



# **GROWING UP IN SCOTLAND:** Change in early childhood and the impact of significant events

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# **GROWING UP IN SCOTLAND:** Change in early childhood and the impact of significant events

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# GROWING UP IN SCOTLAND:

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Responsibility for the opinions expressed in this report, and for all interpretation of the data, lies solely with the authors.

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## EXECUTIVE SUMMARY

This study uses five years of Growing Up in Scotland (GUS) data to investigate four significant events in early childhood:

- parental separation;
- moving house;
- parental unemployment; and
- the onset of maternal health problems.

The research is built around three research questions:

1. How prevalent are the events in the first five years of children's lives?
2. Which families are most likely to experience these events?
3. How are these events associated with known drivers of poor child outcomes?

GUS contains information on a range of factors that other research has identified as 'drivers' of child outcomes. The four drivers that we examine in this research are:

- home chaos;
- low income;
- maternal mental health; and
- parent-child relationship (warmth and conflict).

### ***How prevalent are these events in the first five years of children's lives?***

Approximately one in ten children (11%) experienced parental separation in the first five years of their lives. For two-thirds of these families, the separation marked a transition into a relatively sustained period of lone parenthood, lasting at least for the remainder of the period studied.

Moving house is the most common event studied in this report. Forty per cent of children experienced at least one move in the first five years of their lives and nine per cent moved twice or more.

The majority of couple families (82%) experienced a high level of employment throughout the five-year period, with only six per cent of families experiencing a sustained job loss or substantial reduction in hours. However, the situation for lone parents is very different. Just 20% of lone parents were in stable employment throughout while 14% experienced a job loss with no return to work during the period.



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The onset of *persistent* maternal physical health problems is the rarest event discussed in this report. This occurred in two per cent of families, while 84% of mothers remained in good health throughout the period.

## ***Which families are most likely to experience these events?***

Families most likely to experience parental separation include those with cohabiting rather than married parents, families living in income poverty and families where the birth of the child was unplanned.

Families most likely to experience moving, and moving more frequently, include those with a younger mother and private renters. Families living in rural areas, with good maternal-infant attachment and families with children older than the study child are less likely to move house.

Lone mothers most likely to experience a sustained job loss include younger mothers, mothers with more than one child and mothers with poorer physical health. Couple families most likely to experience a sustained job loss include families in social rented accommodation and families living on low income. In addition, couple families with other children, older than the study child, are less likely to experience a job loss.

Mothers most likely to experience onset of persistent maternal health problems include those living in workless households and mothers with previous poor mental or physical health.

## ***How are these events associated with drivers of poor child outcomes?***

The statistical models in this report adjust for the level of the driver of poor child outcomes before the event occurred when investigating whether the driver was exacerbated after the event. For example, the finding that parental separation is associated with later relative low income takes into account the fact that low income couples are more likely to separate in the first place. Thus, irrespective of prior income level separated families are more likely than intact families to experience income poverty.

All four of the significant events investigated in this report are associated with income poverty. For example, compared with 31% of study families overall, low income was experienced by:

- 55% of separated families;
- 47% of families who moved twice or more;
- 47% of couple families, and 81% of lone parent families, that experienced job loss; and
- 55% of families experiencing the onset of maternal health problems.

Being without work is clearly a key cause of poverty. Losing a job, or significantly reducing hours worked can signal a fall into poverty for many families. The findings further suggest that a parent losing a job or substantially reducing their working hours is also associated with a high level of home chaos and conflict in the parent-child relationship.

House moves are also associated with poor maternal mental health, in addition to low income. This suggests that either more support or better protection is needed for families to avoid unwanted or frequent house moves, especially for low-income families and private renters who are at particular risk of moving.

Findings suggest that the mother developing a persistent limiting health problem is associated with a high level of home chaos, conflict in the parent-child relationship, and poor maternal mental health, as well as low income.

## ***Implications***

The findings from this research have implications for a number of areas of policy and practice, including housing policy, benefits and services for families with children, and local counselling and support services aimed at couples, families, jobseekers or those living with health problems.

For example, combining work with looking after young children is a challenging prospect for many families and the availability of suitable and affordable childcare is often key to enabling parents to work. However, support for childcare costs through the childcare element of Working Tax Credits is being reduced from April 2011, and as yet there are no details on whether and how this support will be replaced under the Universal Credit.

One important finding to emerge from this research is that events that happen to parents can have implications for the whole family, possibly with knock-on effects on young children. This suggests that services need to take into account the needs of the whole family, not just those who the event is perceived to affect directly. The findings on separation, maternal health problems, maternal mental health, and conflicted parent-child relationship have implications for funding and provision of different services aimed at supporting families generally or parents living with health problems. Whole family support services are likely to work best.



chapter  
INTRODUCTION

## 1.1 Background

There is a growing body of research which identifies significant events in children's lives that can have an impact on current and later outcomes. For example, recent research of Growing Up in Scotland (GUS), the Millennium Cohort Study (MCS) and other sources has shown that changes to parental relationships can impact on child behaviour (Bradshaw and Tipping, 2010; Keirnan and Mensah, 2010) and that parents' transitions into and out of employment can impact on both family income and parent-child interaction (Millar and Ridge, 2008; McQuaid et al., 2010). This report will extend previous research by looking at a wider set of events that can happen during early childhood, namely moving house, parental separation, unemployment and maternal health problems.

The research will look at the association between these significant events and factors which other research, including GUS, has shown to be *related* to child outcomes. These 'drivers' of child outcomes include income poverty (Barnes et al., 2010), maternal mental health (Marryat and Martin, 2010) and strained parent-child relationship (Hobcraft and Kiernan, 2010).

The events this research focuses on are relevant to a number of current Scottish policy areas, including the *Early Years Framework*, *Equally Well* and *Achieving our Potential*. In addition, unemployment and maternal health problems relate to the recent and forthcoming changes to the benefit system and the emphasis on reducing inactivity benefits by moving people off both Income Support and Incapacity Benefit and into work. Following the social security theme, any effects of residential moves on family life will also be very topical with the announced changes to Housing Benefit. The research will also be of interest to those providing support services to parents with relationship problems or going through separation.

## 1.2 Adding to the evidence base

This research focuses on identifying key events that happen during childhood and examining whether families who experience these events disproportionately face a higher risk of drivers of negative child outcomes. Prior research (see below) has shown that the four events that we focus on (parental separation, moving house, parental job loss and the onset of maternal health problems) can potentially have significant impacts on family life and children's later outcomes.

Research indicates that relationship breakdown is associated with poor maternal mental health (Coleman and Glenn, 2010), while experiencing parental separation is linked with poorer long-term outcomes, including lower educational attainment. Nevertheless for most children with good parent-child relationships and good communication between the

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parents the negative outcomes following parental separation can be relatively short-term and limited to a transitional period of adjustment (Coleman and Glenn, 2010; Mooney et al., 2009). However, analysis has also indicated that the experience of living in a lone parent family in early childhood (under the age of 5), compared with later childhood, is especially linked with long-term negative outcomes including psychological distress and economic inactivity (Ermisch et al., 2004).

In turn, maternal health problems have been identified as a significant factor associated with child outcomes, including behaviour difficulties (Barnes et al., 2010; Kelly and Bartley, 2010). While it is quite common for families with young children to move house (Ketende et al., 2010) there is mixed evidence on the outcomes for children and a traumatic move can trigger Post Traumatic Stress Disorder in children (Steele and Sheppard, 2003).

Unemployment is a well-documented factor associated with family poverty, but also with other negative outcomes for both adults and their children. Analysis of British Household Panel Survey (BHPS) data has linked job loss with psychological distress in adults and poorer long-term outcomes for children. A movement from employment into unemployment is associated with psychological distress for both men and women without prior psychological problems, as is a movement from employment to family care for women. In both cases, the association was partly explained by the individual's perceived increased financial difficulties (Thomas et al., 2007). Parental unemployment is related to lower educational attainment and higher probability of economic inactivity, psychological distress and smoking among young adults, with the experience of parental worklessness in early childhood (aged 0-5) having the strongest influences on later educational attainment and economic inactivity (Ermisch, 2004).

This report adds to the current evidence base by using data from a large-scale longitudinal social survey designed to examine the characteristics, circumstances and behaviours of children from birth to late adolescence. GUS provides crucial evidence for the long-term monitoring and evaluation of policies for children, with a specific focus on the early years. This study uses the breadth of GUS data to look across not just several significant events, but also multiple family outcomes for each event.

GUS is an important data source in studying this area because it collects information on the same children over time. GUS began in 2005/06, and annual interviews have been carried out with the families since; with the latest sweep of data collection thus far taking place in 2009/10 (sweep 5). This report uses data from the babies (the 'birth cohort'), of which 3,833 took part in the 2009/10 study and 3,621 took part in all five years of the study. Some families who initially took part in GUS did not do so for all of the subsequent sweeps. There are a number of reasons why respondents drop out from longitudinal

surveys and such attrition is not random. However, we use the longitudinal weights supplied with the GUS dataset in our analysis to adjust for this<sup>1</sup>.

### 1.3 Research questions

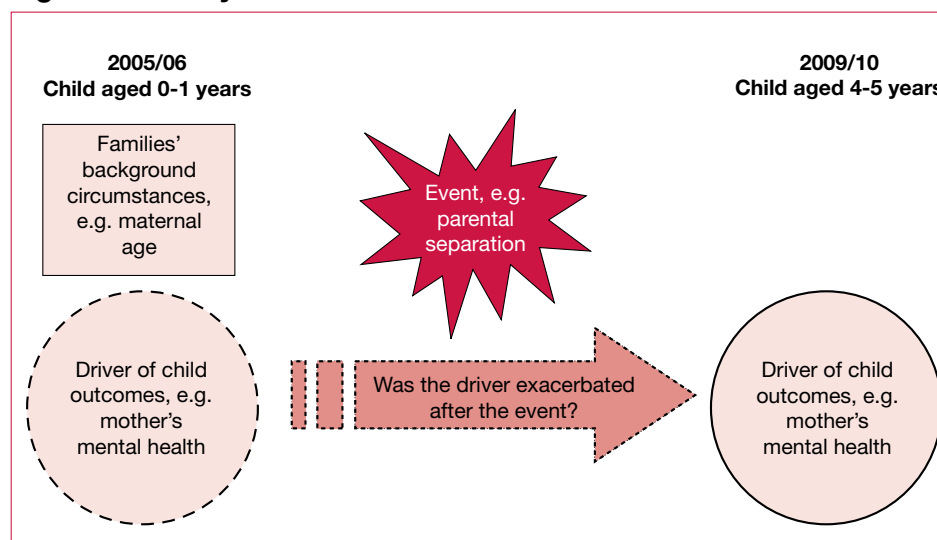
The research is built around three research questions:

1. How prevalent are (selected) events in the first five years of children's lives?
2. Which families are most likely to experience these events?
3. How are these events associated with known drivers of poor child outcomes?

Figure 1.1 illustrates how these research questions will be tackled. We make good use of the longitudinal element of GUS, using data from all five years (2005/06 to 2009/10) to identify an event that children have experienced during the first years of childhood (research question 1). Data from the first year (2005/06) is used to explore which children are most likely to experience an event (research question 2). Data from the last year (2009/10) is used to explore whether children who experienced an event are more likely to be at an increased risk of drivers of child outcomes (research question 3). Part of this analysis will explore the variation in the driver at year 5 for those children that did, and those that did not, experience each of the events. For example, the analysis will compare the likelihood of income poverty for those children whose parents separated with that of the children whose parents stayed together.

This report stops short of looking at actual child outcomes as it is well established that the drivers of child outcomes investigated are linked with poor child outcomes.

**Figure 1.1 Analytical model**



<sup>1</sup> For further information about weighting in GUS see the data user guides on the GUS website [www.growingupinScotland.org.uk](http://www.growingupinScotland.org.uk)

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This research will look at four events that can occur during early childhood:

- parental separation;
- moving house;
- job loss; and
- the onset of maternal health problems.

The four drivers that we examine in this research are:

- home chaos;
- low income;
- maternal mental health; and
- parent-child relationship.

These events and drivers are discussed further in the next chapter.

chapter  
MEASURES AND METHODS

# 2



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In this chapter we examine in more detail the events and drivers of child outcomes, including a discussion of how these are defined and measured in the data, before moving on to outline the analytical techniques used in the project.

## 2.1 Key measures

Fundamental to this research is the construction of measures that allow us to explore the relationship between childhood events and the ‘drivers’. Below we explain how each is measured using the GUS data.

### 2.1.1 Measuring events

GUS collects an assortment of information about children and their families. Main areas the study covers include childcare, education, social work, health and social inclusion. At each annual interview mothers are asked whether a variety of events have happened in the last year. Table 2.1 shows the range of events and the percentage of children that experienced each event during their first five years. It shows quite a wide range of events that can happen during early childhood and seven in ten children experienced at least one of them. The most common event was the arrival of a new baby to the household, which happened to approximately two in five families.

**Table 2.1 Events experienced in early childhood**

Event	Per cent <sup>1</sup>
Arrival of new baby in household	38
Death of grand-parent (or other close relative)	30
Parent has stopped living in household	12
New parent has entered the household	8
Parent has had a serious illness or accident	7
Either parent been away from child for three weeks <sup>2</sup> or more at a time	7
Sibling has had a serious illness or accident	4
Lived in temporary accommodation	3
Another child has stopped living in household	2
Another child has come to live in household	2
Death of parent or sibling	1
None	29
<i>Bases<sup>3</sup></i>	
<i>Weighted</i>	3611
<i>Unweighted</i>	3610

Notes:

<sup>1</sup> Respondents were able to give multiple answers.

