons for clustering together, such as benefiting from social support, as well as negative push factors, such as economic necessity and racial discrimination. Family and friendship ties within neighbourhoods can be seen as indicators of social capital, which may lead to greater feelings of trust and safety.

Civic participation is regarded as an important form of social capital, and Putnam points to declining levels of voting as a key indicator of a decline in social capital (Putnam, 1995). The

importance of religious participation is also stressed within the US context, though this is less likely to be central for most communities in the UK.

Finally, the importance of a common British identity has been stressed in certain policy circles as a source of social cohesion, and this has motivated policy innovations such as 'citizenship tests'. Others stress the importance of adherence to certain inclusive and egalitarian principles, such as willingness to mix with other ethnic and social groups, and subscribing to gender equality, as being more important to social cohesion than a sense of 'Britishness' per se.

Ethnicity, Nationality, Language and Religion

This chapter focuses on the mothers of the Millennium Cohort Study children. Thus, only main respondents who are mothers (whether natural, adoptive or step) are included. Where partners are considered, all are included, regardless of gender or relationship to the cohort member. Mothers who responded to the partner interview are included as partners.

Table 14.1
Country of birth and ethnicity

Country of birth	Mothers' Ethnic Group								
	White	Mixed	Indian	Pakis-tani	Bangla-deshi	Black Carib.	Black African	Other	Total
UK born	*12168.3*	*73.5*	*120.3*	*133.3*	*8.5*	*98.5*	*45.5*	*35.3*	*12683.4*
	95.5	69.7	48.6	40.5	8.5	80	27.3	20	90.6
	11048	80	147	207	22	117	44	42	11707
Not UK born	*575.3*	*32*	*127*	*196.2*	*91.2*	*24.7*	*121.6*	*141.3*	*1309.1*
	4.5	30.3	51.4	59.5	91.5	20	72.7	80	9.4
	504	31	181	328	182	37	193	180	1636
Total	*12743.6*	*105.5*	*247.4*	*329.5*	*99.7*	*123.2*	*167.1*	*176.6*	*13992.5*
	100	100	100	100	100	100	100	100	100
	11552	111	328	535	204	154	237	222	13343
	F=451.04, P>F = 0.000								

Notes: Sample: All MCS 3 mothers (natural, adoptive, foster and step) who completed the main interview and for whom ethnicity was classified. This table excludes any mothers who were eligible but not interviewed and any fathers or grandparents who completed the interview. Table displays unweighted observations, *weighted observations* and weighted percentages in parenthesis (using *weight2* for All UK).

Because ethnicity is bound up with nationality, religion, and language, it is important to consider the intersection between these variables. An eight-category breakdown of ethnicity is used. Although this sometimes leads to small cell sizes, the alternative is to group together ethnic categories with very different migration histories and cultures. Nevertheless, we could not avoid a residual 'other' category, including the Chinese, and other groups with very small numbers. The clustered sampling strategy used by MCS was not appropriate to locate ethnic groups such as the Chinese, whose settlement patterns are dispersed. Table 14.1 shows whether the mothers are UK-born according to ethnicity. Eighty per cent of black Caribbean mothers were born in the UK, compared to 27 per cent of black African mothers. Bangladeshi mothers were the least likely to be born in the UK (9%), substantially less than Pakistani mothers (41%) and Indian mothers (49%). This reflects the dates of the main migration streams into the UK, and also the practice of transnational marriage by the South-Asian groups. Ninety per cent of Bangladeshi mothers and 72 per cent of Pakistani mothers had partners who were not UK born. In most Bangladeshi couples, neither partner was born in the UK. Of those foreign-born Bangladeshi mothers who had partners, 91 per cent of the partners were also not born in the UK.

Table 14.2
English spoken within the home

	Mothers' Ethnic Group								
English spoken	White	Mixed	Indian	Pakis-tani	Bangla-deshi	Black Carib.	Black African	Other	Total
Entirely	*13413.4*	*103.9*	*82.2*	*51.9*	*7.2*	*138.7*	*87.4*	*78.6*	*13963.3*
	97.7	77.8	30	13.9	6.1	94.8	41.3	38.7	91.9
	12190	101	76	60	9	178	102	72	12788
Mostly	*176.3*	*18.1*	*86.1*	*94.6*	*16.1*	*6.6*	*59.4*	*34.7*	*491.7*
	1.3	13.5	31.4	25.3	13.7	4.5	28	17.1	3.2
	295	21	109	151	30	10	84	40	740
Half and half	*76*	*2.9*	*63.9*	*127.7*	*43.2*	*0*	*36.7*	*37.1*	*387.4*
	0.6	2.2	23.3	34.2	36.8	0	17.3	18.3	2.6
	101	4	110	218	82	0	56	60	631
Mostly other language	*49.4*	*7.3*	*39.6*	*92.3*	*48.7*	*1.1*	*24.3*	*42.6*	*305.3*
	0.4	5.5	14.4	24.7	41.5	0.7	11.5	21	2
	73	10	66	177	117	1	50	65	559
No English	*15.2*	*1.5*	*2.4*	*7.2*	*2.2*	*0*	*4.1*	*10.1*	*42.7*
	0.1	1.1	0.9	1.9	1.9	0	1.9	5	0.3
	26	2	5	13	6	0	9	15	76
Total	*13730.2*	*133.6*	*274.3*	*373.6*	*117.3*	*146.4*	*211.8*	*203.1*	*15190.3*
	100	100	100	100	100	100	100	100	100
	12685	138	366	619	244	189	301	252	14794
	F=256.68 , P>F = 0.000								

Notes: Sample: All MCS 3 mothers (natural, adoptive, foster and step) who completed the main interview and for whom ethnicity was classified. This table excludes any mothers who were eligible but not interviewed and any fathers or grandparents who completed the interview. Table displays unweighted observations, *weighted observations* and weighted percentages in parenthesis (using *weight2* for All UK).

Table 14.2 shows the extent of the use of the English language within the home. The pattern of ethnic difference is in line with that in the previous table. Nearly all households with white mothers (98%) spoke entirely in English, followed closely by households with black Caribbean mothers (95%). Households with black African mothers were substantially less likely to use English exclusively (41%). Of the households with Asian mothers, Indians (30%) were most likely to speak entirely in English, followed by Pakistani (14%) and Bangladeshi (6%) mothers. Forty-three per cent of Bangladeshi mothers speak either mostly or exclusively in a language other than English. To the extent that this reflects a lack of English fluency, it may well restrict their interactions with the wider society, including their children's schools. It is also crucial to note that these mothers are relatively likely to have no educational qualifications; 44 per cent of Pakistani and 41 per cent of Bangladeshi mothers had no qualifications, compared to 8 per cent of white and 10 per cent of black Caribbean mothers.

At MCS 1, 86 per cent of households in Wales spoke English exclusively at home, and 3 per cent spoke another language mostly or exclusively. This compares to 91 per cent of households in England, 97 per cent of households in Scotland, and 99 per cent of households in Northern Ireland speaking English exclusively. Of those households in Wales speaking a language other than English, 88 per cent spoke Welsh. In contrast to many other minority languages, mothers in Welsh-speaking households were relatively highly educated: 48 per cent had qualifications at NVQ4/5 compared to 38 per cent of all mothers resident in Wales at MCS1. In England, among those speaking a minority language, the most common were Urdu (19%) and Punjabi (19%).

Table 14.3
Religion and ethnicity

Religion	Mothers' Ethnic Group								
	White	Mixed	Indian	Pakis-tani	Bangla-deshi	Black Carib.	Black African	Other	Total
None	*5831*	*45.8*	*17.4*	*2.2*	*0.2*	*24*	*7.1*	*42*	*5969.7*
	42.5	34.2	6.4	0.6	0.2	16.4	3.4	20.7	39.3
	5289	45	16	2	1	31	7	39	5430
Protestant	*4746.8*	*18.7*	*2.2*	*0*	*0*	*34.9*	*34.3*	*12.6*	*4849.5*
	34.6	14	0.8	0	0	23.8	16.2	6.2	31.9
	4074	19	2	0	0	45	38	14	4192
Catholic	*1658.9*	*21.6*	*6*	*0*	*0*	*28.7*	*29.8*	*26.4*	*1771.4*
	12.1	16.2	2.2	0	0	19.6	14.1	13	11.7
	2037	21	3	0	0	34	40	26	2161
Other Christian	*1367.4*	*21.1*	*1*	*0*	*0.6*	*52.3*	*83.5*	*16.3*	*1542.1*
	10	15.8	0.4	0	0.5	35.7	39.4	8	10.2
	1163	20	2	0	1	69	105	20	1380
Hindu	*4.8*	*5.1*	*111.6*	*2.6*	*3.5*	*0*	*0*	*38.5*	*166*
	0	3.8	40.7	0.7	3	0	0	18.9	1.1
	5	3	151	7	5	0	0	55	226
Jew	*41.8*	*0*	*0.7*	*1.1*	*0.4*	*0*	*0.7*	*0*	*44.8*
	0.3	0	0.3	0.3	0.3	0	0.3	0	0.3
	30	0	2	3	1	0	2	0	38
Muslim	*37*	*15.5*	*36.1*	*367.7*	*112.6*	*5.1*	*55.3*	*52.7*	*682.1*
	0.3	11.6	13.2	98.4	96	3.5	26.1	26	4.5
	49	25	64	607	236	8	108	77	1174
Sikh	*1.5*	*2.4*	*96.2*	*0*	*0*	*0*	*0*	*3.5*	*103.5*
	0	1.8	35.1	0	0	0	0	1.7	0.7
	2	2	124	0	0	0	0	5	133
Buddhist	*13.3*	*3.1*	*0*	*0*	*0*	*0*	*0*	*11.1*	*27.5*
	0.1	2.3	0	0	0	0	0	5.5	0.2
	11	2	0	0	0	0	0	16	29
Other	*28.6*	*0.4*	*3.1*	*0*	*0*	*1.5*	*1.1*	*0*	*34.6*
	0.2	0.3	1.1	0	0	1	0.5	0	0.2
	26	1	2	0	0	2	1	0	32
Total	*13731.1*	*133.6*	*274.3*	*373.6*	*117.3*	*146.4*	*211.8*	*203.1*	*15191.2*
	100	100	100	100	100	100	100	100	100
	12686	138	366	619	244	189	301	252	14795
	F=201.30, P>F = 0.000								

Notes: Sample: All MCS 3 mothers (natural, adoptive, foster and step) who completed the main interview and for whom ethnicity was classified. This table excludes any mothers who were eligible but not interviewed and any fathers or grandparents who completed the interview. Table displays unweighted observations, *weighted observations* and weighted percentages in parenthesis (using *weight2* for All UK).

