HOME VISITING SUPPORT FOR PARENTS IN ADVERSE SITUATIONS:

THE NATURE OF SUPPORT AND PARENTAL EMOTIONAL WELL-BEING

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ABSTRACT

Evidence suggests that for some families home visiting support can be effective for enabling parents in adverse situations to cope with their emotional well-being and other issues. However the circumstances in which home visiting is effective are less well understood.

The administrative data from one home visiting organisation, Home-Start, was analysed to identify how the nature of support, adverse family situations and the interrelationship between them were related to changes in parental emotional well-being. The effects of adverse situations were explored by looking at individual risk factors, multiple risks, levels of need and life events that occur during support. Variables describing the average rate at which parental emotional well-being improves over the course of support were developed. Multiple linear regression models were then used to explore the relationships between the nature of support and the family's situation and that rate of improvement.

Several aspects of the way support was provided were related to faster improvements; including more frequent visits, and support being provided by paid workers. Longer individual visits were associated with families improving more slowly. These different aspects of support affected families in different adverse situations differently. Paid worker support was particularly related to faster improvements in families with domestic abuse, disabled parents and multiple risks. However volunteer support seemed just as effective for families with disabled children and large families. Overall the family's situation was only very weakly associated with the rate at which emotional well-being improved. Though effects were small, families with more malleable risks were more likely to improve more quickly: Domestic abuse was associated with faster improvements whereas large family sizes, disabled parents and parental mental health problems were associated with slower improvements. Bereavements occurring during the course of support also slow down the rate of improvement.

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GLOSSARY

The following definitions explain terms as they are used in this thesis.

Adverse situations - Situations that a family might find themselves in that previous research has indicated could have a negative impact on children.

Coping Measure - A six point scale used by Home-Start to assess how well parents feel they are coping with a range of different issues.

Cumulative Risk - A measure of the total number of risk factors that are present in a family.

Hardiker Level - A way of categorising a family's level of need based on the work of Hardiker et al (1991).

High Risk – Condition of having three or more risk factors.

Home Visiting Support - A form of family support delivered to parents in their own home.

Life Event – An event or change in the lives of those in the family that may be stressful in the short term.

Malleable Risk Factor – A risk factor that is capable of being changed or removed.

Paid Worker – A paid member of Home-Start staff who provides home visiting support to a family.

Risk Factor – A characteristic of the family which previous research has identified as being associated with an increased likelihood of adverse outcomes for the children.

Volunteer – A person who provides home visiting support to families without payment.

Within-service design – research design exploring an intervention using only individuals who have taken part in the intervention.

LIST OF SYMBOLS

$\overline{X}$	Mean
Med	Median
sd	Standard Deviation
n	Number of cases used in a specific piece of analysis
f	Frequency
r$_s$	Spearman's Rho Correlation Coefficient
g	Hedges G
R^2	Coefficient of multiple determination in linear regression models
B	Unstandardised Coefficients, in linear regression models
β	Standardised Coefficients, in linear regression models

Introduction

1.1 Background

The first few months and years of a child's life are crucial, with the relationships they form at that time being one of the cornerstones of their development (Shonkoff and Phillips 2000). Attachment theory (Bowlby 2005) highlights the importance of the secure attachment of infants to a main care giver. Where such an attachment does not occur it can be associated with later behaviour problems in children (Van Ijzendoorn et al 1999). Evidence highlights how problems with parent-child relationships can be associated with a number of negative outcomes in later childhood, including aggressive behaviour, depression, anxiety and internalising problems, poorer educational outcomes, poorer social competence, lower self-esteem and poor health behaviours (O'Connor and Scott 2007).

An understanding of the importance of this relationship has led to a broad range of family support initiatives aimed at helping parents with young children who may be struggling for different reasons. Parenting support can come in a variety of forms. Support may be universal or targeted at specific groups of parents. Some forms of support involve a structured programme, often delivered to either individuals or groups of parents over a fixed time period, while others provide support tailored more specifically to the needs of individual parents. One way of classifying initiatives providing support to parents is to consider them in terms of where the support is provided. Some support is dependent on parents attending groups, or children's centres, while other initiatives provide support to families in their own homes. Some initiatives may provide a mixture of both home and centre based support. Support provided to families in their own homes is described as home visiting support.

Home visiting programmes have several benefits compared to other forms of family support. These include being more easily accessible for families who either cannot access or choose not to access services outside the home (Finello et al 2016). This means parents are less likely to miss appointments (Azzi-Lessing 2011). Home visiting also enables parents and home visitors

to develop longer term, more trusting relationships and a more detailed understanding of a family's circumstances can be built up (Azzi-Lessing 2011, Finello et al 2016).

There are, however many differences between home visiting programmes. Sweet and Appelbaum (2004) describe such programmes as differing along many dimensions. These include the types of families supported, the outcomes targeted, the ages of children, the length and intensity of services and the type of services provided. Finello et al (2016) suggest that the types of services may include support for parents, parent education, support to help parents make links with community resources, activities related to child development and support, screenings and referrals to alternative services. Services provided through home visiting programmes may vary not just between programmes, but also within programmes (Sweet and Appelbaum 2004). Some programmes follow a specific structure, while others may be multifaceted and needs-based.