<sup>2</sup> In the second year the question was regarding a separation for three months or more.

<sup>3</sup> Base sizes vary, smallest bases shown.

This research will look at four events that can occur during early childhood:

- parental separation;
- moving house;
- job loss; and
- the onset of maternal health problems.

Although Table 1.1 provides a guide to the incidence of these events, this is based on just one all-encompassing question asked to mothers. The GUS questionnaire actually asks more detailed information on each event and we used this information to construct more precise definitions of each event for use in further analysis throughout this report. Each definition is outlined below.

### **Parental separation**

Family breakdown is a process that involves a number of risk and protective factors that interact in complex ways (Mooney et al., 2009). We investigate the event of parental separation that happened in the first five years of the study child's life. Separation is identified when families with two parents living together, whether married or cohabiting, are no longer living together when the interviewer returns a year later. Almost all (98%) of the GUS children whose parents separated went on to live with their mother in the year following separation and we focus only on those families where the mother did not re-partner during the period studied (7% of all families). The reason for this is to focus on the separation event by excluding the added complexity of any subsequent re-partnering event. We also only count separations after the first interview, which allows us to record the family's circumstances prior to separation. We compare separated families with families that remained intact during the period. These two categories of families with associated prevalence statistics are presented in Table 2.3.

### **Moving house**

Again, for reasons stated above, we focus on house moves that occurred after the first interview. Given we do not have sufficient information on why families move house, we differentiate between those who did not move, moved house once and those who moved twice or more. See Table 2.3 for the number of children in each of these categories.

### **Job loss or significant decrease in working hours**

To investigate changes in family employment levels we create a measure of Work Intensity Ratio (WIR). This is based on the ratio of parents in employment in each family, taking into account the number of hours each parent works; either not in work (0-15 hours per week), in part-time work (16-34 hours per week) or in full-time work (35+ hours per

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week). Table 2.2 presents the categorisation given to single-parent and couple families according to the working hours of each parent.

**Table 2.2 Work Intensity Ratio categorisation for single-parent and couple families**

WIR	Single-parent family	Couple family
1	Parent working full-time	Both parents working full-time
0.75	-	One parent working full-time, the other part-time
0.5	Parent working part-time	One parent working full-time, the other not working OR both parents working part-time
0.25	-	One parent working part-time, the other not working
0	Parent not working	Both parents not working

To assess changes in a family's work intensity, we calculate differences in WIR from one year to the next. We exclude families where parents re-partnered or separated to avoid confounding employment changes with changes to parental composition (we look at parental separation as a separate event); 83% of all families who took part in all five sweeps were either stable couple or stable lone parent families throughout. We focus on families who experienced a year-on-year decrease in WIR of at least 0.5, which was not followed by a subsequent increase during the period studied. This is equivalent to a single parent losing a part-time job or, in the case of couple families, one parent losing their full-time job. The change is hence substantial and is likely to significantly affect the circumstances of the whole family, including children, particularly because the family's work intensity does not 'recover' during the period. To experience a decrease in WIR of a magnitude of 0.5 or more, a family needs to have a WIR of at least 0.5 in the earlier sweep, i.e. to be 'work-rich'. Therefore, the main comparison group is families who continuously had a high level of employment (WIR of at least 0.5). See Table 2.3 for the number of families in each of these categories.

It needs to be noted that a family may experience a substantial loss in WIR yet still remain 'work rich' - for example, a lone parent who changes from full-time to part-time work, or a couple family where one parent stops their full-time job but the other is still employed on a full-time basis. However, even in such cases the change is deemed to be significant enough to be likely to influence the circumstances of the family.

## The onset of maternal health problems

GUS asks mothers a number of questions about their health. We identify mothers who face an onset of health problems by selecting those who answered yes to two questions; the first asking whether they have any health problems or disabilities that have lasted or are expected to last more than a year, and the second asking whether this health

problem or disability limits their ability to carry out normal day-to-day activities. As we are interested in events which are likely to have a large impact on family life, we focus on mothers who developed a persistent limiting health problem (2%). This was defined as mothers reporting no health problem in the first year of the GUS child's life and then reported health problems in at least two consecutive later years. The comparison group is mothers who reported no health problems throughout the period. Table 2.3 shows the number of families in each of these categories.

Unfortunately, in these sweeps, the study did not inquire about fathers' health problems. So although paternal health problems may have a major impact on family life, our analysis can only focus on the health problems that mothers face.

**Table 2.3 Definition and incidence of events**

Events	Experienced event		Unweighted base (missing in brackets)
	%	n	
<b>Parental separation<sup>1</sup>:</b> Parents separated, mother did not re-partner	7	235	3621 (10)
<b>Residential house move<sup>1</sup>:</b> Moved once	32	1091	
Moved twice or more	9	250	3621 (6)
<b>Job loss/decrease in hours<sup>2</sup>:</b> Decrease in WIR of 0.5 or more	6	167	3139 (131)
<b>Onset of maternal health problems</b> Developed persistent limiting health problem	2	82	3621 (63)

Note: <sup>1</sup>Separations that occurred before the birth or between the birth and the first interview are not counted. Likewise, families that moved house before the birth or between the birth and the first interview are counted as non-movers. This is for analytical purposes, allowing the event to occur after 'baseline' information collected in 2005/06 and before the most recent information collected in 2009/10. <sup>2</sup>Base: All stable couple and stable lone parent families taking part in all five years.  
Base: All families taking part in all five years for all events except Job loss.

In the majority of cases the selected significant events did not co-occur. The majority (56%) of families who could have experienced all events<sup>2</sup> did not experience any of the events at all; some 41% experienced one event while just three per cent experienced two or more events. Thus although some events can occur together, this is beyond the scope of this report.

<sup>2</sup> Families who could have experienced all events would have been job rich couple families where the mother was in good health at the time of the first interview.

## **2.1.2 Measures of ‘drivers’ of child outcomes**

GUS also contains information on a range of factors that other research has identified as ‘drivers’ of child outcomes (Barnes et al., 2010; Barnes et al., 2008; Marryat and Martin, 2010; Jones, 2010; Deater-Deckard et al., 2009). The four drivers that we examine in this research are:

- home chaos;
- low income;
- maternal mental health; and
- parent-child relationship

– each of which has well-established relationships to child outcomes. Below we outline each of these measures<sup>3</sup>:

### ***i) Home chaos***

GUS includes a subset of four questions from the 15-item Confusion, Hubbub, and Order Scale (CHAOS). This instrument is specifically designed to be administered to parents for assessing turmoil in the child’s home across four areas: disorganisation, noise, having a calm atmosphere, and having a regular routine at home (Matheny et al., 1995). US research has shown household chaos to be associated with behaviour problems, inattention and cognitive development problems in children (Deater-Deckard et al., 2009; Dumas et al., 2006). We have combined the four items and taken the top third of the mean scores as an indicator of high level of chaos in the home environment.

### ***ii) Relative low income***

There is a well established link between growing up in a low-income household and poor outcomes for children. We use the bottom 30% of the (equivalised) income distribution to identify families living on low income. This is the same proportion of the income distribution focused on by the Scottish Government’s anti-poverty strategy (and in fact approximately the percentage of GUS families below the poverty line (Barnes et al., 2010)).

### ***iii) Maternal mental health***

Previous analysis of GUS has shown that children who had more prolonged exposure to a mother with mental health problems were more likely to have adverse developmental outcomes (Marryat and Martin, 2010). Maternal mental health is measured in GUS by the Medical Outcomes Study 12-item Short Form (SF-12) mental health component. The SF-12 is a widely used self-reported generic measure of health status, and is tailored for

3 Further detail is provided in Appendix A.

use in large health surveys of general populations. Higher scores are indicative of better health-related quality of life. The scale does not have thresholds defining whether a score suggests the presence of a psychiatric disorder, so we have followed the approach taken in a previous GUS report (Marryat and Martin, 2010) and defined a relative threshold below which we classify mothers as having ‘poor’ mental health (16% of mothers were in this category in 2009/10), as opposed to ‘average or good’ mental health. The threshold score is one standard deviation below the mean score for our analysed population, calculated separately for sweep 1 and sweep 5.

#### **iv) Parent-child relationship**

Attachment theory states that an infant needs to develop a relationship with at least one primary caregiver for social and emotional development to occur normally, and that further relationships build on the patterns developed in the first relationships (Cassidy, 1999). The Pianta scale (Pianta, 1992) is used to measure the mother-child relationship at year 5. The scale is constructed using the responses on the extent to which the mother feels a series of statements apply to her relationship with her child (such as ‘I share an affectionate, warm relationship with [my child]’). The GUS questionnaire contains a subset of the full 30 items included in the scale. We have constructed measures of ‘warmth’ and ‘conflict’ to use in this research, adopting methodology used by Hobcraft and Kiernan (2010) for analysing Pianta questions in the Millennium Cohort Study.

The percentage of children living in families at risk of negative child outcomes is presented in Table 2.4.

**Table 2.4 Percentage of families with ‘drivers’ of negative child outcomes**

<b>Driver of child outcome</b>	<b>%</b>	<b>n</b>	<b>Base (missing in brackets)</b>
High level home chaos	35	1,205	3621 (0)
Low income	31	829	3415 (216)
Poor maternal mental health	16	503	3621 (0)
Low parent-child warmth	23	763	3514 (107)
High parent-child conflict	17	574	3548 (73)

Base: All families taking part in all five years.

Note: Measures taken in the fifth year (2009/10).

## **2.1.3 Measures of family background**

GUS contains a wealth of information on the background circumstances of children and their families. This research uses a range of measures to explore which children are most likely to experience each event. These measures are also used as control variables when exploring the association between an event and the drivers of child outcomes. The measures include:

Characteristics of the child:

- Gender
- Ethnicity
- Health
- Low birth weight

Characteristics of the child's parent/s:

- Age
- Education level
- Marital status
- Poor maternal mental health
- Mother's attachment with child<sup>4</sup>
- Pregnancy planned or unplanned
- Duration of breastfeeding

Characteristics of the child's household:

- Tenure
- Social class
- Low income
- Home chaos
- Rurality
- Local area deprivation
- Number of dependent children in the household
- Family owns or has access to a motor vehicle

---

4 Early parent-child relationship is measured in year 1 using selected items from the Condon and Corkindale's Maternal Postnatal Attachment Scale (1998), see Appendix A for more information.

## 2.2 Analytical techniques

Multivariate analysis is used to help identify which families are most likely to experience each event and whether the event is associated with drivers of child outcomes (research questions 2 and 3 in section 1.3 above). Multivariate analysis is used to explore complex associations between an outcome variable and more than one explanatory variable.

Research question 2 involves investigating which families are most likely to experience each event and we use multiple regression analysis to identify which background characteristics are associated with experiencing an event, when accounting for other, potentially confounding, characteristics. For the separation, job loss and maternal health problem events, binary logistic regression is used (as the dependent variable is whether the event happens or not) while ordinal logistic regression is used to model the house moves event (as here we have three categories; no moves, one move and two or more moves). An explanation of these techniques and the relevant statistical output is included in section B of the technical appendix. Interpretation of the analyses is included in the relevant chapters of the main report.

Research question 3 involves investigating how each event is associated with acknowledged drivers of poor child outcomes. Again, we use multiple regression analysis (binary logistic regression) to identify whether there is an association between experiencing the event and the driver of child outcomes, when accounting for a family's background characteristics. Our approach makes the most recent measure of the driver (from 2009/10) the dependent variable in the model. This means the outcome variable always occurs later in time than the predictor variables, which can help with interpretation of the direction of any relationship. Where available, the model also includes an earlier measure of the driver, along with the measures of family background (all measured in 2005/06). This is important because of the possibility of an association between the same, or similar, drivers measured at two different time points<sup>5</sup> and because an association between an event and a driver may be different according to the level of the driver before the event. For example, the finding that parental separation is associated with later relative low income takes into account the fact that low income couples are more likely to separate in the first place. Thus, irrespective of prior income level separated families are more likely than stable families to experience income poverty.

It is important to note that the analysis presents significant *relationships* between the independent and dependent variables – the analysis does *not* unravel any *cause and effect* in the relationship. For example, if there is a relationship between moving house

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<sup>5</sup> Such approaches can result in driver score at year 5 (the dependent variable) being highly correlated with the driver score at year 1 (one of the independent variables), which manifests itself in high values of R<sup>2</sup> and makes it more difficult for other associations to be detected. However, this should be less of a problem given the relatively large time span between the two measurements (four years).



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and a decline in mother's mental health, the analysis cannot definitively show whether moving house is a cause of declining mental health. However, as we allude above, because we measure mental health before and after moving house, we have more weight to such assertions than is possible in cross-sectional (static) analysis. But we should reiterate that these relationships are inherently complex, and ascertaining the direction of causality is difficult.

Separate regression models are constructed for each event, and for each event separate models are constructed for each of the drivers we explore. It is also important to point out that some events are relevant only to certain sub-groups of children. For example, the separation event is only relevant to children whose parents are initially partnered, whereas a house move can happen to all children, and the analysis groups are constructed appropriately.

GUS was not designed to focus specifically on these events however, the events are part of the life of young children and hence are captured in the study. However this does mean that relatively rare events will affect only a few families in the study. In addition, as noted above some events are only relevant to a subgroup of families or have for analytical purposes been defined in a way that further constrains the number of families in the sample for whom an event can be analysed (for example the job loss event analysis is limited to stable couple and stable lone parent families). While such simplifications make the findings clearer to interpret this is naturally at the expense of some of the immense complexity of the real world.