Religion is strongly tied up with ethnicity, as shown in Table 14.3. White mothers are by far the most likely to report that they had no religion (43%), with the majority of the remainder divided between Protestants (35%), Catholics (12%), and Christians who did not specify a denomination, or whose denomination was categorised as 'other' (10%). Black African and black Caribbean mothers were the most likely to identify as Christian without specifying a denomination, or specifying a denomination outside the categories provided (39% and 36% respectively). There was also a substantial Muslim minority (26%) among the black African mothers. The Pakistani and Bangladeshi mothers were almost exclusively Muslim, whereas

Indian mothers were more diverse, being mainly divided between Hinduism (41%), Sikhism (34%) and Islam (13%). The sample contains very small numbers of Jews and Buddhists.

Family and partnership

Family structures vary considerably between ethnic groups. We classify mothers as lone parents if they do not have a partner living with them. Half of the black Caribbean mothers and 40 per cent of the black African mothers were lone parents. The Bangladeshi (93%), Indian (90%) and Pakistani (86%) mothers were most likely to be married. White mothers were the most likely to be cohabiting (18%). The numbers of children in the household (including step-children) also vary considerably by ethnic group. Around two thirds of Bangladeshi and Pakistani respondents had three or more children, compared to around a third of white mothers. This is linked to the low levels of labour-market participation by Bangladeshi and Pakistani mothers reported in chapter 11.

The prevalence of extended rather than nuclear family units also varies by ethnic group. Indian (24%), Bangladeshi (15%) and Pakistani (16%) mothers were all more likely to live in the same accommodation with a grandparent than white mothers (2%).

Table 14.4
Ethnic homogamy

Partner	Mothers' Ethnic Group								
	White	Mixed	Indian	Pakis-tani	Bangla-deshi	Black Carib.	Black African	Other	Total
White	*10613*	*47.2*	*19.8*	*11.1*	*0.9*	*22.8*	*3.7*	*56.1*	*10774.4*
	98	60.5	8.2	3.8	0.9	32.6	3.3	34.3	90.7
	9466	40	14	9	2	20	3	51	9605
Mixed	*73.1*	*6.6*	*2.2*	*4.6*	*0.4*	*2.6*	*4.6*	*0.7*	*94.7*
	0.7	8.4	0.9	1.6	0.4	3.6	4.1	0.5	0.8
	58	10	4	4	1	3	4	2	86
Indian	*24.4*	*8.4*	*205.7*	*3.7*	*2.4*	*0*	*0*	*5.3*	*249.8*
	0.2	10.7	84.6	1.3	2.5	0	0	3.2	2.1
	21	5	282	6	2	0	0	6	322
Pakistani	*8.3*	*1.8*	*6.2*	*270.8*	*0.7*	*1.1*	*0*	*1.5*	*290.5*
	0.1	2.3	2.6	93	0.8	1.6	0	0.9	2.4
	13	3	8	453	2	1	0	4	484
Bangla-deshi	*3.9*	*0*	*2*	*0.4*	*88.7*	*0*	*0*	*0*	*94.9*
	0	0	0.8	0.1	95.3	0	0	0	0.8
	5	0	1	1	186	0	0	0	193
Black Carib.	*51.7*	*5.5*	*2*	*0*	*0*	*39.8*	*4.6*	*2.4*	*105.9*
	0.5	7	0.8	0	0	57	4.1	1.4	0.9
	40	5	1	0	0	55	4	2	107
Black African	*16.8*	*4*	*0.7*	*0*	*0*	*2.9*	*95.4*	*3.5*	*123.5*
	0.2	5.1	0.3	0	0	4.2	85.3	2.2	1
	15	5	2	0	0	4	136	8	170
Other	*42*	*4.6*	*4.4*	*0.7*	*0*	*0.7*	*3.6*	*94.1*	*150.1*
	0.4	5.8	1.8	0.3	0	1.1	3.3	57.5	1.3
	39	4	3	2	0	2	4	128	182
Total	*10833.2*	*78*	*243.1*	*291.2*	*93*	*69.9*	*111.8*	*163.7*	*11883.8*
	100	100	100	100	100	100	100	100	100
	9657	72	315	475	193	85	151	201	11149
	650.36, P>F = 0.000								

Notes: Sample: All MCS 3 mothers (natural, adoptive, foster and step) who completed the main interview and for whom ethnicity was classified who had resident partners for whom ethnicity was classified. This table excludes any mothers who were eligible but not interviewed and any fathers or grandparents who completed the interview. Table displays unweighted observations, *weighted observations* and weighted percentages in parenthesis (using *weight2* for All UK).

Ethnic groups vary in the extent to which they tend to partner within the same group. Table 14.4 shows the partner's ethnic group cross-tabulated against the mother's ethnic group. The highest rate of homogamy is found for the white mothers (98%). This is unsurprising, as we have not attempted to allow for the fact that the white population is much larger than any of the minority populations. Very high rates of homogamy are also found for Bangladeshi mothers (95%) and Pakistani mothers (93%). Although these two groups share a common religion, rates of inter-partnering between them are minute. Somewhat lower rates of homogamy are found for black Africans and Indians (85%). Homogamy is relatively low for the black Caribbean mothers (57%). Unsurprisingly, the 'mixed' group has the lowest levels of homogamy (8%).

Table 14.5
Religious homogamy

	None	Protestant	Catholic	Other Christian	Hindu	Jew	Muslim	Sikh	Buddhist	Other	Total
None	*3671.8*	*1574.2*	*542.8*	*515.2*	*6.9*	*9.8*	*10.6*	*4.6*	*10.4*	*8.8*	*6355*
	73.7	35.6	35.9	39.1	4.5	23.7	2	5	43.5	29.9	48.5
	3253	1257	529	421	8	10	12	4	8	9	5511
Protestant	*669.6*	*2199.3*	*262.1*	*276.8*	*5.1*	*0*	*0*	*0*	*2*	*0*	*3414.9*
	13.4	49.8	17.3	21	3.3	0	0	0	8.4	0	26.1
	571	1919	236	222	3	0	0	0	1	0	2952
Catholic	*284*	*255.3*	*579*	*71.6*	*0*	*3.1*	*8*	*0*	*1.5*	*0*	*1202.4*
	5.7	5.8	38.3	5.4	0	7.5	1.5	0	6.1	0	9.2
	269	232	864	80	0	2	7	0	2	0	1456
Other Christian	*292.4*	*359.2*	*105.9*	*435.8*	*0*	*0.4*	*0.9*	*0*	*3.1*	*2.4*	*1199.9*
	5.9	8.1	7	33.1	0	0.9	0.2	0	13	8.1	9.2
	250	290	96	397	0	1	1	0	2	2	1039
Hindu	*6.4*	*0.2*	*2*	*1.5*	*129.6*	*0*	*0.7*	*1.5*	*0.4*	*0*	*142.3*
	0.1	0	0.1	0.1	83.1	0	0.1	1.6	1.6	0	1.1
	7	1	1	2	178	0	2	4	1	0	196
Jew	*4.2*	*8.4*	*9.5*	*4.2*	*0*	*26.6*	*0*	*2*	*0*	*0*	*54.8*
	0.1	0.2	0.6	0.3	0	64.4	0	2.2	0	0	0.4
	4	5	6	3	0	18	0	1	0	0	37
Muslim	*20.5*	*6.8*	*11.4*	*5.7*	*3.3*	*1.5*	*511.5*	*0*	*0*	*1.1*	*561.8*
	0.4	0.2	0.8	0.4	2.1	3.6	96	0	0	3.7	4.3
	19	6	18	5	9	4	881	0	0	1	943
Sikh	*6.2*	*0.6*	*0.4*	*0.2*	*4.9*	*0*	*0.7*	*82.1*	*0*	*0*	*95.1*
	0.1	0	0	0	3.2	0	0.1	91.1	0	0	0.7
	4	1	1	1	5	0	2	105	0	0	119
Buddhist	*9.3*	*5.1*	*0*	*2.2*	*2.4*	*0*	*0*	*0*	*6.5*	*0*	*25.5*
	0.2	0.1	0	0.2	1.5	0	0	0	27.4	0	0.2
	7	3	0	3	2	0	0	0	9	0	24
Other	*19.4*	*10.4*	*0.4*	*3.6*	*3.7*	*0*	*0*	*0*	*0*	*17.1*	*54.6*
	0.4	0.2	0	0.3	2.4	0	0	0	0	58.3	0.4
	14	8	1	6	4	0	0	0	0	14	47
Total	*4983.7*	*4419.5*	*1513.3*	*1316.8*	*155.9*	*41.3*	*532.6*	*90.1*	*23.8*	*29.3*	*13106.3*
	100	100	100	100	100	100	100	100	100	100	100
	12686	138	366	619	244	189	301	252	14795		
	F=650.36, P>F = 0.000										

Notes: Sample: All MCS 3 mothers (natural, adoptive, foster and step) who completed the main interview and for whom ethnicity was classified who had a resident partner for whom ethnicity was classified. This table excludes any mothers who were eligible but not interviewed and any fathers or grandparents who completed the interview. Table displays unweighted observations, *weighted observations* and weighted percentages in parenthesis (using *weight2* for All UK).