There is now a long history of home visiting programmes in many countries (Finello et al 2016), and a growing body of evidence concerning their effectiveness. A number of reviews and meta-analyses of these studies have been carried out (Olds and Kitzman 1993, Guterman 1999, Kendrick et al 2000, Sweet and Appelbaum 2004, Bilukha et al 2005, Olds et al 2007, Nievar et al 2010, Turnbull and Osborn 2012, Dalziel and Segal 2012, Segal et al 2012, Filene et al 2013, Goyal et al 2013, Peacock et al 2013, Stamuli et al 2015, Casillas et al 2016). While not all randomised control trials of home visiting programmes have shown significant effects, overall the meta-analyses suggest that some home visiting programmes do have an effect on some outcomes for children and parents. Effect sizes are however generally small. Nievar et al (2010) report an average effect size on maternal behaviour across all countries of d=.37. Filine et al (2013) report an aggregated effect size over a range of different outcomes of 0.2, while Sweet and Appelbaum (2004) report average effect sizes for parent outcomes in the studies they looked at were 0.14.

What these studies suggest collectively is that home visiting can have an effect on families but that that effect is small. Given the importance of good parental emotional well-being for the parents of very young children perhaps even a small effect size may be considered to be of value. Sweet and Appelbaum (2004) highlight the importance of considering what the home visiting programme is trying to do in determining what sort of effect size is important. As they point out "an effect size indicating even a fractional reduction in child abuse may have more practical significance than a small effect size relating to an IQ measure." (Sweet and Appelbaum 2004, p. 1445).

Small effect sizes can occur because the home visiting programmes have a small effect on all families. Alternatively they could occur if the programmes have a larger effect on some families, and no effect on others. If this is the case then it leads to questions about the circumstances in which the support is effective. A theoretical framework for why parents remain in and engage with family support services was proposed by McCurdy and Daro (2001). Their model suggests that the predictors of both enrolment and retention in family support services can be considered in four domains. The first two of these, individual factors and neighbourhood factors relate to the family's situation, while the second two reflect more on the nature of support, concerning the provider of support and the programme itself. While this theoretical framework is concerned with the engagement in family support it could also be useful for considering why family support services are effective. It could be that the way support is delivered affects its effectiveness. This point was raised by Hermanns et al (2013) who highlight how research is needed to help understand the "effective ingredients of home visiting programmes." Alternatively, it could be that the family's circumstances affect the effectiveness of support, with a recent review of evidence on home visiting support conducted for the US Department of Health and Human Services (Sama-Miller et al 2017) emphasising the need for more evidence about what works for families with a range of different characteristics.

This study will make a contribution to understanding what works in terms of home visiting support for whom and in what situations. When considering those situations it will focus specifically on adverse family situations which may be stressful for parents. Stress in parents can disrupt parenting behaviours (Webster-Stratton 1990) and adverse family situations have been associated with negative outcomes for children (Rutter 1979, Flouri et al 2010, Kerker et al 2015). This provides an imperative for understanding how home visiting programmes can be effective for these families, and in particular considering changes in emotional well-being among families in different adverse situations receiving home visiting support.

This study will look at the relative improvements in emotional well-being for parents receiving home visiting support from one UK third sector organisation, Home-Start. It will consider the relative effects of different aspects of support on changes in a parent's emotional well-being for families in different adverse situations. By doing this it will enable an understanding to be developed of the relationship between the way the support is provided and the family's situation and changes in parental emotional well-being.

The remainder of this introductory chapter will provide more background to this, explaining the rationale for this approach. It is set out in a further five sections. The next section will look at the policy context within which the study is being carried out. This will consider government policy across the UK for supporting families with young children and the place of home visiting support within this. Section 1.3 will consider Home-Start support in particular, describing Home-Start's structure and the type of support provided. It will also consider previous research on Home-Start in more detail. The fourth section will explain more about why this study is focusing on families in different adverse situations and improvements in the emotional well-being of parents in such situations. This will be followed by a section summing up the aims of this study and setting out the research questions through which it will be carried out. The final section will outline the structure of the rest of the thesis.

1.2   Family support policy across the UK

Policy relating to family and parenting support in the UK is devolved to the respective governments across the four nations, so slightly different programmes of support are available in different parts of the UK. However, even prior to devolution, an emphasis on early intervention approaches to support families with young children had been instigated by the then New Labour Government with the Sure Start programme announced in 1998 (Bouchal and Norris 2014). The governments in all four nations of the UK have continued to make commitments to supporting early intervention approaches working with families to prevent problems arising.