## **2.3 Technical Appendix**

Readers interested in the details of the analyses should consult the Technical Appendix published alongside this report.

chapter  
PARENTAL SEPARATION

# 3

# GROWING UP IN SCOTLAND:

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In this chapter we investigate what happens to families when parents separate in the first five years of their children's lives. Undoubtedly there is a complex interaction between parental separation and other factors that can help increase or decrease the risk of poor child outcomes. Such factors include exposure to parental conflict, the timing of the separation, the quality of the parent-child relationship, as well as related issues such as strained finances and maternal mental health (Mooney et al., 2009; Coleman and Glenn, 2009).

## 3.1 Key findings

- The incidence of parental separation is highest in the first couple of years after the birth.
- Over one in ten children (11%) experienced parental separation in the first five years of their lives. In two-thirds of these families the mother did not re-partner during this time period.
- Families most likely to experience parental separation are those where the parents were unmarried, the family was living on low income or where the pregnancy had been unplanned.
- Families experiencing separation were more likely than stable couple families to experience subsequent income poverty and poor maternal mental health.

## 3.2 How many families experience parental separation?

The majority of GUS children were born into couple families where the parents<sup>6</sup> remained together throughout the five-year period. However, 11% of children experienced parental separation at some point during the first five years of their lives. Most children continued to live with their mother, and in two-thirds of these families the mother remained a lone parent throughout the period after separating (Table 3.1).

**Table 3.1 Family status stability during first five years**

Family status stability	%	Unweighted frequency
Stable couple family throughout	72	2862
Parents separated after birth - mother did not re-partner	7	235
Parents separated after birth - mother re-partnered	4	114
Originally absent parent moved in with child	4	102
Originally lone parent re-partnered	3	68
Stable lone parent throughout	9	230
<i>Bases</i>		
<i>Weighted</i>	3609	
<i>Unweighted</i>	3611	3611

Base: All families taking part in all five years.

6 GUS records the number of natural parents living in the household at each sweep, and the term couple family in this chapter refers to families where both natural parents are living together with the GUS child. Table 3.1 excludes the few cases where the GUS child lived with neither natural parent at sweep 1.

Overall, the incidence of parental separation declines over the first five years after birth. However, this pattern is not apparent when looking at only those families where the mother did not re-partner (Table 3.2).

**Table 3.2 Timing of parents' separation**

Age of GUS child at time of separation	Mother did not re-partner %	Mother re-partnered %	Total %
Age 0-1	20	38	26
Age 1-2	22	30	25
Age 2-3	22	21	22
Age 3-4	15	8	13
Age 4-5	22	3	15
<i>Bases</i>			
<i>Weighted</i>	265	134	399
<i>Unweighted</i>	235	114	349

Base: All separated families taking part in all five years.  
Note: Column per cent.

Table 3.2 includes families where the parents separated between the birth and the first interview. Although the first interview was carried out when the GUS child was 10 months old, mothers who at that point reported that they were not living with the child's father were asked to describe their relationship to him at the time of the birth. However, for the remainder of this chapter, we focus only on families who experienced separation after the first interview (thus excluding the 3% of all families where parental separation occurred between the birth and the first interview). The reasons for limiting our analysis to families where the separation occurred after the first interview are analytical as it ensures the event occurs after 'baseline' information has been collected.

### 3.3 Which families are most likely to experience parental separation?

As shown in Table 3.3 and Table 3.4 below, the likelihood of parental separation varies significantly by a number of the parental and household background characteristics listed in section 2.1.3 above and measured in 2005/06 (when the child was aged 0-1).

The likelihood of separation is higher among families with younger mothers, mothers with no qualifications, mothers with poor mental health, cohabiting parents, and when the birth had not been planned. The likelihood of separation is also higher among families living in rented accommodation, workless families, those living on a low income or in most deprived areas as well as among large families.

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However, many of these variables are likely to be associated with each other. For example, large families are generally more likely to live on relative low income, as are workless families. Next, we therefore turn to multivariate analysis to identify those factors which are independently related to separation when other, potentially confounding, factors are taken into account. The associations which were identified in the multivariate analysis as remaining significant when controlling for other factors are highlighted in Table 3.3 and Table 3.4 and discussed further below.

**Table 3.3 Separation by background characteristics of parents**

Characteristics of parents		Parental relationship history			
		Stable couple family	Parents separated	Separated, mother re-partnered	Unweighted bases
		%	%	%	
Mother's age	Under 20	64	19	16	53
	20 to 29	86	10	4	1044
	30 and over	94	5	1	1996
Mother's education level	Higher or above	91	7	2	2545
	Standard grade or other	86	9	4	435
	No qualifications	83	12	5	146
Parents' relationship status at child's birth	Married	94	4	1	2237
	Cohabiting	81	14	6	891
Maternal mental health indicator	Good/average mental health	91	6	3	2726
	Poor mental health	83	13	4	403
Pregnancy planning	It was planned by mother or by both parents	93	5	2	2251
	Neither planned nor prevented	85	10	5	442
	Not planned at all	81	14	5	398
Duration of breastfeeding	Never breastfed	86	10	4	921
	Up to 2 weeks	90	7	3	405
	more than 2 weeks, up to 2 months	92	6	2	453
	3-5 months	91	6	3	364
	6-9 months	94	5	2	471
	Still breastfeeding at Sweep 1 interview (10 months)	93	5	1	509
<b>All</b>		<b>90</b>	<b>7</b>	<b>3</b>	<b>3129</b>

Base: All originally couple families (at sweep 1) taking part in all five years.

Note: Row per cent.

Note: Shaded rows show characteristics with statistically significant associations with relationship history, after controlling for other factors in multivariate regression analysis.

Table 3.4 Separation by background characteristics of household

Characteristics of household		Parental relationship history			
		Stable couple family %	Parents separated %	Separated, mother re-partnered %	Unweighted bases
Household tenure	Owner occupied	94	5	1	2485
	Social rented	78	15	8	448
	Private rented	80	13	7	136
	Other	95	5		59
Social class	Managerial and professional occupations	94	5	1	1414
	Intermediate occupations	90	7	3	222
	Small employers and own account workers	91	6	2	357
	Lower supervisory and technical occupations	90	7	2	459
	Semi-routine and routine occupations	88	8	4	531
	No one employed	70	23	8	119
Low income indicator	Not relative low income	93	5	2	2257
	Relative low income	81	14	5	576
Urban-rural classification	Large urban	91	6	4	1117
	Other urban	89	9	3	893
	Small towns	87	10	3	410
	Rural	92	6	2	709
Area deprivation	Least deprived	94	5	1	771
	2	92	6	2	727
	3	91	7	3	686
	4	90	7	3	511
	Most deprived	82	13	6	434
Number of dependent children	1	90	7	3	1427
	2	91	7	3	1134
	3+	87	10	3	568
Family owns or has access to motor vehicle	No	76	17	7	223
	Yes	91	6	2	2905
<b>All</b>		<b>90</b>	<b>7</b>	<b>3</b>	<b>3129</b>

Base: All originally couple families (at sweep 1) taking part in all five years.

Note: Row per cent.

Note: Shaded rows show characteristics with statistically significant associations with relationship history, after controlling for other factors in multivariate regression analysis.

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For the multivariate analysis, and for the remainder of this chapter, we focus only on families who experienced separation and did not re-partner (seven per cent of all originally couple families). That is, the parents separated after the first interview and the mother did not re-partner during the period studied. These families are compared with stable couple families. The reason for limiting our analysis to families where the mother did not re-partner is that re-partnering (the entry of a step-parent into the household) constitutes another possibly significant event in the child's life, which can affect family life in ways that are likely to differ from the original separation event.

The multivariate analysis shows that after controlling for other factors, the background characteristics that remained significantly associated with a higher likelihood of parental separation were the parents' relationship status at the birth of the GUS child, whether the birth was planned and income at the time of the first interview (see Table C.1 in the technical appendix for full results).

- Cohabiting parents were more likely than married parents to separate<sup>7</sup>.
- Families where the birth of the GUS child had not been planned were more likely to experience separation compared with families where the birth had been planned.
- Parental separation was more likely among low income families.

## 3.4 What happens to children who experience parental separation?

Families that experienced parental separation were more likely than stable couple families to experience drivers of child outcomes (measured in 2009/10); notably:

- household chaos;
- income poverty;
- poor maternal mental health; and
- lower parent-child warmth.

There does not seem to be a substantial difference in terms of the Pianta conflict dimension (see Table 3.5).

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<sup>7</sup> The association between marital status and separation remains significant even when controlling for the duration of the relationship (analysis not shown).

**Table 3.5 Drivers of child outcomes by relationship stability**

		%
Home chaos (% high level chaos)	Stable couple family	32
	Parents separated	40
	<i>All</i>	32
Income poverty (% poor)	Stable couple family	19
	Parents separated	55
	<i>All</i>	22
Maternal mental health (% poor mental health)	Stable couple family	12
	Parents separated	28
	<i>All</i>	13
Pianta warmth (% lower or least warmth)	Stable couple family	21
	Parents separated	29
	<i>All</i>	21
Pianta conflict (% higher or most conflict)	Stable couple family	15
	Parents separated	17
	<i>All</i>	15
<i>Bases</i>		
<i>Weighted</i>		2644
<i>Unweighted</i>		2880

Base: All originally couple families taking part in all five years.

Table 3.5 does not show the level of the driver measures prior to the separation event taking place, and so we can not judge whether there has been a *change* in the driver following the event. For this we turn to multivariate regression analysis which allows us to look at the relationship between the event and the drivers of child outcomes while taking other potentially confounding factors into account, and importantly, controlling for the level of the driver measure at year 1 (note that a measure of home chaos is not available in year 1).

Table 3.6 summarises the results from the regression models. The dependent variable for each model is the relevant driver of child outcomes named in the column headings, the separation event and the sweep 1 measure of the driver are listed down the left and the arrows indicate the direction of any significant association. All of the measures of family characteristics listed in Section 2.1.3 were initially entered into the models as control variables (see Tables D.1 to D.5 in the technical appendix for full results).

Parental separation is significantly associated with a higher likelihood of income poverty and poor maternal mental health, but not significantly associated with either home chaos, or mother-child relationship on either the warmth or conflict dimensions.



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- Controlling for income poverty in year 1, and other factors, families that had experienced separation were much more likely to be income poor in year 5.
- Mothers who experienced separation were more likely to experience poor mental health in year 5 (controlling for maternal mental health in year 1, and other factors). Unsurprisingly, mothers with poor mental health in year 1 were more likely to have poor mental health in year 5. However, there was also an interaction between the separation event and the mother’s mental health in year 1 which means that the negative effect of separation on mental health is lessened for mothers who had poor mental health prior to the separation. This might suggest some support for other research reviewed by Coleman and Glenn (2010) which indicated that smaller increases in depression have been noted following the separation from high-conflict relationships, or where a partner has been depressed during the relationship.

**Table 3.6 Relationship between parental separation and drivers of child outcomes controlled for other factors**

	Drivers of child outcomes				
	High level home chaos	Income poverty	Poor maternal mental health	Parent-child – Low warmth	Parent-child – High conflict
Parents separated		↑	↑		
Driver present at year 1	n/a	↑	↑	↑	↑
Interaction: Driver present (year 1) and parents separated	n/a		↑		

Note: All factors other than the Event are measured at the Sweep 1 interview (2005/06).

Note: Arrows indicate whether an event or year 1 driver category is associated with significantly higher (↑) odds of the driver of negative child outcomes occurring, compared with the reference category.

Note: All factors with arrows (↑) are significant at 5% level, unless otherwise indicated. Blank cells indicate no significant relationship.

The timing of parental separation was included in separate models (not shown). The timing of parental separation was significantly associated with income poverty, with those separating between the third and fourth interviews having the highest likelihood of poverty in year 5. The timing of parental separation was also associated with poor mental health, with more recent separation associated with higher likelihood of poor mental health. However, it should be noted that relatively few families separated in any single year so these findings should be interpreted with caution.

chapter  
RESIDENTIAL MOVES

4

# GROWING UP IN SCOTLAND:

Change in early childhood and the impact of significant events

Research shows that moving house is one of the greatest stresses we face in our lives. Previous research on children who move house has shown that Post Traumatic Stress Disorder in children can be triggered by a traumatic move (Steele and Sheppard, 2003). Parents often underestimate their children's feelings and younger children who see parents stressing over the basic inconveniences associated with moving are more likely to interpret their parent's behaviour as being their fault.

In this chapter we investigate the data GUS collects on residential moves. We focus on the number of times children move house during the first five years. We then explore the types of children most likely to make a house move, and frequent moves, during early childhood. We go on to see whether families who move house are at increased risk of drivers of child outcomes.

## 4.1 Key findings

- Moving house is a relatively common event in the first five years of a child's life; 40% of families moved at least once.
- The likelihood of a house move decreased as the child got older and the most common reason given for the move was to have a bigger home.
- Families most likely to move were those with young mothers, those renting privately, those with only one child and families living in urban areas.
- Families who had moved house once were more likely to subsequently have a mother with poor mental health, while families moving twice or more in the five-year period were both more likely to be living in income poverty and to experience poor maternal mental health.