We can also examine homogamy according to religious affiliation. Table 14.5 shows that Muslim mothers had the highest levels of religious homogamy (96%), followed by Sikh mothers (91%). Hindu mothers were relatively more likely to inter-partner (83% were homogamous). Interestingly, mothers of no religion were more likely to share their lack of faith with their partners (74%) than Protestant or Catholic mothers were to share their faith with theirs (50% and 38% respectively).

Community, Neighbourhood and Social Ties

The MCS respondents were living disproportionately in minority ethnic and other disadvantaged wards at the time of the original sampling in 2000-1 (the ethnic minority wards were also disadvantaged). The numbers of ethnic minority respondents outside of England are very small. Black Caribbean mothers were most likely to be drawn from disadvantaged wards in England (34%), whereas Bangladeshi mothers were most likely to be drawn from wards with high minority ethnic populations (85%).

The MCS data provide us with a number of ways of looking at the characteristics of the neighbourhoods in which the cohort members live, and the social networks and experiences of the respondents.

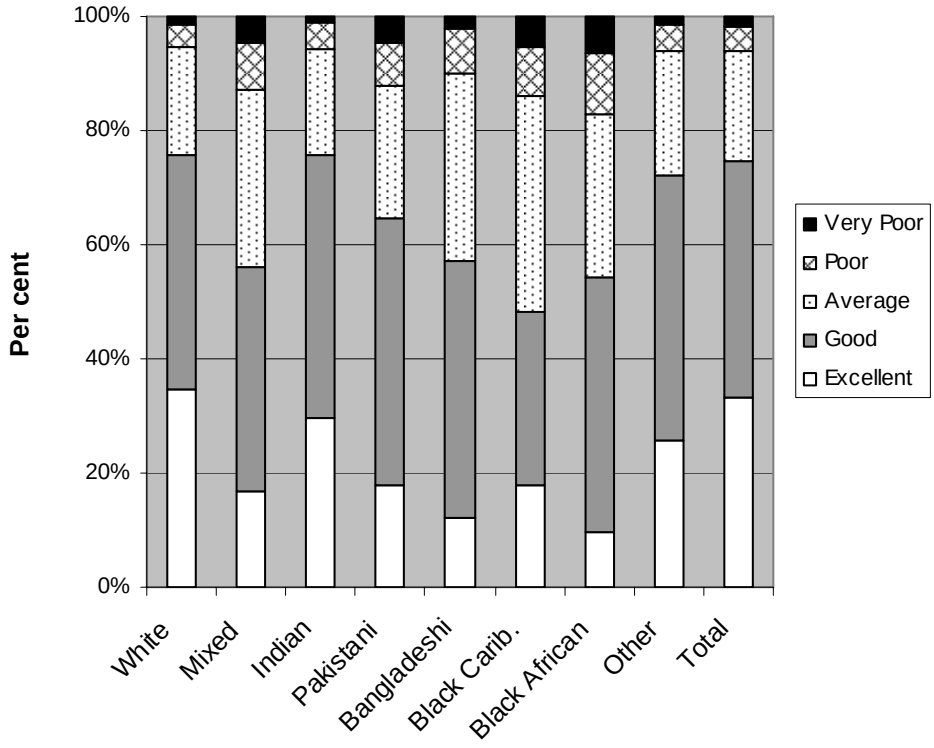
Table 14.6
Percentage same ethnic group as respondent in ward (England only)

	Mean	Std. Err.	95% Confidence Interval	
White	94.82	0.43	93.98	95.67
Mixed	2.22	0.23	1.77	2.66
Indian	15.22	2.87	9.57	20.87
Pakistani	21.33	4.50	12.47	30.20
Bangladeshi	13.70	4.25	5.33	22.07
Black Caribbean	7.82	1.36	5.14	10.50
Black African	8.52	1.28	6.00	11.04
Other	4.44	0.46	3.53	5.36

Notes: Sample: All MCS 3 mothers in England (natural, adoptive, foster and step) who completed the main interview and for whom ethnicity was classified. This table excludes any mothers who were eligible but not interviewed and any fathers or grandparents who completed the interview. Table displays weighted means by country weight.

As a very simple measure of ethnic residential segregation at MCS3, Table 14.6 shows the mean proportion of people living in the ward at the time of the sweep who are from the same ethnic group as the respondent (this information is derived from census data). Since so few of our ethnic minority respondents were from outside England, we restrict this table to respondents in England. White mothers lived in areas where, on average, 95 per cent of the other residents were white. In contrast, the average proportion of residents of the same ethnic group was less than a quarter for each of the other ethnic groups. Pakistani (21%), Indian (15%) and Bangladeshi (14%) mothers lived in areas with a higher average proportion from their own ethnic group than black Caribbean (8%) and black African mothers (9%). In future research, it would be worth examining whether these ethnic residential patterns have changed across sweeps of the survey.

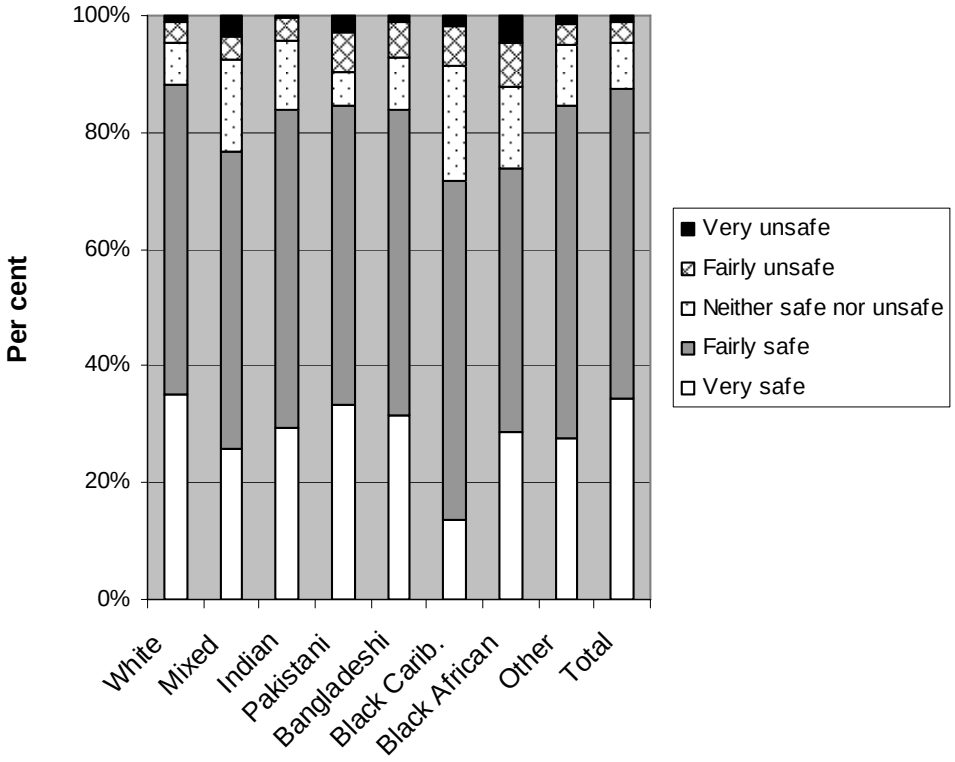
Figure 14.1
Is this a good area for raising children?



Notes: Sample: All MCS 3 mothers (natural, adoptive, foster and step) who completed the main interview and for whom ethnicity was classified. This table excludes any mothers who were eligible but not interviewed and any fathers or grandparents who completed the interview. Table displays unweighted observations, *weighted observations* and weighted percentages in parenthesis (using *weight2* for All UK).

The respondents were asked whether theirs was a good area for raising children. The percentages quoted here are slightly different from those in chapter 13, because of the different base. Figure 14.1 shows that responses to this question varied substantially by ethnic group. White mothers were most likely to believe that their area was excellent for bringing up children (35%), followed by Indian mothers (30%). Mothers from other ethnic groups were considerably less likely than white and Indian mothers to consider their area to be either excellent or very good for bringing up children. The fact that minorities live mainly in urban areas is probably a factor in the explaining differences between white and minority ethnic mothers.

Figure 14.2
How safe do you feel in the area?



Notes: Sample: All MCS 3 mothers (natural, adoptive, foster and step) who completed the main interview and for whom ethnicity was classified. This table excludes any mothers who were eligible but not interviewed and any fathers or grandparents who completed the interview. Table displays unweighted observations, *weighted observations* and weighted percentages in parenthesis (using *weight2* for All UK).

The respondents were also asked how safe they felt in their area. Figure 14.2 shows that responses varied by ethnicity, with black Caribbean, mixed, and black African mothers being substantially less likely than other groups to feel very safe. Again, the fact that minorities live mainly in urban areas is probably a factor in the explaining some of the differences between white and minority ethnic mothers.

Table 14.7
Friends with other parents in the area

	White	Mixed	Indian	Pakis-tani	Bangla-deshi	Black Carib.	Black African	Other	Total
Yes	*12345.7*	*106.2*	*224.4*	*309.1*	*100.4*	*122.4*	*152.7*	*160*	*13520.7*
	90.2	79.5	81.8	85.3	86.4	84.2	73.6	78.9	89.4
	11275	109	300	512	211	148	218	198	12971
No	*1343.8*	*27.4*	*49.9*	*53.1*	*15.9*	*23*	*54.7*	*42.8*	*1610.5*
	9.8	20.5	18.2	14.7	13.6	15.8	26.4	21.1	10.6
	1362	29	66	86	30	40	77	53	1743
Total	*13689.5*	*133.6*	*274.3*	*362.2*	*116.2*	*145.3*	*207.4*	*202.7*	*15131.3*
	100	100	100	100	100	100	100	100	100
	12637	138	366	598	241	188	295	251	14714
	F=7.32, P>F = 0.000								

Notes: Sample: All MCS 3 mothers (natural, adoptive, foster and step) who completed the main interview and for whom ethnicity was classified. This table excludes any mothers who were eligible

but not interviewed and any fathers or grandparents who completed the interview. Table displays unweighted observations, *weighted observations* and weighted percentages in parenthesis (using *weight2* for All UK).

Respondents were then asked about their social networks of friends and family in the local area. Table 14.7 shows whether the mothers said that they were friends with other parents living in the area. Whereas 90 per cent of white mothers were friends with other local parents, the figure was lower for other ethnic groups. Black African mothers were the least likely to be friends with local parents.

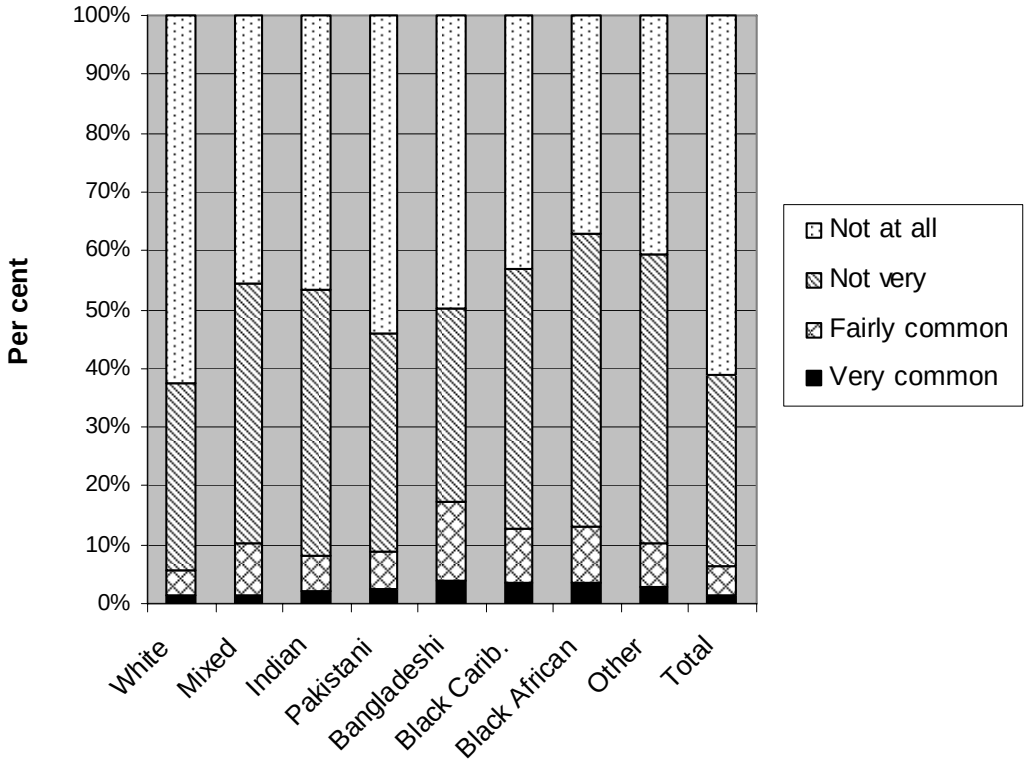
Table 14.8
Other friends and family in the area

	White	Mixed	Indian	Pakis-tani	Bangla-deshi	Black Carib.	Black African	Other	Total
Friends	*3918.5*	*44.2*	*85.5*	*68.7*	*25*	*49*	*84.2*	*87*	*4362.1*
	28.6	33	31.2	19	21.5	33.7	40.6	42.9	28.8
	3337	45	117	107	47	50	128	94	3925
Family	*1087.2*	*7.2*	*31.4*	*41.6*	*14.4*	*16.5*	*19.2*	*25.2*	*1242.6*
	7.9	5.4	11.4	11.5	12.3	11.3	9.2	12.4	8.2
	1152	10	44	75	31	29	25	33	1399
Both	*6927.4*	*58.1*	*106.3*	*190.7*	*65.5*	*52.5*	*50.9*	*55*	*7506.4*
	50.6	43.5	38.8	52.6	56.4	36.1	24.5	27.1	49.6
	6557	53	142	332	140	67	63	73	7427
Neither	*1757*	*24.2*	*51.1*	*61.2*	*11.4*	*27.3*	*53.1*	*35.5*	*2020.8*
	12.8	18.1	18.6	16.9	9.8	18.8	25.6	17.5	13.4
	1592	30	63	84	23	42	79	51	1964
Total	*13690*	*133.6*	*274.3*	*362.2*	*116.2*	*145.3*	*207.4*	*202.7*	*15131.8*
	100	100	100	100	100	100	100	100	100
	12638	138	366	598	241	188	295	251	14715
									F=7.32, P>F = 0.000

Notes: Sample: All MCS 3 mothers (natural, adoptive, foster and step) who completed the main interview and for whom ethnicity was classified. This table excludes any mothers who were eligible but not interviewed and any fathers or grandparents who completed the interview. Table displays unweighted observations, *weighted observations* and weighted percentages in parenthesis (using *weight2* for All UK).

A follow-up question asked whether the respondent had other friends and family in the area (Table 14.8). The extent and type of these social ties varied greatly according to ethnicity. Bangladeshi (56%) and Pakistani (53%) mothers were the most likely to have both friends and family in the local community. This may show the positive side of a degree of residential segregation. Just over half of white mothers had both friends and family nearby, compared to only a quarter of black African mothers and 36 per cent of black Caribbean mothers. Over a quarter of black African mothers had neither family nor friends in the local area – double the percentage for white mothers.

Figure 14.3
How common are racist insults/attacks in the area?



Notes: Sample: All MCS 3 mothers (natural, adoptive, foster and step) who completed the main interview and for whom ethnicity was classified. This table excludes any mothers who were eligible but not interviewed and any fathers or grandparents who completed the interview. Table displays unweighted observations, *weighted observations* and weighted percentages in parenthesis (using *weight2* for All UK).

Ethnic minority respondents (including 'other' whites) were asked how common racist insults and attacks were in their local area (Figure 14.3). A majority of white respondents (63%), believed that racist incidents were 'not at all common'. However, mothers from other ethnic groups were less likely to give this response, especially black Caribbean (43%) and black African (37%) mothers.