## 4.2 How often do families move house?

In this section we illustrate the type and frequency of residential moves; looking at how many children moved house and whether this varies as children get older. We also look at why families move house and the number of times families moved during the first five years of the study children's lives. GUS asks a suite of questions about the family's home and begins by asking whether they have moved house in the last year<sup>8</sup>.

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8 This, as with the majority of questions in GUS, is asked to the main respondent (usually the mother). So there may be cases where the mother was not living with the child last year but now is, even though the children have not actually moved house. This is likely to be a very rare event, so we assume in our analysis that all changes in address apply to the GUS child.

**Table 4.1** Number of times children moved house in first five years

Number of times moved house	%	n
None	60	2274
One	32	1091
Two	7	205
Three	2	42
Four	<0	3
<b>Total</b>	<b>100</b>	<b>3615</b>

Base: All families taking part in all five years.

The majority of children (60%) did not move house over the period. Of those that did, moving just once was the norm. However, almost one in ten (9%) children moved twice or more, with a minority moving three or four times (2%). Our previous analysis of the Families and Children Survey (Barnes et al., 2008) showed that 29% of children (aged 0-16 years) had moved house over a five-year period (2001 and 2005), which supports the suggestion that families with younger children are more likely to move house<sup>9</sup>.

**Table 4.2** Timing of first house move

Age of GUS child	% who moved house in last year	Base (unweighted)
Did not move	60	2274
Age 1-2	16	530
Age 2-3	11	368
Age 3-4	8	269
Age 4-5	5	174
<b>Total</b>	<b>100</b>	<b>3615</b>

Base: All families taking part in all five years.

Note: Families that moved house before the birth or between the birth and the first interview are counted as non-movers. This is for analytical purposes, allowing the event to occur after 'baseline' information collected in 2005/06 and before the most recent information collected in 2009/10.

The likelihood of a family moving house decreased as the GUS child got older. There are a number of explanations for this. First, the change in family composition at the birth of a child can change the accommodation needs of a family, presenting a need for different or bigger accommodation in the early years of the child's life. Secondly, it may be easier to move house with a very young child, who is easier to move physically, and has less of a connection with the area or local school. Thirdly, as the GUS child ages it is more likely that the family has a new child or the child has an older sibling who has become established at school – hence a family becomes more connected to an area. Finally, in

<sup>9</sup> Analysis of FACS data by the authors also shows a fall in the prevalence of house moves in the past 12 months by age of the youngest child in the household.

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longitudinal surveys it is more difficult to trace families who move house and hence some of the decrease of house moves might be explained by those who do move house not being recorded at later sweeps<sup>10</sup>.

Young families move house for a variety of reasons, for example, to get a foot on the housing ladder, to move to a bigger or better home, because a parent changes job or to be within a school catchment area. GUS asks for the main reasons why a family made a move. This question was not asked in all sweeps of GUS, only when the GUS child was aged 1-2, 2-3 and 4-5 years.

**Table 4.3 Main reasons families move house**

Reasons for moving house	2006/07	2007/08	2009/10
	Age 1-2	Age 2-3	Age 4-5
	%	%	%
For larger home	49	47	43
Wanted own place	16	11	11
Near relatives	10	9	9
Wanted to buy	8	7	5
For better home	18	18	19
Better area	17	17	19
Children's education	6	7	13
School catchment area	4	6	9
Near work	5	4	5
Changed job	2	2	0
Relationship breakdown	5	9	11
New relationship	2	1	3
No longer afford it	2	2	3
Evicted/repossessed	1	1	2
Away from crime	3	6	9
Problem neighbours	5	5	8
Wanted change	2	3	6
Other reason	15	18	23
Base (unweighted)	530	446	296

Base: All families taking part in all five years and who moved house.

Note: Multiple responses.

<sup>10</sup> Every effort is taken to track people in the study and the relevant cross-sectional and longitudinal weights are used in all analysis in this report, however it is possible that the number of frequent movers is underestimated.

Moving to a larger or better house or a better area are popular reasons to move. Very few families were evicted or moved because they could not afford current housing costs. Overall, the reasons for moving remained fairly constant over time. Exceptions were moving because of relationship breakdown or a new relationship, which became more frequent as the child got older (which is interesting considering the opposite trend in the prevalence of separations noted in the previous chapter) – as did moving for reasons to do with the child’s education, which clearly becomes more relevant as the child nears school age. Reasons that became less common were those associated with starting a family (likely to be relevant to those families for whom the GUS child was the first child), such as wanting to move to a larger house, and families wanting to buy or have their own house. Moving because a parent changed job was virtually non-existent in 2009/10, which may be linked to the depressed job market as a result of the recession – although few young families gave this reason before the recession.

Categorising families into ‘voluntary’ and ‘involuntary’ reasons to move – with the expectation that ‘involuntary’ changes might prove the more harmful to children – would have been a useful next stage. However, given that these distinctions are not clear cut (also note the large number of ‘other’ responses), and because we are missing reasons for two-fifths of the recorded moves (because the question was not asked in all years), this approach does not seem feasible.

### **4.3 Which families are most likely to move house?**

We now go on to explore in more detail the characteristics of families in 2005/06 (when the child was aged 0-1) according to whether, and how often, they moved house. Table 4.4 and Table 4.5 (below) show that families most likely to move house at least once included:

- Families with one child
- Families with a younger mother
- Families with a lower educated mother
- Lone-parent families
- Families with poor mother-infant attachment
- Families in rented accommodation
- Workless families
- Families on low income
- Families in urban areas
- Families in the most deprived areas

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Families particularly likely to move more than once have broadly the same characteristics. The only exceptions are that families with mothers with poor mental health were also more likely to move twice or more, while the urban-rural classification of the local area was not associated with moving more than once.

Again, many of these characteristics go hand-in-hand and ordinal logistic regression was used to identify which of these characteristics remain associated with a house move when other characteristics are taken into account (see Table C.2 in the technical appendix for full results). The model suggested the following factors are important in predicting whether a family moves house or not:

- mother's age (with younger mothers more likely to move);
- housing tenure (families renting privately were substantially more likely to move than owner occupiers);
- number of children (families with children older than the GUS child less likely to move);
- mother-infant attachment (families with poor attachment more likely to move); and
- urban-rural classification (families in urban areas more likely to move).

The factors significantly associated with moving house, when other factors are controlled for, are highlighted in the tables.

**Table 4.4 House moves by child and parental background characteristics**

		Moved house		Number of times		Unweighted Base
		No %	Yes %	1 %	2 + %	
<b>Characteristics of child</b>						
Child's birth order	First or only child	52	48	37	11	1759
	Older siblings	68	32	26	6	1856
<b>Characteristics of parents</b>						
Mother's age	Under 20	28	72	47	26	158
	20 to 29	52	48	38	10	1289
	30 and over	71	29	24	5	2123
Mother's education level	Higher or above	62	38	31	7	2801
	Standard grade or other	53	47	34	13	574
	No qualifications	58	42	31	11	237
Parents' relationship status at child's birth	Married	67	33	29	5	2255
	Cohabiting	57	43	32	11	950
	In a relationship but not living together	41	59	43	16	221
	Single/Divorced or separated/Widowed	45	55	36	19	181
Maternal mental health indicator	Good or average mental health	61	40	32	8	3094
	Poor mental health	57	43	31	12	521
Mother-infant attachment	Poor	51	49	35	13	480
	Good	62	38	31	8	3007
Pregnancy planning	It was planned by mother or by both parents	64	36	30	6	2358
	Neither planned nor prevented	54	46	33	13	537
	Not planned at all	54	47	34	13	673
Duration of breastfeeding	Never breastfed	58	42	32	10	1215
	Up to 2 weeks	57	43	32	11	466
	more than 2 weeks, up to 2 months	57	43	36	7	505
	3-5 months	61	39	29	10	404
	6-9 months	65	35	32	3	488
	Still breastfeeding at Sw1 interview (10 months)	67	33	28	5	529
	<b>All</b>		<b>60</b>	<b>40</b>	<b>32</b>	<b>9</b>

Base: All families taking part in all five years.

Note: Row per cent.

Note: Shaded rows show characteristics with statistically significant relationships with house moves, after controlling for other factors in multivariate regression analysis.



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**Table 4.5 House moves by household background characteristics**

		Moved house		Number of times		Unweighted Base
		No %	Yes %	1 %	2 + %	
<b>Characteristics of household</b>						
Household tenure	Owner occupied	67	33	28	5	2589
	Social rented	55	45	34	10	743
	Private rented	23	77	49	28	188
	Other	31	69	49	20	93
Occupational group of main earner	Managerial and professional occupations	66	34	29	5	1456
	Intermediate occupations	58	42	33	9	260
	Small employers and own account workers	67	33	26	6	362
	Lower supervisory and technical occupations	58	42	33	9	476
	Semi-routine and routine occupations	60	40	31	9	616
	No one employed	47	53	38	15	418
Low income indicator	Not relative low income	65	35	30	5	2328
	Relative low income	52	48	35	13	962
Urban-rural classification	Large urban	59	41	31	9	1303
	Other urban	57	43	34	10	1076
	Small towns	62	39	30	8	490
	Rural	65	35	29	5	746
Area deprivation	Least deprived	68	32	27	5	785
	2	65	35	30	5	784
	3	62	38	30	8	780
	4	53	47	36	11	618
	Most deprived	53	47	34	13	648
Number of dependent children	1	53	47	36	11	1693
	2	66	34	28	6	1279
	3+	68	33	26	7	643
Family owns or has access to motor vehicle	No	50	50	36	14	504
	Yes	63	38	31	7	3110
<b>All</b>		<b>60</b>	<b>40</b>	<b>32</b>	<b>9</b>	<b>3615</b>

Base: All families taking part in all five years.

Note: Row per cent.

Note: Shaded rows show characteristics with statistically significant relationships with house moves, after controlling for other factors in multivariate regression analysis.

#### 4.4 What happens to children that move house?

Table 4.6 presents the relationship between residential moves and drivers of child outcomes (measured in 2009/10).

**Table 4.6 Drivers of child outcomes by residential moves**

		%
Home chaos (% high level chaos)	Did not move house	35
	Moved house	36
	Moved once	36
	Moved 2+	35
	<i>All</i>	35
Income poverty (% poor)	Did not move house	26
	Moved house	36
	Moved once	33
	Moved 2+	47
	<i>All</i>	31
Maternal mental health (% with poor mental health)	Did not move house	13
	Moved house	19
	Moved once	18
	Moved 2+	22
	<i>All</i>	16
Pianta warmth (% lower or least warmth)	Did not move house	21
	Moved house	24
	Moved once	22
	Moved 2+	29
	<i>All</i>	22
Pianta conflict (% higher or most conflict)	Did not move house	15
	Moved house	19
	Moved once	19
	Moved 2+	18
	<i>All</i>	17
<i>Bases</i>		
<i>Weighted</i>		3402
<i>Unweighted</i>		3413

Base: All families taking part in all five years.

Overall, there are relatively few differences observed in drivers for families who move house, compared with those who did not:

- Income poverty is more prevalent among families who have moved particularly families who have moved more frequently.
- A higher percentage of children who had moved house twice or more had less warm relationships with their mothers.
- A higher percentage of children who had moved house had more conflict in their relationships with their mothers.

# GROWING UP IN SCOTLAND:

Change in early childhood and the impact of significant events

Again we turn to multivariate analysis to investigate the relationship between the residential moves event and the drivers of child outcomes, while controlling for other factors. The table below (Table 4.7) summarises the results from the regression models (see Table D.6 to D.10 in the technical appendix for full results). Overall, moving house was significantly associated with income poverty and poor mental health, but not with home chaos or parent-child relationship.

- Moving once was associated with poor maternal mental health, although the negative effect of moving on mental health was removed entirely for mothers who had poor mental health prior to the move. In other words, for those mothers the higher likelihood of poor mental health after the move was explained by their previous experience of poor mental health.
- Moving twice or more was associated with a higher likelihood of income poverty, compared with not moving. However, the negative effect of moving twice or more on the likelihood of income poverty was not as strong for those already living on low income prior to the moves (in year 1). In other words, the high likelihood of these families living in income poverty after moving was partly explained by their prior experience of living on low income.

The timing of the house move (or the first move in the case of multiple moves) was not significantly associated with any of the drivers of child outcomes (models not shown).

**Table 4.7 Relationship between house moves and drivers of child outcomes controlling for other factors**

	Drivers of child outcomes				
	High level home chaos	Income poverty	Poor maternal mental health	Parent-child – Low warmth	Parent-child – High conflict
Moved house once			↑		
Moved house twice or more		↑			
Driver present at year 1	n/a	↑	↑	↑	↑
Interaction:					
Driver present (year 1) and moved once	n/a		↑		
Interaction:					
Driver present (year 1) and moved twice+	n/a	↑ <sup>1</sup>			

Note: All factors other than the Event are measured at the sweep 1 interview (2005/06).

Note: Arrows indicate whether an event or year 1 driver category is associated with significantly higher (↑) odds of the driver of negative child outcomes occurring, compared with the reference category.

Note: All factors with arrows (↑) are significant at 5% level, unless otherwise indicated. Blank cells indicate no significant relationship.

Note: <sup>1</sup>Significant at 10% level.

chapter  
JOB LOSS

# 5

# GROWING UP IN SCOTLAND:

Change in early childhood and the impact of significant events

Previous research using GUS data (Barnes et al., 2010) has identified low family level work intensity as a factor with particular bearing on child poverty. Analysis of British Household Panel Survey (BHPS) data has linked job loss with psychological distress in adults (Thomas et al., 2007) and poorer long-term outcomes for children, with the experience of parental worklessness in early childhood (age 0-5) having the strongest influences on later educational attainment and economic inactivity (Ermisch, 2004). In this chapter we investigate what happens to families when a significant reduction in parents' combined working hours occurs.

## 5.1 Key findings

- A sustained job loss or substantial reduction in working hours was much more likely among lone parents than couple families.
- Lone parents more likely to experience job loss included younger mothers and those who had older children in addition to the study child and those with poorer physical health.
- Couple families more likely to experience job loss included those living in social rented housing and those living on low income. Among couple families the likelihood of experiencing job loss was in fact lower for those who had older children in addition to the study child.
- Both lone parent and couple families who experienced job loss were more likely to subsequently have a high level of home chaos, low income and high conflict in the parent-child relationship.

## 5.2 How many families experience job loss?

As explained in Chapter 2, to investigate changes in employment at the family (household) level, we create a measure of Work Intensity Ratio (WIR). This is based on the average use of household workforce. To assess changes in the level of employment in the household, we calculate wave-on-wave differences in WIR by subtracting WIR in a given wave from WIR in the next wave. Negative values of this measure indicate decrease in the level of household employment and positive values indicate increase. We focus on those families who experienced a wave-on-wave *decrease* in WIR of at least 0.5, which was *not* followed by a subsequent recovery (see Chapter 2 for a more detailed definition of this event).

The timing of the event may also be important – a job loss experienced early in a child's life may have different consequences for its outcomes than a job loss experienced later. Table 5.1 presents the distribution of years in which we observed the drop in employment.

**Table 5.1** Timing of the job loss event

Age of the child when job loss occurred	%
1-2 years in 2006/07	25
2-3 years in 2007/08	15
3-4 years in 2008/09	12
4-5 years in 2009/10	48
<i>Bases</i>	
<i>Weighted</i>	171
<i>Unweighted</i>	167

Base: All families taking part in all five years and experiencing a job loss after the first interview.

Note: Column per cent.

The proportion of families who experienced a job loss when the child was aged 1-2 years was higher than over the two following years. This could partly be because of mothers taking a career break and not returning to employment at the end of maternity leave<sup>11</sup>. However, job loss peaked when the child was aged 4-5. This is at least to some extent due to the way in which we defined the event – a job loss followed by a lack of recovery – as clearly it is easier to observe a recovery for events that occur earlier. Note that we cannot be sure how many of the families who experienced job loss between the last two sweeps of the survey would increase their employment levels over the next year or so. This problem is known in the statistical literature as ‘censoring’, and we include the timing of the job loss in our statistical modelling to at least partially control for this problem.

The job loss event is equivalent to a single parent losing a part-time job or, in the case of couple families, one parent losing their full-time job. The change is hence substantial and is likely to significantly affect the circumstances of the whole family, including children, particularly because it is sustained over time. The main comparison we carry out is between families who continued to have a high level of employment (WIR of at least 0.5) in all five sweeps of the survey, and those families who initially had a high level of employment, but then experienced a substantial drop in their employment level, and never recovered after the drop. In the subsequent analyses we will refer to these groups of families as having ‘stable employment’ and ‘job loss’ histories respectively.

To put these categories of interest in context, Table 5.2 presents their frequencies relative to other possible employment history profiles: a ‘stable lack of employment’ profile, that is families with WIR below 0.5 at all five years, and all the remaining families with mixed or unstable employment histories – the profile labelled as ‘other’ in the table.

<sup>11</sup> In 2004/05 when the GUS babies were born employed mothers were entitled to up to 52 weeks of maternity leave. Respondents on maternity leave are treated as economically active with their job status recorded as it was prior to starting maternity leave. As the first interview took place when the GUS child was 10 months old the higher prevalence of job loss between the first and second interviews may partly be due to some mothers having been on maternity leave at the time of the first interview from a (full-time) job to which she did not subsequently return.

# GROWING UP IN SCOTLAND:

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**Table 5.2 Employment history profiles by family type**

	Lone parent families	Couple families	Total
	%	%	%
Stable employment	21	82	75
Job loss	13	5	6
Stable lack of employment	42	3	8
Other	24	9	11
<i>Bases</i>			
<i>Weighted</i>	343	2501	2844
<i>Unweighted</i>	242	2766	3008

Base: All families taking part in all five years.

Note: Column per cent.

Patterns of employment vary considerably according to the family type: 82% of couple families are in the ‘stable employment’ category, compared with only 21% of lone parent families. Conversely, only three per cent of couple families are in the ‘stable lack of employment’ category, compared with 42% among lone parents. The event of job loss, as defined in this report, is also more likely to happen in lone parent families (13%) than in couple families (5%). This pattern suggests that the differences between the family types should be taken into account in further analyses. Hence all subsequent descriptive analysis in this chapter presents separate estimates for lone parent and couple families.

## 5.3 Which families are most likely to experience job loss?

Table 5.3 presents the association between job loss and family background characteristics measured in 2005/06 (when the child was aged 0-1, see section 2.1.3 for full list of characteristics considered). The main findings are that for both lone parents and couple families there is an increased likelihood of job loss among families:

- with younger mothers;
- with mothers with poorer physical health;
- with a main earner in lower occupational class (social class);
- living on a low income; or
- living in more deprived areas.

A number of background characteristics had different associations with job loss for lone parents and couple parents:

- The likelihood of job loss among lone parent families increased with the number of children; such a pattern is not evident among couple families.

- Among couple families, the likelihood of job loss is lowest for owner-occupiers and highest among families renting in the social sector. However, among stable lone parents the likelihood of job loss is highest among those in the privately rented and 'other' accommodation.
- Among couple families, the likelihood of job loss does not vary by the urban-rural classification of the local area. However, among lone parents job loss is more likely in urban areas than in small towns and rural locations.

Highlighted in the tables are those associations which remained significant for either lone parents or couple parents after taking other factors into account (see below).

**Table 5.3 Job loss by background characteristics of child and parents**

		Stable lone parent			Stable couple			Unweighted bases	
		Stable employment %	Job loss %	Temporary reduction %	Stable employment %	Job loss %	Temporary reduction %	Stable lone parent	Stable couple
<b>Characteristics of child</b>									
Child's birth weight	Low birth weight	*	*	*	84	10	6	4	138
	Birth weight not low	56	33	11	89	5	6	96	2481
Child's birth order	First or only child	55	32	13	89	6	4	71	1262
	Older siblings	[51]	[45]	[4]	88	5	8	29	1358
<b>Characteristics of parents</b>									
Mother's age	Under 20	*	*	*	72	12	16	15	24
	20 to 29	[58]	[33]	[9]	87	5	8	39	802
	30 and over	[71]	[24]	[5]	90	5	4	44	1769
Mother-infant attachment	Poor	*	*	*	89	7	4	12	309
	Good	59	34	7	89	5	6	85	2246
Mother's physical health score	Mean	54.50	51.50	54.10	53.90	52.90	52.70	100	2592
	Standard error	0.72	1.28	0.99	0.13	0.58	0.63		
<b>All</b>		<b>54</b>	<b>35</b>	<b>11</b>	<b>89</b>	<b>5</b>	<b>6</b>	<b>100</b>	<b>2620</b>

Base: All originally job-rich families taking part in all five years.

Note: Row per cent.

Note: <sup>1</sup>Three least deprived quintiles; <sup>2</sup>Two most deprived quintiles.

Note: Shaded cells show characteristics with statistically significant relationships with job loss (separately for lone parent and couple families), after controlling for other factors in multivariate regression analysis.

Note: [ ] Percentages are based on fewer than 50 cases and should be interpreted with caution. \* Percentages are based on fewer than 20 cases and are not robust, therefore results are not presented.



# GROWING UP IN SCOTLAND:

Change in early childhood and the impact of significant events

**Table 5.4 Job loss by background characteristics of household**

		Stable lone parent			Stable couple			Unweighted bases	
		Stable employment %	Job loss %	Temporary reduction %	Stable employment %	Job loss %	Temporary reduction %	Stable lone parent	Stable couple
<b>Characteristics of household</b>									
Household tenure	Owner occupied	72	28		92	4	4	50	2233
	Social rented	[45]	[24]	[31]	67	13	19	30	232
	Private rented or 'Other'	[36]	[60]	[4]	87	5	8	20	155
Social class	Managerial, professional and intermediate	[57]	[30]	[13]	92	4	4	44	1477
	Own account, lower supervisory, technical and routine occupations	52	39	9	84	7	8	56	1140
Low income indicator	Not relative low income	[68]	[25]	[7]	92	4	4	30	2067
	Relative low income	47	40	13	77	11	12	66	326
Urban-rural classification	Large urban	[44]	[30]	[27]	88	7	6	31	928
	Other urban	[50]	[46]	[4]	88	5	7	49	739
	Small towns and rural	[88]	[12]		90	5	6	20	953
Area deprivation	Less deprived <sup>1</sup>	[72]	[20]	[9]	91	4	4	40	1921
	More deprived <sup>2</sup>	45	43	12	83	8	10	60	699
Number of dependent children	1	65	23	11	89	6	5	63	1231
	2+	[36]	[54]	[10]	88	5	7	37	1389
<b>All</b>		<b>54</b>	<b>35</b>	<b>11</b>	<b>89</b>	<b>5</b>	<b>6</b>	<b>100</b>	<b>2620</b>

Base: All originally job-rich families taking part in all five years.

Note: Row per cent.

Note: <sup>1</sup>Three least deprived quintiles; <sup>2</sup>Two most deprived quintiles.

Note: Shaded cells show characteristics with statistically significant relationships with job loss (separately for lone parent and couple families), after controlling for other factors in multivariate regression analysis.

Note: [ ] Percentages are based on fewer than 50 cases and should be interpreted with caution. \* Percentages are based on fewer than 20 cases and are not robust, therefore results are not presented.

Multivariate analysis was used to identify the factors associated with job loss when controlling for other variables. In this analysis, and for the remainder of the chapter, we focus on those who experienced a job loss and compare these with those in stable employment. Lone parents face different circumstances when combining working with family responsibilities and as noted above job loss is more commonly experienced by lone parents than among couple families, hence we undertook separate analyses for the two family types<sup>12</sup>. However, any interpretation of the results of the multivariate analysis for lone parents should bear in mind the small sample size - only 92 originally work-rich

<sup>12</sup> Initial modelling of job loss including both sets of parents in the same model revealed significant interactions between family type and a number of the explanatory factors.

stable lone parents were included in the analysis. Conducting multivariate analysis on a sample this small affects the power of the tests, meaning certain associations could be missed (see Table C.3 in the technical appendix for full results).

For lone parents the likelihood of job loss was:

- lower as mothers got older;
- lower for families in small towns compared with large urban cities;
- lower for lone mothers with higher physical health scores on the SF-12 scale; but
- substantially higher for families with other children older than the GUS child.

For couple families, the likelihood of job loss was:

- higher for families living in social rented housing, compared with owner occupiers; and
- higher for families living on low income.

In contradiction to the finding for lone parents, the likelihood of job loss for couple families was actually lower for families with other children older than the GUS child.

#### **5.4 What happens to children whose parents experience job loss?**

Table 5.5 presents the drivers of child outcomes, measured in 2009/10, for families who experienced a job loss and for those with stable employment histories.

- Home chaos is higher in families that experienced job loss in both lone parent and couple families.
- Income poverty is higher among lone parent families than couple families overall, but in both family types the job loss families have a higher risk of income poverty than the stable employment groups.
- Lone parents that have experienced job loss have a higher likelihood of poor mental health. The difference is not as large among couple families. This may indicate that the support of a partner may have a protective influence following job loss, or it may indicate a more voluntary (or unconstrained) reduction in work intensity among couple families.
- There seem to be some differences between those who experienced a job loss and those with stable employment in terms of the mother-child relationship on both the warmth and the conflict dimension, particularly among lone parent families.

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**Table 5.5 Drivers of child outcomes by employment history**

		Lone parent %	Couple %	Total %
Home chaos (% high level chaos)	Stable employment	20	29	20
	Job loss	43	40	40
	All	43	32	35
Income poverty (% poor)	Stable employment	41	9	10
	Job loss	81	47	56
	All	56	11	14
Maternal mental health (% poor mental health)	Stable employment	13	10	10
	Job loss	32	14	19
	All	21	10	11
Parent warmth (% lower or least warmth)	Stable employment	16	19	19
	Job loss	23	26	25
	All	19	19	19
Parent conflict (% higher or most conflict)	Stable employment	18	14	14
	Job loss	27	20	22
	All	21	14	15
<i>Bases</i>				
<i>Weighted</i>		373	2451	3404
<i>Unweighted</i>		256	2699	3415

Base: All originally job-rich families taking part in all five years.

Of course the table above does not show at what level the driver was prior to the event, this is included in the multivariate analysis along with other control factors. Initial modelling revealed the effects of job loss were not different for the two family types and the job loss event for any of the drivers so for each driver both family types were included in the same regression model. Table 5.6 summarises the results from the regression models (see Tables D.11 to D.15 in the technical appendix for full results).

For both lone parents and couple families, compared to stable employment, job loss was significantly associated with a higher likelihood of:

- high level of home chaos;
- income poverty; and
- high conflict in the parent-child relationship.