Political Participation

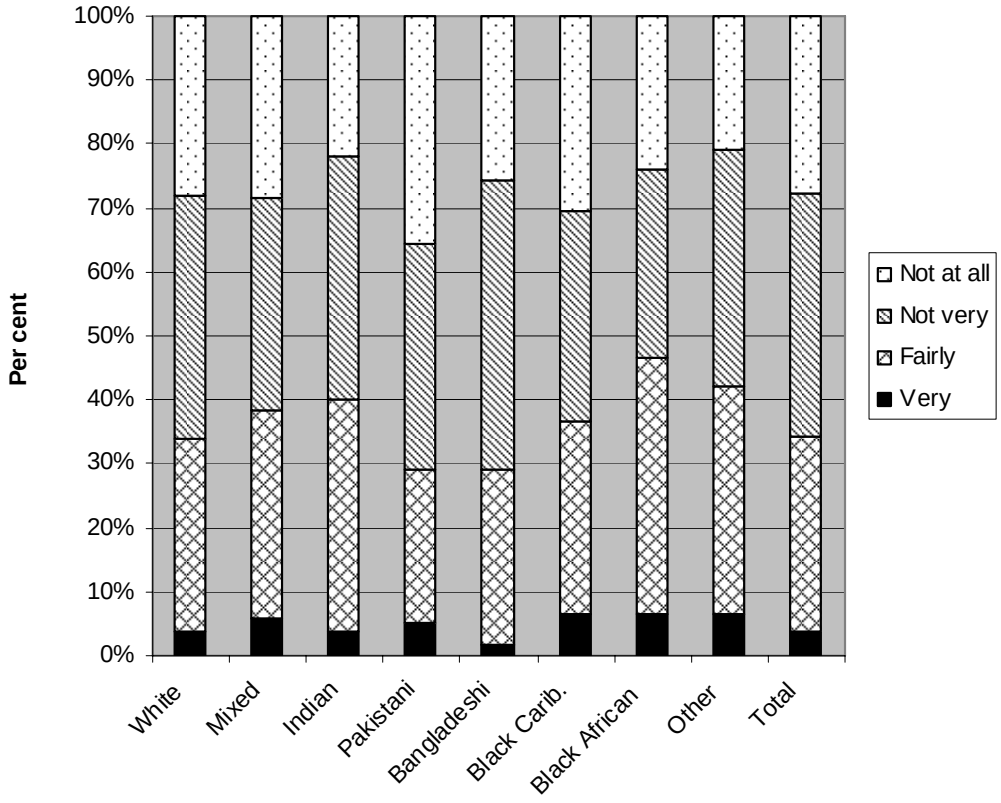
Table 14.9
Voted in the last general election

Voted	White	Mixed	Indian	Pakis-tani	Bangla-deshi	Black Carib.	Black African	Other	Total
Yes	*8267.2*	*62.6*	*188.3*	*247.4*	*92*	*68.7*	*126.5*	*108.1*	*9160.7*
	60.6	46.8	68.6	68.6	79.6	47.6	61.4	53.4	60.7
	7435	65	253	422	194	84	163	137	8753
No	*5376.5*	*71.1*	*86*	*113.1*	*23.5*	*75.6*	*79.4*	*94.2*	*5919.2*
	39.4	53.2	31.4	31.4	20.4	52.4	38.6	46.6	39.3
	5165	73	113	173	45	103	130	113	5915
Total	*13643.7*	*133.6*	*274.3*	*360.4*	*115.5*	*144.2*	*205.9*	*202.3*	*15080*
	100	100	100	100	100	100	100	100	100
	12600	138	366	595	239	187	293	250	14668
	F=5.52, P>F = 0.000								

Sample: All MCS 3 mothers (natural, adoptive, foster and step) who completed the main interview and for whom ethnicity was classified. This table excludes any mothers who were eligible but not interviewed and any fathers or grandparents who completed the interview. Table displays unweighted observations, *weighted observations* and weighted percentages in parenthesis (using *weight2* for All UK).

The respondents were asked whether they had voted in the last election (those not eligible to vote were coded as missing: not applicable). Table 14.9 shows that 61 per cent of white mothers said they had voted. Asian mothers were substantially more likely to have voted (80% of Bangladeshis and 69% of Indians and Pakistanis). In contrast, less than half of the mothers of black Caribbean and mixed heritage had voted. It may be that the high level of voting among South Asian mothers was connected to issues particular to the 2005 general election, such as the Iraq war, and the candidacy of George Galloway in Tower Hamlets. It will be interesting to see whether these high voting levels are maintained in future years.

Figure 14.4
How interested are you in politics?



Notes: Sample: All MCS 3 mothers (natural, adoptive, foster and step) who completed the main interview and for whom ethnicity was classified. This table excludes any mothers who were eligible but not interviewed and any fathers or grandparents who completed the interview. Table displays unweighted observations, *weighted observations* and weighted percentages in parenthesis (using *weight2* for All UK).

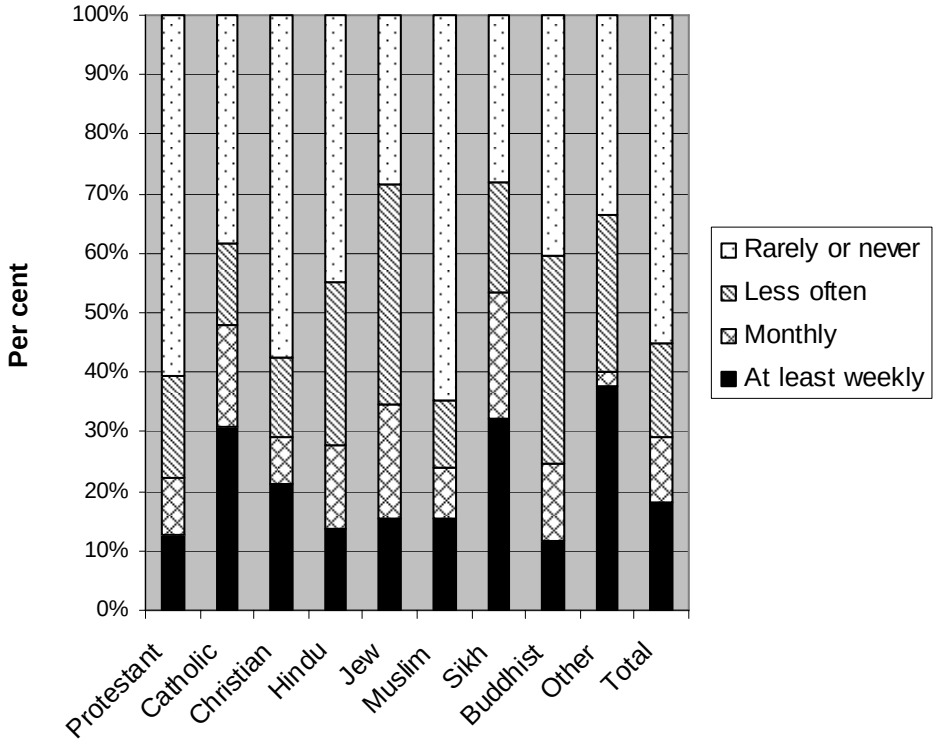
Is the variability in voting according to ethnic group accounted for by a similar variability in interest in politics? Figure 14.4 shows that this does not appear to be the case. Despite their high voting rates, Bangladeshi and Pakistani mothers were relatively unlikely to be either very or fairly interested in politics (29% in each case compared to 34% for whites). In contrast, 37 per cent of black Caribbean mothers were very or fairly interested in politics, despite their low voting rates. This suggests that interest in politics was not the only factor determining whether mothers voted. One can speculate that pessimism regarding the potential for making a difference may dissuade black Caribbean mothers from voting. Interestingly, Putnam argues that there is a link between living in a neighbourhood with a high level of ethnic diversity, and lower frequency of voting combined with higher interest in and knowledge about politics, but a lower sense of efficacy (Putnam, 2007). This issue warrants further investigation.

It is important to bear in mind that there is also variability in the likelihood of voting according to social class; and, of course, ethnicity and social class are associated. Nearly three quarters of mothers in the highest NS-SEC (managerial and professional) said that they had voted in the last general election, compared to only half of those in the lowest NS-SEC category (routine and semi-routine). (In order to maximise the number of valid cases we take the combined main and partner respondents' NS-SEC category, and include all cases where either the main or the partner gave an occupation at any sweep). Fifteen per cent of mothers

in the highest NS-SEC were not at all interested in politics, compared to 41 per cent in the lowest NS-SEC category.

Religious participation

Figure 14.5
Mothers' attendance at religious services



Notes: Sample: All MCS 3 mothers (natural, adoptive, foster and step) who completed the main interview and for whom ethnicity was classified excluding those saying they had 'no religion'. This table excludes any mothers who were eligible but not interviewed and any fathers or grandparents who completed the interview. Table displays unweighted observations, *weighted observations* and weighted percentages in parenthesis (using *weight2* for All UK).

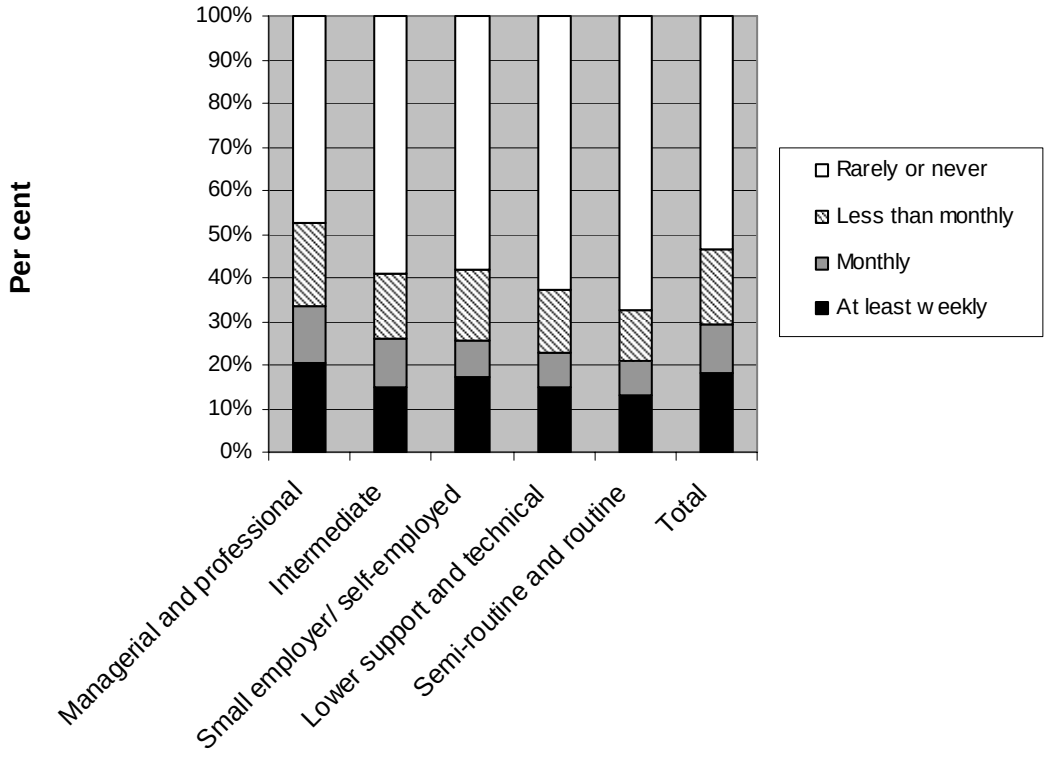
Over half of the mothers attended religious services either rarely or never (Figure 14.5 excludes respondents with no religion). Religious attendance is more central to some faiths than others, and is not a direct measure of religiosity. For example, most Hindus observe religious rituals at home, and Buddhists also can worship both at home or at a temple. Weekly religious attendance was most common among 'Other' (38%), Sikh (32%) and Catholic mothers (31%), whereas only 13 per cent of Protestant mothers attended weekly religious services, and 61 per cent did so rarely or never. Muslim women were the most likely to attend religious services rarely or never (65%). In contrast, Muslim partners were substantially more likely than partners from other religious groups to attend services weekly (57%, compared to 20% of Catholic partners). Islam traditionally encourages women to remain within the home, and not to attend the mosque, and most British mosques still do not permit women access to worship. This implies that religious attendance is likely to be a poor measure of religiosity for Muslim women. To the extent that mosques form focal points for Muslim communities, exclusion from the mosque may contribute to social exclusion for women. However, practices vary between different mosques, and some larger mosques provide a focus for wider activities other than just religious services.

Table 14.10
Mother's NS-SEC classification and religion

Religion	Managerial and Professional	Intermediate	Small employer/ self-employed	Lower support and technical	Semi-routine and routine	Total
None	*2107.6*	*650.1*	*450.4*	*394.2*	*901.7*	*4504*
	32.7	41.1	35.5	46.3	47.5	37.4
	1676	561	380	368	915	3900
Protestant	*2486.5*	*531.9*	*427.8*	*259.2*	*474.5*	*4179.8*
	38.6	33.7	33.7	30.5	25	34.7
	1915	479	345	250	498	3487
Catholic	*813.7*	*172.3*	*131.7*	*90.2*	*196*	*1403.9*
	12.6	10.9	10.4	10.6	10.3	11.7
	803	224	153	115	297	1592
Christian	*765.5*	*156*	*126.4*	*63.6*	*179.2*	*1290.7*
	11.9	9.9	10	7.5	9.4	10.7
	611	145	110	61	181	1108
Hindu	*70.9*	*19.4*	*18.1*	*5.9*	*30.6*	*144.9*
	1.1	1.2	1.4	0.7	1.6	1.2
	81	29	24	12	43	189
Jew	*22.5*	*5.7*	*2*	*3.1*	*2.7*	*36*
	0.3	0.4	0.2	0.4	0.1	0.3
	18	5	1	2	3	29
Muslim	*100.9*	*29.2*	*92.6*	*29*	*93.4*	*345*
	1.6	1.8	7.3	3.4	4.9	2.9
	130	44	159	60	175	568
Sikh	*41.4*	*11.9*	*13.5*	*3.3*	*16.9*	*87*
	0.6	0.8	1.1	0.4	0.9	0.7
	41	14	15	5	32	107
Buddhist	*13.3*	*1*	*3.1*	*0*	*1.7*	*19*
	0.2	0.1	0.2	0	0.1	0.2
	12	2	2	0	3	19
Other	*19.3*	*2.6*	*3.8*	*2.2*	*0*	*27.8*
	0.3	0.2	0.3	0.3	0	0.2
	16	2	5	2	0	25
Total	*6441.6*	*1579.9*	*1269.4*	*850.5*	*1896.6*	*12038.1*
	100	100	100	100	100	100
	5303	1505	1194	875	2147	11024
	F=9.47, P>F = 0.000					

Notes: Sample: All MCS 3 mothers (natural, adoptive, foster and step) who completed an interview and for whom ethnicity was classified and a valid NS-SEC classification. This table excludes any mothers who were eligible but not interviewed and any fathers or grandparents who completed the interview. Table displays unweighted observations, *weighted observations* and weighted percentages in parenthesis (using *weight2* for All UK).

Figure 14.6
Mother's NS-SEC and religious services



Notes: Sample: All MCS 3 mothers (natural, adoptive, foster and step) who completed the main interview and for whom ethnicity was classified. This table excludes any mothers who were eligible but not interviewed and any fathers or grandparents who completed the interview. Table displays unweighted observations, *weighted observations* and weighted percentages in parenthesis (using *weight2* for All UK).

Mother's religious affiliation and attendance also vary according to their NS-SEC category. Table 14.10 shows that nearly a third of mothers in the highest NS-SEC had no religion, compared to nearly half of mothers in the lowest NS-SEC. Protestants are disproportionately represented in the highest NS-SEC, whereas Muslims are disproportionately represented in the lowest. Figure 14.6 shows that attendance at religious services also varies considerably across NS-SEC categories, as 67 per cent of mothers in the lowest NS-SEC attended services rarely or never compared to 47 per cent of mothers in the highest NS-SEC. This finding is relevant to the debate over social selectivity and faith schooling, as working-class families would be less able to gain places at these schools even if religious attendance were the sole criterion of entry.

Attitudes

Table 14.11
Feeling British (excludes white British)

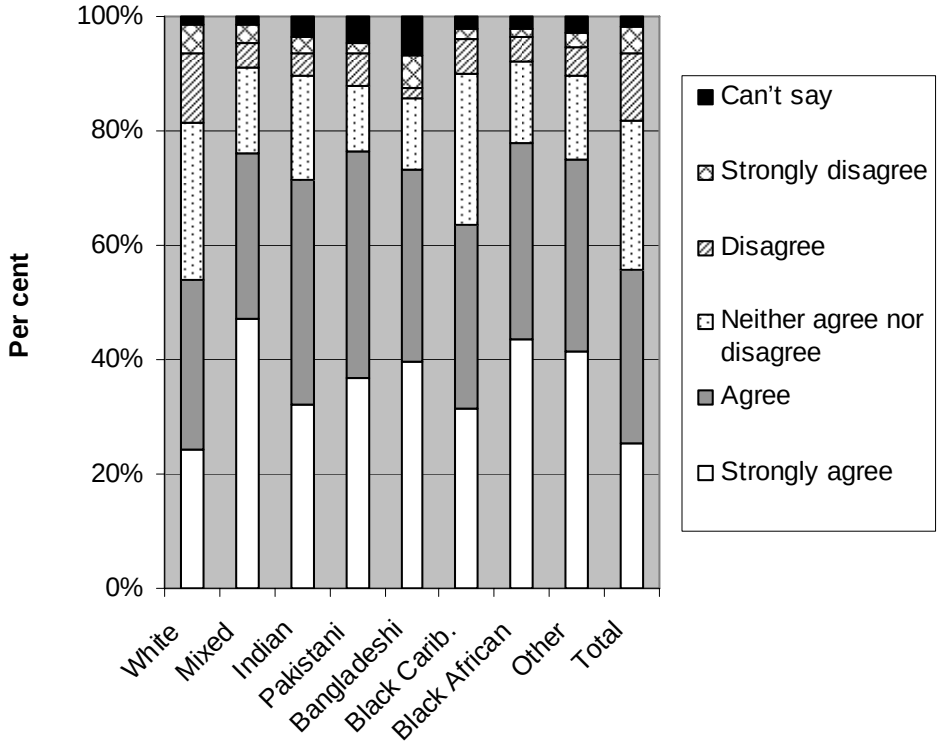
	Do you think of yourself as British?			Do you think of your child as British?		
	UK born	Not UK born	Total	UK born	Not UK born	Total
Agree strongly	*186.9*	*113.2*	*300.1*	*298*	*173.7*	*471.7*
	33.1	15.4	23.1	38.5	28.7	34.2
	232	139	371	335	230	565
Agree	*221.2*	*238.8*	*460*	*306.1*	*244.4*	*550.5*
	39.2	32.5	35.4	39.6	40.3	39.9
	267	297	564	340	328	668
Neither agree nor disagree	*110.8*	*151.3*	*262*	*135.2*	*113.6*	*248.8*
	19.6	20.6	20.2	17.5	18.7	18
	119	177	296	154	126	280
Disagree	*20*	*114.6*	*134.7*	*17*	*40.8*	*57.8*
	3.5	15.6	10.4	2.2	6.7	4.2
	27	129	156	18	51	69
Strongly disagree	*18.6*	*77.1*	*95.8*	*11.4*	*10.1*	*21.5*
	3.3	10.5	7.4	1.5	1.7	1.6
	20	73	93	14	13	27
Can't say	*6.6*	*40.9*	*47.5*	*6.1*	*23.6*	*29.6*
	1.2	5.6	3.7	0.8	3.9	2.1
	14	65	79	12	38	50
Total	*564.2*	*735.8*	*1300*	*773.8*	*606.1*	*1379.9*
	100	100	100	100	100	100
	679	880	1559	873	786	1659
	F=983.0956, P>F = 0.0000			F=24.10, P>F = 0.000		

Notes: Sample: All MCS 3 mothers (excluding white British) (natural, adoptive, foster and step) who completed the main interview and for whom ethnicity was classified. This table excludes any mothers who were eligible but not interviewed and any fathers or grandparents who completed the interview. Table displays unweighted observations, *weighted observations* and weighted percentages in parenthesis (using *weight2* for All UK).