**Table 5.6 Relationship between job loss and drivers of child outcomes controlling for other variables**

	Drivers of child outcomes				
	High level home chaos	Income poverty	Poor maternal mental health	Parent-child – Low warmth	Parent-child – High conflict
Job loss	↑ <sup>1</sup>	↑			↑
Driver present at year 1	n/a	↑	↑	↑	↑
Interaction: Driver present (year 1) & job loss	n/a				

Note: All factors other than the Event are measured at the sweep 1 interview (2005/06).

Note: Arrows indicate whether an event or year 1 driver category is associated with significantly higher (↑) odds of the driver of negative child outcomes occurring, compared with the reference category.

Note: All factors with arrows (↑) are significant at 5% level, unless otherwise indicated. Blank cells indicate no significant relationship.

Note<sup>1</sup>: Significant at 10% level

The timing of job loss was significantly associated with income poverty, with more recent job loss associated with a higher likelihood of income poverty (models not shown). However, the small number of job losses recorded in some of the years should be borne in mind when interpreting this finding.

chapter  
MATERNAL HEALTH PROBLEMS

# 6

In this chapter we focus on persistent maternal health problems. Previous analysis of GUS identified maternal health problems as a significant factor associated with child outcomes (Barnes et al., 2010). Recent analysis of MCS data focusing on parental health and child outcomes found that family socio-economic background variables explained the largest part of the association between parental health and children's lower cognitive ability. The largest part of the association between maternal health and behaviour difficulties was explained by maternal psychological well-being (Kelly and Bartley, 2010).

## 6.1 Key findings

- Most mothers in GUS experienced good health throughout the study period and the mother developing a persistent limiting health problem only occurred in two per cent of families.
- Mothers in workless households had a higher likelihood of developing a persistent limiting health problem, as were those mothers with poor mental health.
- Families in which the mother developed a persistent limiting health problem were more likely to subsequently have a high level of home chaos, live in income poverty, experience poor maternal mental health and high conflict in the parent-child relationship.

## 6.2 How many mothers experience long-standing health problems?

To look at the maternal health problems in this report, we look at long-standing health problems which limit daily activities. The majority of mothers (84%) reported no health problems at any of the five sweeps. This is to be expected considering the relatively young age of the mothers in GUS. While a very small percentage reported having health problems at every sweep (permanent health problem; 1%) or at two consecutive sweeps after sweep 1 (persistent health problem; 2%), temporary or recurrent health problems are more common (12%) (Table 6.1).

**Table 6.1** Pattern of maternal health problems

Family status stability	%	Unweighted frequency
Stable good health	84	3039
Mother develops persistent health problem	2	82
Mother develops temporary or recurrent health problem	7	235
Mother has pre-existing <sup>1</sup> health problem, recurrent or recovery	5	156
Mother has pre-existing <sup>1</sup> permanent health problem	1	46
<i>Bases</i>		
<i>Weighted</i>	3547	
<i>Unweighted</i>	3558	3558

Base: All families taking part in all five years.

Note: <sup>1</sup> Reported at the first interview.

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As we are interested in events which are likely to have a large impact on family life, the remainder of this chapter will focus on those who *develop* a persistent limiting health problems (i.e. 2%); that is, health problems which are reported in at least two consecutive years after the first interview.

Among those who report a health problem, 40% first report it at the initial interview. This category will include all those mothers with long-term pre-existing health problem prior to the birth of the child, as well as some who developed a long-standing illness following the birth of the GUS child. The proportion of mothers first reporting a health problem falls with each subsequent sweep. Mothers with a history of good health appear less likely to develop health problems (Table 6.2).

**Table 6.2 First mention of mother's limiting long-standing health problem**

Timing	% of mothers
Limiting long-standing illness recorded in 2005/06 <sup>1</sup>	40
Limiting long-standing illness first recorded in 2006/07	21
Limiting long-standing illness first recorded in 2007/08	15
Limiting long-standing illness first recorded in 2008/09	15
Limiting long-standing illness first recorded in 2009/10	10
<i>Bases</i>	
<i>Weighted</i>	571
<i>Unweighted</i>	517

Base: All families taking part in all five years with mothers ever reporting limiting long-standing illness (lasting or expected to last more than 12 months).

Note: <sup>1</sup>The first GUS interview.

## 6.3 Which mothers are most likely to develop long-standing health problems?

The likelihood of the mother developing a persistent limiting health problem varies by a range of background characteristics recorded in 2005/06 (when the child was aged 0-1), as shown in Table 6.3. The likelihood was higher among:

- families where the mother was without educational qualifications;
- families where the mother had poor mental health;
- families living in rented accommodation; and
- workless families.

As noted in previous chapters, many of these characteristics are also highly correlated with each other and the characteristics which remained significant after controlling for other factors are highlighted in the table.

Table 6.3 Maternal health problems by child and parental background characteristics

		Maternal health status			<i>Unweighted base</i>
		Stable good health %	Develops persistent health problem %	Temporary or recurrent health problem %	
<b>Characteristics of child</b>					
Child's gender	Male	85	3	12	1807
	Female	86	2	13	1705
<b>Characteristics of parents</b>					
Mother's education level	Higher or above	87	2	11	2740
	Standard grade or other	82	3	15	553
	No qualifications	74	5	21	216
Maternal mental health indicator	Good or average mental health	89	2	9	3028
	Poor mental health	65	6	29	484
Mother's physical health score	Mean	54.30	50.90	48.50	3000
	Standard error	0.11	0.97	0.56	
<b>All</b>		<b>85</b>	<b>3</b>	<b>12</b>	<b>3512</b>

Base: All families taking part in all five years, with mother originally in good health.

Note: Row per cent.

Note: Shaded rows show characteristics with statistically significant associations with maternal health status, after controlling for other factors in multivariate regression analysis.



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Change in early childhood and the impact of significant events

**Table 6.4 Maternal health problems by background characteristics of household**

		Maternal health status			Unweighted base
		Stable good health %	Develops persistent health problem %	Temporary or recurrent health problem %	
<b>Characteristics of household</b>					
Household tenure	Owner occupied	89	2	10	2544
	Social rented	77	4	18	692
	Private rented	79	4	17	182
	Other	91	1	8	92
Social class	Managerial and professional occupations	90	2	9	1435
	Intermediate occupations	86	2	13	256
	Small employers and own account workers	87	3	11	354
	Lower supervisory and technical occupations	88	2	10	466
	Semi-routine and routine occupations	86	2	12	591
	No one employed	72	6	22	386
Low income indicator	Not relative low income	89	2	9	2290
	Relative low income	78	4	18	911
Area deprivation	Least deprived	92	1	7	777
	2	87	2	11	771
	3	87	3	10	755
	4	82	2	16	598
	Most deprived	79	4	16	611
Family owns or has access to motor vehicle	No	75	4	21	467
	Yes	88	2	10	3044
<b>All</b>		<b>85</b>	<b>3</b>	<b>12</b>	<b>3512</b>

Base: All families taking part in all five years, with mother originally in good health.

Note: Row per cent.

Note: Shaded rows show characteristics with statistically significant associations with maternal health status, after controlling for other factors in multivariate regression analysis.

Multivariate analysis shows that the social class and mother's mental and physical health at the first interview were all significantly associated with persistent limiting health problems, all else being equal (see Table C.4 in the Technical Appendix).

- Mothers in households where no parent had ever worked were more likely to develop a persistent limiting health problem compared with mothers in families where at least one parent was in a managerial occupation.
- Mothers with poor mental health at the time of the first interview were more likely to develop a persistent limiting health problem compared with mothers with good or average mental health at that time.

- Mothers with higher scores on the SF-12 physical health scale (i.e. mothers with better health) at the time of the first interview were less likely to develop a persistent limiting health problem.

#### 6.4 What happens to children whose mothers develop persistent health problems?

The experience of maternal health problems is related to a number of drivers of child outcomes (measured in 2009/10) investigated in the report (Table 6.5). Families where the mother developed a persistent limiting health problem were more likely to:

- have a high level of household chaos;
- live in income poverty;
- have a mother with poor maternal mental health is higher; and
- have a high level of conflict in the mother-child relationship.

There does not seem to be a difference between the stable good health and health problem groups for the mother-child relationship on the warmth dimension.

**Table 6.5 Drivers of child outcomes by maternal health**

		%
Home chaos (% high level chaos)	Stable good health	32
	Persistent limiting health problem	61
	<i>All</i>	33
Income poverty (% poor)	Stable good health	27
	Persistent limiting health problem	55
	<i>All</i>	28
Maternal mental health (% poor mental health)	Stable good health	11
	Persistent limiting health problem	59
	<i>All</i>	12
Pianta warmth (% lower or least warmth)	Stable good health	22
	Persistent limiting health problem	23
	<i>All</i>	22
Pianta conflict (% higher or most conflict)	Stable good health	15
	Persistent limiting health problem	30
	<i>All</i>	15
<i>Bases</i>		
<i>Weighted</i>		2895
<i>Unweighted</i>		2956

Base: All families taking part in all five years with mother originally in good health.

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Next, we turn to multivariate analysis which allows us to investigate the relationship between maternal health and the drivers of child outcomes, while controlling for the drivers measured prior to the event and other factors. The table below (Table 6.6) summarises the results from the regression models (see Tables D.16 to D.20 in the technical appendix for full results).

When controlling for other variables, compared with those with stable good health, the onset of a persistent maternal health problem was associated with a higher likelihood of:

- high level home chaos;
- income poverty;
- poor maternal mental health; and
- parent-child conflict.

**Table 6.6 Relationship between maternal health and drivers of child outcomes controlling for other variables**

	Drivers of child outcomes				
	High level home chaos	Income poverty	Poor maternal mental health	Parent-child – Low warmth	Parent-child – High conflict
Persistent limiting health problem	↑	↑	↑		↑
Driver present at year 1	n/a	↑	↑	↑ <sup>1</sup>	↑
Interaction: Driver present (year 1) and health problem	n/a				

Note: All factors other than the Event are measured at the sweep 1 interview (2005/06).

Note: Arrows indicate whether an event or year 1 driver category is associated with significantly higher (↑) odds of the driver of negative child outcomes occurring, compared with the reference category.

Note: All factors with arrows (↑) are significant at 5% level, unless otherwise indicated. Blank cells indicate no significant relationship.

Note<sup>1</sup>: Significant at 10% level.

The timing of the onset of the persistent health problem was associated with home chaos, poverty, mental health and parent-child conflict (models not shown). There was a higher likelihood of:

- high level of home chaos for more recent onset of health problems;
- income poverty for those who developed their health problem between years 2 and 3 (when the GUS child was aged 2-3); and
- high conflict in the parent-child relationship for mothers who developed their health problem between years 1 and 2 or between years 3 and 4.

Again, caution is required when interpreting these results because of the small number of mothers developing persistent health problems in individual years.

chapter

SUMMARY OF FINDINGS AND  
IMPLICATIONS FOR POLICY



## 7.1 Main findings

### 7.1.1 *How prevalent are the significant events and which families are most at risk?*

Approximately one in ten children (11%) experienced parental separation in the first five years of their lives. In some two-thirds of these families the separation marked a transition into a relatively sustained period of lone parenthood, lasting at least for the remainder of the period studied (up to four years). Families at higher risk of parental separation include those with cohabiting rather than married parents, families living in income poverty and families where the birth of the child was unplanned. Among all the families that separated in the first five years, separation was most prevalent in the early years following the birth.

Moving house was a much more common event, with 40% of GUS children experiencing at least one move in the first five years of their lives; nine per cent moving twice or more. Families most likely to move, and move more frequently, include those with a younger mother, private renters and those in 'other'<sup>13</sup> accommodation. Families living in rural areas, with good maternal-infant attachment and families with children older than the cohort child are less likely to move house. In the latter case it may be that the need to move to bigger and more suitable accommodation is more pronounced or prevalent after the birth of the firstborn child.

Three-quarters of couple families (75%) experienced a high level of employment throughout the five-year period, with only six per cent of families experiencing a sustained job loss or substantial reduction in hours. Couple families at higher risk of a sustained job loss include families in social rented accommodation and income poor families. In addition, families with other children, older than the study child, are less likely to experience a job loss. This may imply that among couple families a family-level job loss is more likely following the birth of the firstborn child, if the mother takes a career break when starting a family. Conversely, if the mother did not take a career break between the births of her children the likelihood of doing so after the birth of a subsequent child may be reduced.

However, the situation for couple families and lone parents is very different, with just one fifth (20%) of lone parents being in stable employment (compared with 75% of couple families) and 14% of lone parents experiencing a job loss from which their work intensity did not 'recover' during the period (compared with six per cent of couple families)<sup>14</sup>. This finding is in line with earlier analysis of the first sweep of GUS which showed that lone parents were less likely to be in work than parents in couple families (Anderson et al., 2007), and our findings show that this is sustained over the early years of the

<sup>13</sup> Other accommodation includes accommodation tied to employment, temporary accommodation and living rent-free, for example with the child's grand-parents.

<sup>14</sup> The majority of lone parents were either out of employment through out the period (43 per cent) or out of employment at the beginning of the period and then entering employment, temporarily out of employment, or cycling in and out of employment during the period (27 per cent).

child's life. Lone mothers at higher risk of a sustained job loss include younger mothers, mothers with more than one child and mothers with poorer physical health. Lone parents living in small towns are less likely to experience job loss than lone mothers in large urban cities.

The rarest event discussed in this report involved the mother developing a persistent limiting health problem, which occurred in two per cent of families, while 84% of mothers remained in good health throughout the period. Mothers more likely to develop persistent limiting health problems include those living in households where neither she nor her partner (if present) has ever worked and mothers with previous poor mental health or worse physical health.

In the majority of cases these selected significant events did not co-occur. The majority (56%) of families who could have experienced all events<sup>15</sup> did not experience any of the events at all; some 41% experienced one event while just three per cent experienced two or more events.

### **7.1.2 What happens to families who experience an event?**

This research has identified events which can impact on a number of drivers of child outcomes. All four of the significant events investigated in this report are associated with income poverty, while none of them are associated with low warmth in the parent-child relationship. Other associations existed too; parental separation and house moves are both associated with poor maternal mental health, a parent losing a job or substantially reducing their working hours is associated with a high level of home chaos and conflict in the parent-child relationship. The mother developing a persistent limiting health problem is also associated with a high level of home chaos and conflict in the parent-child relationship as well as poor maternal mental health.

## **7.2 Implications for policy**

The findings from this research have implications for a number of areas of policy and practice, including housing policy, benefits and employability, and services for families with children, and local counselling and support services aimed at couples, families, jobseekers or those living with health problems.

One important finding to emerge from this research is that events that happen to parents can have implications for the whole family, including young children. For example, job loss is associated with high conflict in the parent-child relationship. This suggests that services need to take into account the needs of the whole family, not just those who the

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<sup>15</sup> Families who could have experienced all events would have been job rich couple families where the mother was in good health at the time of the first interview.

event is perceived to affect directly. In many cases, it may be helpful for an umbrella of services to be activated so that not just the individual who has experienced an event such as job loss, but the effects on, and needs of, the rest of the family are taken into account at such a potentially stressful time. This would not necessarily require new service provision, as numerous services and projects for families and children already exist, but rather a coordination service to signpost families to useful support and join up service provision in a more holistic manner. If the suggestion in the Deacon report to develop children's centres across Scotland is implemented (Deacon, 2011), this function could potentially be filled by these centres, providing a place for peer-support by other families as well contact with staff who can provide signposting, referral and outreach services to ensure those families which need more formal support have access to it.

By definition, a significant event in childhood as presented in this report is likely to have an impact on the family. As a result families are likely to come into contact with services that focused on the fallout of the event in a reactive manner. However, even at such crisis points, there are opportunities to intervene to prevent situations from deepening and widening. Even better are having services that can spot problems early, focusing on recognising early warning signs which could prevent situations from escalating. Both the UK and the Scottish Governments have expressed a commitment to early intervention (although the Deacon report (2011) pointed out this commitment has not consistently been translated into adequate resource allocation). Below we discuss in more detail some of the policy areas relevant to the findings of our research.

## **Housing**

Our research has shown that a substantial proportion of children experience a house move in the first five years of their lives, that private renters are particularly likely to move and that house moves are associated with subsequent income poverty and poor maternal mental health.

A house move may well be necessary and desirable following a change to the family composition. This is especially likely to be the case following the birth of a couple's first child as many couples may not be able to move into accommodation suitable for a family prior to the birth of the child, particularly if the pregnancy was unplanned. Our analysis was not able to include information on the reasons for moves. It is thus unknown whether the higher prevalence of moving among private tenants is due to families being able to take advantage of a more flexible housing market to meet their changing needs or whether it is because of involuntary moves due to a less secure housing situation. However, negative outcomes that can be associated with house moves highlighted in this report indicate that either more support is needed for families to avoid unwanted or frequent house moves, perhaps through better protection for private tenants, or that additional support is needed for families around the time of moving house.

More research on the reasons for moving house, and subsequent family outcomes, would be useful to inform the implementation of Scottish Government's strategy and action plan for housing (Scottish Government, 2011). The strategy aims, in part through the Private Rented Housing (Scotland) Bill, to create a more focused regulatory system for the private renting sector, more flexibility and stability and better quality housing and tenancy management for private renters while expanding this housing sector.

In our research, families in social rented accommodation were not more likely than owner occupiers to move house. However, with the UK Government's proposed forthcoming changes to social housing rents and shorter-term tenancies, it is unknown how families in social housing will be affected in the future.

In addition, it is noteworthy that low-income families are more likely to move and have multiple moves. This suggests that their financial circumstances make their position on the housing market less stable or secure and requires them to move more often. Analysis of MCS data has indicated that frequent house moves is associated with lower uptake of immunisations for children (Pearce et al., 2008; cited in Ketende et al., 2010). In this study we have found house moves were associated with a higher risk of low income (controlling for prior income) and poor maternal mental health. Both of these factors have in other research been linked with behavioural problems in children (Bradshaw and Tipping, 2010; Kelly and Bartley, 2010; Marryat & Martin, 2010) so efforts aimed at reducing low income families' need to move house could well have some positive effect on children, or at least help prevent negative outcomes.

### **Poverty and employment**

All four of the selected events were associated with a higher risk of income poverty. The Scottish Government discussion paper in support of the child poverty strategy<sup>16</sup> (Scottish Government, 2010) puts parents' employment and employability at the centre of the government's approach.

Being without work is clearly a key cause of poverty. Losing a job or significantly reducing hours worked can signal a decline into poverty for many families. Combining work with looking after young children is a challenging prospect for many families, and it is commonplace for family working patterns to be disrupted, especially for those with very young children. Being able to plan for these disruptions can help many families, for example by saving beforehand or reducing outgoings. But these options are not available for all families.

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16 Child Poverty Strategy, Scottish Government, <http://www.scotland.gov.uk/Publications/2011/03/14094421/6>



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Job loss or a reduction in working hours that is not planned, particularly relevant during times of recession, can have very different consequences. Dealing with the shock of losing work, coupled with the need to provide for a young family, can have knock-on consequences, both economic and social. Our previous research on job loss during a recession found that both job loss and job insecurity were associated with an increased risk of depression and financial stress (Barnes et al., 2009). Hence it is imperative that policy aims to prevent and reduce social disadvantage, in addition to containing the purely economic problems that can arise during tough economic times.

Families still need to make ends meet, and hence a reduction in hours worked by one parent can mean the other parent looks to work longer hours. Again, this is a difficult balancing act to get right in times of recession, and increased work hours for one parent can mean less time to spend with the family, and the relevant stresses that brings. Spreading the workload between parents may be the best option for some families, but this is not always possible given that there is a high number of lone parent families where this is unfeasible and the UK has a particularly wide gender pay gap, minimal paternity leave and high costs of childcare.

The UK Government has announced the extension in the right to request flexible working, to cover all parents with children under the age of 18 from April 2011, and plans for the Universal Credit (subject to the Welfare Reform Bill 2011) aiming to ensure that work always pays more than being on benefits, which could help more parents combine employment with family responsibilities. However, support for childcare costs through the childcare element of Working Tax Credits is being reduced from April 2011, and as yet there are no details on whether and how this support will be replaced under the Universal Credit. Analysis indicates that while there are those who benefit and those who lose out from the introduction of the Universal Credit across all family types, on average, lone parents will lose out in the long run (Brewer et al., 2011).

Of course the issues surrounding employment and family responsibilities are often exacerbated for single parent families. Lone parents have to fit work around childcare, meaning working sufficient hours and finding adequate and affordable childcare is paramount. Losing a job or having to reduce hours worked can have a huge impact on household income. As can ensuring the non-resident parent contributes to household income. Furthermore we should not forget that many working families, lone parent and couple families alike, experience poverty despite being 'in work' (Parekh et al., 2010; Barnes et al., 2010).

Some recent benefit changes particularly affect lone parents. Until recently lone parents have been able to claim Income Support while bringing up dependent children but recent legislation means that for those with school-aged children benefit receipt is conditional on

them looking for work and being available for a minimum of 16 hours of work a week. Parents with a youngest child aged 12 were put on to the new system in 2008, those with a youngest child aged 7 were moved last October and it is proposed that those with a youngest child aged 5 will be moved in 2012 (subject to the Welfare Reform Bill 2011 being enacted). Key to the success of this policy is immediate high-quality and tailored job-search support, access to suitable and affordable childcare, improved availability of jobs with flexible working hours from the start and the perception of being better off in work.

### **Counselling and support services**

The findings on separation, maternal health problems, maternal mental health, and conflicted parent-child relationship have implications for funding and provision of different services aimed at supporting families, parents living with health problems or even services for adults more generally where the service user is a parent.

For example, the association between job loss and higher parent-child conflict implies a need for extra support for unemployed parents, or the whole family, over and above the employment support available to jobseekers. However, further research could shed more light on this finding. The GUS parent-child relationship measure is effectively a measure of the mother-child relationship. We do not have measures of the father-child relationship, nor does our family level work intensity ratio indicate whether the job loss or reduction in working hours affected the mother or the father.

Family instability and changes in family composition (through parental separation or re-partnering) has been associated with behavioural problems in young children (Kiernan and Mensah, 2010) and this and other research (see for example Coleman and Glenn, 2010 for a review) has shown that parental separation is associated with poor maternal mental health. In addition, the quality of the parents' relationships has been associated with both parenting and child outcomes. Parents who felt their couple relationship was of a poorer quality were not as involved with their children and used harsher discipline while mothers who felt their relationship was of a better quality had children with better cognitive abilities and less behavioural problems (Jones, 2010).

Coleman and Glenn (2010) reviewed evidence that suggested that family breakdown is not inevitable; couple relationships can be strengthened and relationship breakdown can be prevented with support. Support for couple relationships may well be best targeted at unmarried parents, income poor parents and couples who are expecting or have recently had a new baby. The transition to parenthood is a particularly stressful time for couples, and represents an opportune time point for early intervention and prevention. There is some evidence of positive outcomes for both intervention programmes aimed at this time

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point and training for ante-natal and post-natal health practitioners to identify couples for referral to counselling (Barrett et al., 2010). In addition, mediation and counselling services following family breakdown can help reduce the post-separation stress and conflict between the parents.

In the UK, couple relationship support is generally available through voluntary sector provision (Barrett et al., 2010) such as Relationships Scotland. The UK Government recently announced a commitment of annual funding for relationship support organisations in the order of £7.5 million per year. However, most relationship support services charge parents a fee which has been identified as a barrier to take-up (Barrett et al., 2010). A more costly, but perhaps more effective way of reaching families in need of such support might have been making relationship or family counselling free at the point of contact for families experiencing difficulties, for example through health visitor referral. Counselling on the NHS is currently generally limited to diagnosed mental health problems such as anxiety or depression or coming to terms with long-term illness and available on GP referral.

Other barriers to take-up of relationship counselling include lack of information about available services, denial of the gravity of problems and difficulties accessing services due to waiting lists and limited appointment times or lack of availability in the local area. In addition, a general perception of counselling as a last resort means that many couples who do seek help often do so at too late a stage when the problems have become entrenched and possibly irreversible, contributing to the relatively low success rate of couples counselling (Barrett et al., 2010). Professionals working with families and children, such as health visitors, can (with appropriate training) provide screening and out-reach services to offer help to those families facing relationship conflict at an earlier stage.

Such professionals could also help identify parental mental health problems and provide information about the services available through GP referral. As noted by Marryat and Martin (2010) such screening and intervention beyond the early post-natal period and throughout children's early years could help improve mental health or prevent recurrence of problems, possibly resulting in positive child outcomes (or prevention of negative outcomes).

In many families, informal support from extended family (including grandparents) and peers for both parents and children is sufficient to get through the difficulties of parental separation or to cope with poor parental mental health. However, where such informal support is not available, or in situations when family members require more formal support, a whole-family approach to address the emotional, health and care needs of both parents and children has shown the most encouraging results (Barrett et al., 2010).

For example, an event that impacts on a mother's mental health is also likely to have negative connotations for other members of the family. Here services need to support the mother directly but also take into account the distinct needs of the other family members; her partner (if present) and the emotional, physical and educational needs of her children especially. This may mean offering emotional support to the whole family, helping parents to build confidence in their parenting role whilst also helping children to develop a better understanding of their parent's mental health problems.

### 7.3 Further research

Clearly there is scope for further research into these issues. The lack of information on fathers has meant we have been unable to provide a rounded view of the circumstances of couple families. Given that many policy recommendations suggest more of an equal responsibility between mothers and fathers, having a greater insight into how their lives interact, with each other and with their children, is paramount. The lack of focus on fathers also means we know less about some of the problems which are likely to have quite serious implications for the family, such as fathers' physical and mental health.

Understanding the timing of events (e.g. when house moves are most likely to take place), and their consequences, throughout childhood would also help plan the intervention and availability of services. Equally as important is understanding whether significant events are linked; so whether families that experience one event are more likely to experience other events – not necessarily concurrently but within relatively short timescales. Dealing with one significant event is difficult enough, but having to deal with another, soon after, may have compounding effects on the family. If these events are more commonplace for certain sub-groups of the population, more focused data collection, whether quantitative or qualitative may be required.

Being able to differentiate events is also important. Some families may be resilient to significant events, and hence face very different consequences of the event, but for others it may be the intensity of the event, the timing of the event or the amount of control over the event that has most impact. For example, some house moves and employment transitions are voluntary, and some separations are desirable as they end abusive or otherwise harmful relationships, and may be a generally positive experience accompanied by improvements in 'outcomes'. Involuntary events may have very different consequences. Including more context to the event in large-scale surveys such as GUS can only enable researchers, policy makers and practitioners to understand these events in more detail.

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appendix  
MEASURES OF CHILD OUTCOMES



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## Measures of ‘drivers’ of child outcomes

GUS contains information on a range of factors that other research has identified as drivers of child outcomes (Barnes et al., 2010; Barnes et al., 2008; Marryat and Martin, 2010; Jones, 2010). The four ‘drivers’ that we examine in this research are “home chaos”, poverty, maternal mental health, and parent-child relationship – each of which has well-established relationships to child outcomes. Below we explain how each of these measures is constructed and provide some descriptive statistics of these measures in our sample.