Respondents were asked: "Do you think of yourself as British?" This sense of 'Britishness' is sometimes thought of as reflecting a sense of belonging or integration into British society, although the extent to which it really matters is open to debate. This question was not put to respondents from the white British/English/Scots/Welsh/Irish majority. It is important to bear in mind that we cannot assume that these respondents would have expressed exclusively 'British' identities had they been asked (Heath et al. 2006). Table 14.11 shows the responses to this question for UK-born and foreign-born respondents. A third of UK-born mothers agreed strongly that they thought of themselves as British, and a further 39 per cent agreed. Only 7 per cent disagreed or disagreed strongly. Even among mothers born overseas, only 26 per cent either disagreed or disagreed strongly that they felt British.

This table also shows the mothers' responses to the question: "Do you think of your child as British?" Seventy-eight per cent of UK-born mothers either agreed or strongly agreed with this statement, compared to 69 per cent of foreign-born mothers.

Figure 14.7
Wouldn't mind the cohort member attending a mixed-race school (50/50)

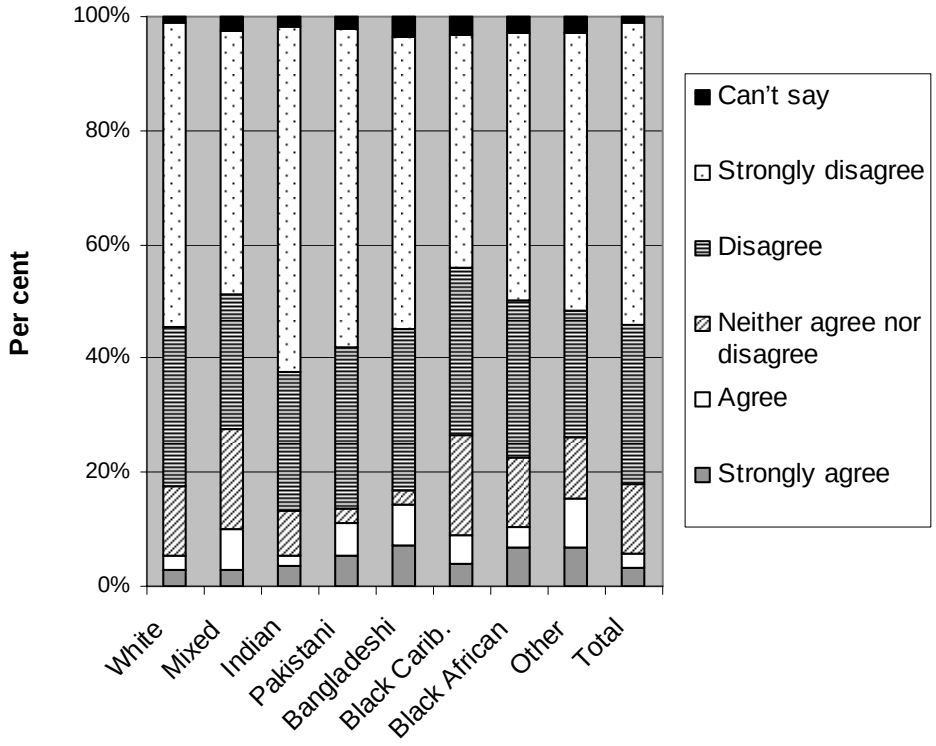


Notes: Sample: All MCS 3 mothers in Great Britain (natural, adoptive, foster and step) who completed the main interview and for whom ethnicity was classified. This table excludes any mothers who were eligible but not interviewed and any fathers or grandparents who completed the interview. Table displays unweighted observations, *weighted observations* and weighted percentages in parenthesis (using *weight2* for All UK).

Respondents in Britain were asked whether they would not mind their child attending a school where half the children were of another race (Figure 14.7). Overall, 25 per cent of mothers strongly agreed with this statement, with a further 30 per cent agreeing. White mothers were least likely to agree: 24 per cent of white mothers agreed strongly that they would not mind, while 12 per cent disagreed, and a further 5 per cent disagreed strongly. Mothers from minority ethnic groups were much more likely to agree that they would not mind. Mixed (47%) and black African (43%) mothers were most likely to agree with this statement.

In Northern Ireland, an equivalent question was asked regarding religion. Those with no religion were most likely (56%) to strongly agree that they would not mind their child attending a school where half the children were from a different religious background. Protestant and Catholic mothers had similar levels of agreement, with 63 per cent of Protestant and 65 per cent of Catholic mothers either agreeing or strongly agreeing with the statement.

Figure 14.8
Mother's views on whether sons should be encouraged more than daughters

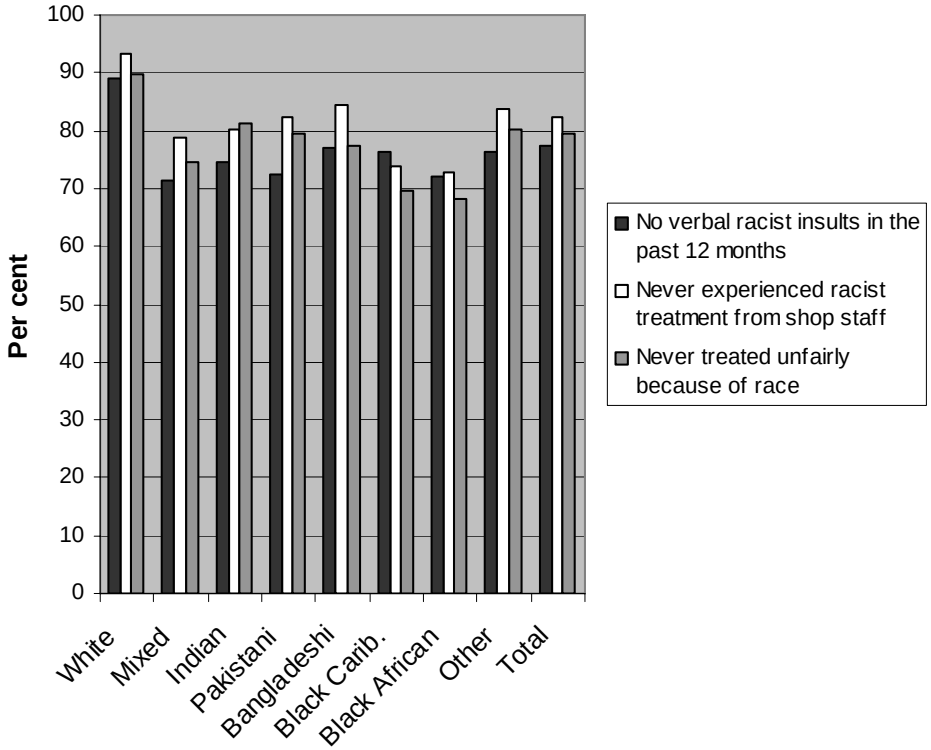


Notes: Sample: All MCS 3 mothers (natural, adoptive, foster and step) who completed the main interview and for whom ethnicity was classified. This table excludes any mothers who were eligible but not interviewed and any fathers or grandparents who completed the interview. Table displays unweighted observations, *weighted observations* and weighted percentages in parenthesis (using *weight2* for All UK).

Mothers were also asked to respond to the statement "Sons in families should be given more encouragement than daughters to do well at school". Figure 14.8 shows that, while the majority of mothers strongly disagreed with this statement, 3 per cent of mothers strongly agreed and a further 3 per cent agreed. The level of preference for sons expressed varied considerably by ethnic group. Bangladeshi and Other mothers were the most likely to agree or strongly agree that sons should be encouraged more than daughters (14%), followed by Pakistani (11%) and black African mothers (10%).

Experiences of Racism

Figure 14.9
Mothers' experiences of racism



Notes: Sample: All MCS 3 mothers (natural, adoptive, foster and step) who completed the main interview and for whom ethnicity was classified. This table excludes mothers identifying themselves as British Irish, British Scots or British Welsh and any mothers who were eligible but not interviewed and any fathers or grandparents who completed the interview. Table displays unweighted observations, *weighted observations* and weighted percentages in parenthesis (using *weight2* for All UK).

Mothers were asked whether they had received verbal racist insults within the last 12 months, whether they had received racist treatment from shop staff within the previous 12 months, and how often they had been treated unfairly because of their race or ethnicity. These questions were not put to white British-Irish-Welsh-Scots respondents. The responses were 'never', 'once or twice', 'several times', 'many times', or 'can't say'. Figure 14.9 summarises the responses, showing the proportion of each group responding 'never', as this was the most common response. Seventy-seven per cent of mothers overall had not experienced any verbal racist insults in the previous 12 months compared to 89 per cent of the subset of white respondents who were asked this question. A substantial minority had received racist treatment from shop staff, but this was far less common for white mothers. Black Caribbean (70%) and black African (68%) mothers were the least likely to report that they had experienced no unfair treatment because of their race.