### ***j) Home chaos***

GUS includes a subset of four questions from the 15-item Confusion, Hubbub, and Order Scale (CHAOS), an instrument specifically designed to be administered to parents for assessing turmoil in the child’s home (Matheny et al., 1995). CHAOS is used to assess a child’s home life and the GUS items ask parents how strongly they agree/disagree with questions about disorganisation, noise, having a calm atmosphere, and having a regular routine at home.

US research has shown household chaos to be associated with behaviour problems, inattention and cognitive development problems in children (Deater-Deckard et al., 2009; Dumas et al, 2006).

Table A.1 shows the (weighted) score for those families that took part in all five years of the survey.

**Table A.1 Sweep 5 - Home Chaos Score (high score corresponds to high chaos)**

	Score
Mean	8.9
Median	9
Std. Deviation	2.3
Minimum	4
Maximum	19
<i>Unweighted base</i>	3620

Base: All families taking part in all five sweeps.

**CHAOS items in the GUS questionnaire**

The four items are administered in the GUS interview using a show card with the possible answer categories:

- 1 Strongly agree
- 2 Agree
- 3 Neither agree nor disagree
- 4 Disagree
- 5 Strongly disagree

And the respondent is asked the following:

*"The next few questions are about what it's generally like in your home. Can you tell me how much you agree or disagree with these statements?"*

*"It's really disorganised in our home"*

*"You can't hear yourself think in our home"*

*"The atmosphere in our home is calm"*

*"First thing in the day, we have a regular routine at home"*

**ii) Relative income poverty**

The most widely used official indicator of income poverty is household income below 60% of the population median income, adjusted for household size and composition. However, the official figures for median income have not been published at the time of writing. We therefore use the bottom 30% of the income distribution (equivalised income); the same proportion of the income distribution focused on by the Scottish Government's anti-poverty strategy (and in fact approximately the percentage of GUS families below the poverty line (Barnes et al., 2010)).

Exact income is not captured in GUS, respondents instead being asked to locate their income in one of 17 bands of household income. Income is therefore estimated using the midpoint amounts of these bands, and then equivalised using the modified-OECD scale. We construct a relative measure of income poverty based on these weighted estimates, for the families that took part in all five sweeps of the survey. For sweep 1 the 30th percentile was £13,437 and for sweep 5 it was £13,749.

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Table A.2 shows the (weighted) income for those families that took part in all five years of the survey, at sweeps 1 and 5.

**Table A.2 Annual equivalised household income statistics for sweeps 1 and 5**

	2005/06	2009/10
Mean	£21,430	£22,946
Median	£19,643	£21,243
Std. Deviation	£12,587	£12,443
Minimum	£1,549	£1,831
Maximum	£68,966	£68,966
<i>Unweighted base</i>	3295	3415

Base: All families taking part in all five sweeps.

## Household income item in the GUS questionnaire

*This card shows different income levels as weekly, monthly and annual amounts.*

*Which of the letters on this card represents the **total** income of your household from **all** sources before tax – including benefits, interest from savings and so on?*

*Just tell me the letter beside the row that applies to you.*

- 1 - Q Less than £3,999 pa
- 2 - T £4,000 - £5,999 pa
- 3 - O £6,000 - £7,999 pa
- 4 - K £8,000 - £9,999 pa
- 5 - L £10,000 - £11,999 pa
- 6 - B £12,000 - £14,999 pa
- 7 - Z £15,000 - £17,999 pa
- 8 - M £18,000 - £19,999 pa
- 9 - F £20,000 - £22,999 pa
- 10 - J £23,000 - £25,999 pa
- 11 - D £26,000 - £28,999 pa
- 12 - H £29,000 - £31,999 pa
- 13 - A £32,000 - £37,999 pa
- 14 - W £38,000 - £43,999 pa
- 15 - G £44,000 - £49,999 pa
- 16 - N £50,000 - £55,999 pa
- 17 - E £56,000 or more pa

**iii) Maternal mental health**

At sweeps 1 and 5 (ages 10 months and 58 months respectively), parental mental health was measured by the Medical Outcomes Study 12-Item Short Form (SF-12) mental health component. The SF-12 is a widely used self-reported generic measure of health status, and is tailored for use in large health surveys of general populations. Higher scores are indicative of better health-related quality of life.

The scale does not have threshold scores that define whether a score suggests the presence of a psychiatric disorder, so we have followed the approach in a previous GUS report (Marryat and Martin, 2010) and defined a relative threshold below which we classify mothers as having ‘poor’ mental health, as opposed to ‘average or good’ mental health. The threshold score is one standard deviation below the mean score for our analysed population at each sweep. Table A.3 shows the (weighted) scores for those families that took part in all five years of the survey.

**Table A.3 Maternal mental health, MCS-12 scale: statistics for sweeps 1 and 5**

	2005/06	2009/10
Range	8.5 – 66.5	5.9 – 68.9
Mean	50.2	50.2
Median	53	53.3
Std. Deviation	9.1	9.6
Unweighted base	3607	3597

Base: All families taking part in all five sweeps.

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## **Medical Outcomes Study 12-Item Short Form items in the GUS questionnaire<sup>17</sup>**

*In general, would you say your health is excellent, very good, good, fair, or poor?:*

- 1 *Excellent*
- 2 *Very Good*
- 3 *Good*
- 4 *Fair*
- 5 *Poor*
- 6 *Can't say*

*How much does your health limit you in moderate activities such as moving a table, pushing a vacuum cleaner, bowling or playing golf.*

- 1 *Limited a lot*
- 2 *Limited a little*
- 3 *Not limited at all*
- 4 *Can't say*

*How much does your health limit you in climbing several flights of stairs.*

- 1 *Limited a lot*
- 2 *Limited a little*
- 3 *Not limited at all*
- 4 *Can't say*

*During the past four weeks, have you accomplished less than you would like as a result of your physical health?*

- 1 *Yes*
- 2 *No*

*During the past four weeks, were you limited in the kind of work or other regular activities you do as a result of your physical health?*

- 1 *Yes*
- 2 *No*

---

<sup>17</sup> All of these items are used for the derivation of both the physical and the mental health scores but weights are applied to the items differently for the two components.

*During the past four weeks, have you accomplished less than you would like as a result of any emotional problems, such as feeling depressed or anxious?*

1 Yes

2 No

*During the past four weeks, did you not do work or other regular activities as carefully as usual as a result of any emotional problems, such as feeling depressed or anxious?*

1 Yes

2 No

*During the past four weeks, how much did physical pain interfere with your normal work, including both work outside the home and housework?*

1 Not at all

2 Slightly

3 Moderately

4 Quite a bit

5 Extremely



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## Medical Outcomes Study (SF-12) continued

These questions are about how you feel and how things have been with you during the past four weeks. For each question, please give the one answer that comes closest to the way you have been feeling.

How much time during the past four weeks have you felt calm and peaceful?

- 1 All of the time
- 2 Most of the time
- 3 A good bit of the time
- 4 Some of the time
- 5 A little of the time
- 6 None of the time

How much of the time during the past four weeks did you have a lot of energy?

- 1 All of the time
- 2 Most of the time
- 3 A good bit of the time
- 4 Some of the time
- 5 A little of the time
- 6 None of the time

How much of the time during the past four weeks have you felt down?

- 1 All of the time
- 2 Most of the time
- 3 A good bit of the time
- 4 Some of the time
- 5 A little of the time
- 6 None of the time

During the past four weeks, how much of the time has your physical health or emotional problems interfered with your social activities like visiting with friends, relatives etc?

- 1 All of the time
- 2 Most of the time
- 3 A good bit of the time
- 4 Some of the time
- 5 A little of the time
- 6 None of the time

#### iv) Parent-child relationship

The Pianta scale (Pianta, 1992) is used to measure the mother-child relationship at year 5. The scale is constructed using the responses on the extent to which the respondent feels a series of statements apply to her relationship with her child (such as *'I share an affectionate, warm relationship with [my child]'*).

The full scale has 30 items and looks at three dimensions of the relationship – warmth, conflict and dependency. The 15 items included in the sweep 5 GUS questionnaire are a subset of the full scale that were also used in the Millennium Cohort Study (MCS2; 2004/05) and which relate to warmth and conflict. We have constructed measures for these two dimensions, with a high score corresponding to a high degree of warmth or conflict. Each of these uses seven items, shown below.

A paper by Hobcraft and Kiernan (2010) using the MCS data grouped the resulting scores into four categories, from least to most warmth or conflict. The distribution of the scores in GUS was similar, so we have followed their example, and we also combine the 'worst' two categories (i.e. the bottom two for warmth and top two for conflict) to create a 'poor' relationship threshold. Table A.4 and Table A.5 show the (weighted) distribution of the grouped scores for those families that took part in all five years of the survey. A total of 23.1% of families fall into the 'poor relationship' category for warmth; and the figure is 17% for conflict.

**Table A.4 Sweep 5 Pianta scale – grouped: percentage of families in each group**

Grouped score	Warmth
1 Least warmth	6.4
2	16.7
3	31.0
4 Most warmth	45.9
<i>Unweighted base</i>	<i>3514</i>

Base: All birth cohort families taking part in all five sweeps.

Note: Column per cent.

**Table A.5 Sweep 5 Pianta scale – grouped: percentage of families in each group**

Grouped score	Conflict
1 Least conflict	60.5
2	22.6
3	13.8
4 Most conflict	3.2
<i>Unweighted base</i>	<i>3548</i>

Base: All birth cohort families taking part in all five sweeps.

Note: Column per cent.

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## Pianta scale items in the GUS questionnaire

The respondent is asked to choose from six categories about the statements below. The items are grouped into warmth or conflict here, although the two types are interspersed in the actual questionnaire.

1 *Definitely does not apply*

2 *Not really*

3 *Neutral*

4 *Applies sometimes*

5 *Definitely applies*

6 *Can't say*

*In this section please think about how far each of the statements currently apply to your relationship with [Child's name].*

### Warmth items

- *I share an affectionate, warm relationship with [Child's name]*
- *[Child's name] will seek comfort from me*
- *[Child's name] values his/her relationship with me*
- *When I praise [Child's name], he/she beams with pride*
- *[Child's name] spontaneously shares information about [his/herself]*
- *It is easy to be in tune with what [Child's name] is feeling*
- *[Child's name] openly shares his/her feelings and experiences with me*

### Conflict items

- *[Child's name] and I always seem to be struggling with each other*
- *[Child's name] easily becomes angry at me*
- *[Child's name] remains angry or is resistant after being disciplined*
- *Dealing with [Child's name] drains my energy*
- *When [Child's name] wakes up in a bad mood, I know we're in for a long and difficult day*
- *[Child's name]'s feelings towards me can be unpredictable or can change suddenly*
- *[Child's name] is sneaky or manipulative with me*

Early parent-child relationship is measured at Sweep 1 using a subset of six items from

Condon and Corkindale’s Maternal Postnatal Attachment Scale (1998). The items cover the mother’s feelings about her child, with ranked responses - such as When I am caring for [child] I get feelings of annoyance or irritation, responses ranging from ‘Almost all the time’ to ‘Never’.

Factor analysis on standardised scores showed that the best way to construct an indicator was to use only four of the six items. Furthermore, it was decided to split the answer categories per question into positive and negative ones. Then a count was made of the number of times, out of the four items, respondents scored in the “positive” bracket. A score of four, that is a positive relation to the child on all four items, was taken as showing good maternal attachment.

Table A.6 shows the (weighted) distribution of the scores for those families that took part in all five years of the survey.

**Table A.6 Sweep 1 – Maternal-Infant Attachment Scale (percentage of mothers in each category)**

Score	%
0 Poor maternal attachment	0.2
1	0.4
2	1.9
3	11.5
4 Good maternal attachment	86.0
<i>Unweighted base</i>	<i>3492</i>

Base: All families taking part in all five sweeps.

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## **Condon and Corkindale's Maternal Postnatal Attachment Scale items in the GUS questionnaire**

*\*When I am caring for [child] I get feelings of annoyance or irritation ...*

1. *almost all the time*
2. *very frequently*
3. *frequently*
4. *occasionally*
5. *very rarely*
6. *never*
7. *can't say*

*When I am not with [child] I find myself thinking about him/her ...*

1. *almost all the time*
2. *very frequently*
3. *frequently*
4. *occasionally*
5. *very rarely*
6. *never*
7. *can't say*

*When I have to leave [child] ...*

1. *I always feel rather sad*
2. *I often feel rather sad*
3. *I have mixed feelings of sadness and relief*
4. *I often feel rather relieved*
5. *I always feel rather relieved*
6. *can't say*

*\*When I am caring for [child], I feel ...*

1. *very incompetent and lacking in confidence*
2. *fairly incompetent and lacking in confidence*
3. *fairly competent and confident*
4. *very competent and confident*
5. *can't say*

*\*Usually when I am with [child] ...*

1. *I am very impatient*
2. *I am fairly impatient*
3. *I am fairly patient*
4. *I am very patient*
5. *can't say*

Note \* indicates item included in the final measure.

\*Thinking about the things that I have had to give up because of [child] ...

1. I find that I resent or mind it a lot
2. I find that I resent or mind it a fair amount
3. I find that I resent or mind it a bit
4. I don't resent or mind it at all
5. can't say



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