Conclusions

The Millennium Cohort Study reveals information about a generation which is far more ethnically diverse than preceding cohorts. The social resources that the cohort members' families have access to are likely to affect the opportunities available to the children themselves. These differences in social capital may help us to understand ethnic differences in educational and other outcomes for the cohort members in the future.

Asian mothers (Bangladeshi, Pakistani and Indian) showed some characteristics in common. However, Indian mothers had greater economic prosperity and diverse religious composition. Asian mothers tended to have high levels of 'bonding' social capital within their families. They were relatively likely to be married, and their partnerships were typically homogamous. They were also relatively likely to be living together with a grandparent. Compared to black mothers, they were more likely to cluster in neighbourhoods with others from their own ethnic group, to have friends and family living locally, and to feel safe in their local area, and less likely to believe that racist insults and attacks were common in their area. Black Caribbean and black African mothers were also more likely to believe that they had been treated unfairly as a result of their race during the previous 12 months.

Both voting and political interest were strongly associated with NS-SEC classifications. Nevertheless, Asian mothers were relatively likely to vote, despite the relatively low average socio-economic status of Bangladeshi and Pakistani mothers in the UK. Black Caribbean mothers, in contrast, were relatively unlikely to vote, despite having higher levels of political interest than Bangladeshi or Pakistani mothers.

Mothers' religious affiliations and attendance were very strongly associated with NS-SEC, and this is, of course, part of the reason why schools which use faith-based admissions are more socially selective. Religious participation for Muslim mothers was low, which is unsurprising as many mosques do not allow or encourage women's attendance.

Three quarters of British-born ethnic-minority respondents, and nearly half of those who were born overseas, said that they thought of themselves as British. The figures were even higher in whether they viewed the cohort child as British. Support for integrated schooling (not minding the cohort child going to a school where 50 per cent of children were from another race) was high overall. The least 'tolerant' group on this measure was the white majority. Support for gender equality was also high overall, as measured by disagreement with an item stating that sons should be favoured. However, Bangladeshi and Pakistani mothers were more likely to agree that sons should be favoured. It will be fascinating to track any effects of these maternal attitudes on the children's gendered trajectories through the schooling system.

Overall, this chapter suggests that Asian mothers have high levels of 'bonding' social capital. Nevertheless, the lower levels of labour-market participation of Bangladeshi and Pakistani mothers may leave them with lower levels of 'bridging' social capital (social ties with other communities). In contrast, black Caribbean and black African mothers were relatively likely to be lone parents, and were the most likely to say that they had neither friends nor family living locally. These mothers were also the most likely to feel that they had been treated unfairly because of their race during the previous 12 months. Thus, black mothers could be seen as particularly socially excluded. The position of black Caribbean mothers may be of particular concern to policy-makers, since this is a long-established and well-integrated community, which still appears to perceive high levels of discrimination against them. The fact that black mothers have more contact with white people than Asian mothers do may be one factor that increases their risk of experiencing discrimination. This could lead to disillusionment for these mothers; perhaps reflected in their low levels of voting despite high levels of political interest.

Finally, the above findings are, of course, simply cross-tabulations, and do not imply causal relationships. Further analysis is required to elucidate the associations shown here.

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Chapter 15

CONCLUSIONS

Heather Joshi and Kirstine Hansen

By the time of the survey reported in this volume, the children of the Millennium Cohort had reached, or were approaching, the milestone of their fifth birthday. As they had started to go to ‘proper’ primary school, the study began to collect data from their teachers as well as their parents. Most of them had already experienced nursery education, as well as other forms of childcare, in their pre-school years, and nearly half of the families still used various forms of non-parental childcare in out-of-school hours, so the ‘milestone’ was not an abrupt discontinuity in their lives.

The longitudinal data show many other strands of continuity in their lives. Most children were still living in or close to the places where they had been selected for the study, with both their natural parents. Substantial numbers had experienced changes in their family circumstances – arrival of siblings, departures and arrivals of parents, marriages of parents, moving home, mothers (and fathers) moving in and out of employment. These events are likely to have triggered some of the movement in and out of poverty, which, on the measure used here, seems to have affected three out ten families at each survey.

As this survey and other literature shows, lone mother families have a high risk of poverty and the experience of living apart from natural fathers can be associated with other negative outcomes for children. As these experiences are particularly concentrated among children of young mothers, these findings provide justification for policies to reduce teenage pregnancy and improve alternatives to early motherhood for the least-educated young women. They also imply that families with young mothers, who are least likely to be employed, may benefit from further additional targeted support from government policy.

As the children grow older each follows his or her own path of cognitive, behavioural and physical development. Within the growth path, there are strong continuities. Development at age 3 predicts the stage reached at 5 for most children, but by no means all. Some fall back and some gain more than average. As at age 3, there are strong social and ethnic patterns in child outcomes, suggesting inter-generational transmission as well as continuity within one child’s life. It is not only the disadvantages facing families of young mothers that are still apparent, but the advantages experienced in the homes of highly educated parents, inequalities that present an important challenge to the school system. Yet there is sufficient variation in the experience within groups and from survey to survey to warn against concluding that social disadvantages have already been set in stone.

The children’s transition to school has also been marked by the first successful linkage of administrative data to the survey since the hospital and registration records at birth. In England we were able to link to the Foundation Stage Profile records of children attending state schools. In Scotland, Wales and Northern Ireland, we made contact with teachers for the first time, in a postal survey mimicking the assessments done in England by teachers. The comparability of these results remains to be scrutinised. Plans for both sorts of data collection from schools are in train for future sweeps, which will help trace the dual role of home and school in the children’s progress.

The results from teachers at the end of the first school year also reveal the expected advantage of children who were born early in the school year, a feature which the year-long recruitment to the cohort was designed to allow for, and which is a different source of

inequality among children from the socio-economic differentials which are also in abundant evidence. The hypothesis that ambitious parents avoid having summer-born children remains, like much else, to be investigated.

The somewhat surprising finding that few parents reported failing to get their child into their first-choice school has a resonance with the origin of the survey. As recruitment took place, in 2001, it became apparent that births in UK were at an unexpected, all–time low. The fact that the children being studied come from a particularly small cohort made it difficult for the survey to reach its original target of 20,000 but may have made it easier for these parents to get the primary school of their choice.

Social and economic differentials are documented throughout the report in the mental and physical health of parents, in children's health, behaviour, cognitive development and school performance, much of it associated with two markers of disadvantage, young motherhood and being in certain ethnic minority groups. Neither of these markers is likely to be the root source of the extra difficulties facing those children. Indeed ethnicity is also the marker of some positive aspects of social capital, and health-promoting behaviour which may cut across economic disadvantage.

The UK coverage of the survey has been able to show that in many respects differences between the four countries are small, even when statistically significant. One intriguing thread to emerge across the chapters concerns the families who took part in the survey in Northern Ireland. Despite similar levels of parental employment to the rest of the UK, both mothers and fathers are more likely to say they have plenty of time with their child and rate their life satisfaction and their satisfaction with their neighbourhood most highly (as they did at the age 3 survey). It is not obvious whether this might be related to the higher rates of self-employment, rural environments or the greater stability of partnerships, the greater use of childcare, membership of religious groups or other social capital, or indeed the higher numbers of younger siblings (which one might have thought would add to stress) or the lower response rates, to name but a few. Readers should bear in mind that making comparisons across different groups of people in these subjective attitudinal questions is always difficult.

It is also noteworthy that the parents in Northern Ireland are markedly more likely to read to their child every day and the children score highest on the composite cognitive score, which might be related to the earlier start of schooling as well, or instead of, the home learning situation. On the other hand, Northern Ireland is least likely to have families in the top fifth income bracket and has the highest poverty rate among our estimates.

The other countries show fewer systematic patterns of difference. The countries with the highest rate of normal body mass index in children are England and Scotland. Scotland also has the most normal BMIs among mothers and fathers. This, and the unexpectedly low poverty rate in Scotland, may yet be explained by particularly low response rates among poor families in that country.

The survey design, particularly in Wales, with a sample of 2,171 in this sweep, also affords the opportunity for within-Wales analysis of topics of particular relevance in that country. On schooling in the Welsh language, we find that 12 per cent of the families in Wales speak at least some Welsh at home, and around the same proportion of children were attending a mainly Welsh medium school. The latter is based on the smaller number of children covered in responses to the postal survey of teachers. It will require further investigation to see if children from homes which do not report speaking Welsh are going to schools which teach entirely or partially in Welsh.

There was also turnover in the participation of families in the study, with a remarkable recovery of ‘lost’ cases returning to the survey at age 5 almost compensating for the attrition of families interviewed at age 3, leading to an overall response rate of 79 per cent at both follow-up surveys to date.

Each chapter has taken different dimensions of the child’s development or the family circumstances as reached at age 5. They are like separate pieces of a jigsaw puzzle which need to be joined up across domains and over time to understand the causal processes behind these inequalities and provide a better guide to policy-making. For example, how far do the home learning environment, parenting style and experience of non-parental care, together with parental relationships and material resources, affect child development? This report is intended to help the research and policy worlds reach informed, in-depth conclusions. The tour of first findings is not offered as the last word, but as a stimulus to further insight.

The cohort marches on to the next survey at age 7 and beyond.