Families, across each nation, are able to benefit from programmes set up to promote health in children. These include the Healthy Child Programme in England (Public Health England 2018), the Health Child Wales Programme (Welsh Government 2016), the Child Health Programme in Scotland (Healthier Scotland 2011) and the Healthy Child Healthy Future programme in Northern Ireland (Department for Health, Social Services and Public Safety 2010). These programmes have an emphasis on early intervention, and also provide for the specific needs of individuals. For example, the Healthy Child Programme in England ensures that services are based a different level of intervention, with mechanisms to ensure that those with the greatest need are able to access more support.

There has been a long tradition of informal home visiting support for families with young children in the UK. Some of this goes back as far as the work of Florence Nightingale, who advocated for an approach of visiting healthy families with young children to preventing health

problems developing (Adams 2012, Finello et al 2016). Home visiting support for families with young children from health visitors has been a universal statutory service in the UK since 1929 (Adams 2012). Health visitors carry out visits to families with new babies to provide advice, carry out assessments, and refer them to other services as needed. As a universal service the number of visits a family has is limited, however some families receive additional home visiting support from professional home visitors. Policy with respect to how much support is provided, and to whom, is also devolved across the different governments of the UK.

In England, Scotland and Northern Ireland in addition to health visiting, home visiting support is provided to first time young mothers through the Family Nurse Partnership programme. This programme is based on a model originally developed in the USA by Olds (2006). Home visits start during pregnancy and continue until the child is 2 years old. Visits are carried out by a specially trained family nurse whose work is guided by visit-to-visit guidelines (Family Nurse Partnership National Unit 2012). A series of randomised control trials carried out on the programme in the USA pointed to its efficacy at reducing childhood injuries, improving infant emotional and language development and identified an association with changes in the maternal life course (Olds 2006). However, in spite of the evidence from the USA highlighting the programmes efficacy, a recent randomised control trial of the programme in England suggested that the programme provided no additional benefit to a number of outcomes in the short term (Robling et al 2016). The authors suggest that this might be because of statutory health services already available for mothers in the UK.

 In Wales a different approach has been taken. Additional support is provided to families living in areas classified as the most deprived through the Welsh Government's Flying Start Programme (Welsh Government 2012a). One element of the programme is enhanced health visiting support, with families receiving much more frequent visits from health visitors than families in other areas, particularly if those health visitors assess them to have high levels of need or risk (Welsh Government 2012b). In addition to the health visitor home visiting support, Flying Start families are also given access to parenting programmes, language and play groups and part-time childcare for all two to three-year olds.   While no randomised control trial of the Flying Start programme has been carried out, a recent evaluation compared school data for those in Flying Start areas with those in other areas (Wilton and Davies 2017). This showed that children living in Flying Start areas had made greater improvements in school attendance and were more likely to have a special educational need identified early than children in other areas.

As well as programmes focused around health visiting, each nation of the UK provides additional early intervention support for families. The Scottish the Government issued a policy statement highlighting their support for early intervention in 2008 (Scottish Government 2008), and funding has subsequently been made available to support organisations providing early intervention support to families (Scottish Government 2016). In Northern Ireland, the Early Intervention Transformation Programme provides a range of services for families (Department of Health 2018). This includes support for all parents with young children, support for parents as problems begin to emerge and support to address the impact of adversity on children. In Wales, families with complex problems may be supported through the Welsh Government's Families First programme (Welsh Government 2017a). The programme covers families with children of any age and has an emphasis on early intervention, prevention and support for whole families, encouraging different agencies to work together for the needs of the family. There are several different aspects to the programme including the commissioning of projects by local authorities focusing on early intervention. In England, the Troubled Families programme was set up to try to move service provision away from a reactive model to a preventative model. It focuses on families with children of all ages and multiple indicators of deprivation. Families are provided with a key worker who works with the whole family and supports them in accessing other services (Department for Communities and Local Government 2014).

Devolution has clearly resulted in differences in support for families in adverse situations with young children across the UK. However, in spite of these differences some commonalities can be found. All the governments have committed in some way to early intervention approaches for working with families. They provide funding either through local authorities or directly to third sector organisations to facilitate early intervention services for families. They all provide home visiting to families, and have committed in some way to an enhanced form of home visiting for certain families.

There has also been an emphasis from government on programmes working with parents that are evidence-based. For example, in Northern Ireland the Early Intervention Support Service set up as part of the Early Intervention Transformation Programme, supports evidence informed parenting programmes (Early Intervention Transformation Programme 2015). The Welsh Government in its recently published guidance on parenting support emphasises that parenting support services should be evidence-based (Welsh Government 2017b). The governments in England and Scotland have both emphasised the evidence-based credentials

of the Family Nurse Partnership Programme (Family Nurse Partnership National Unit 2012, Scottish Government 2018).

This emphasis on the need for evidence-based programmes provides a further incentive for gaining a better understanding about the circumstances in which home visiting support can be effective. The lack of consistent results from trials and small effect sizes identified in meta-analysis of home visiting programmes (Sweet and Appelbaum 2004, Filine et al 2013), may be discouraging for government policy makers looking for evidence-based programmes. If such effects occur because home visiting programmes are effective in some circumstances but not others then this provides a further reason to understand these circumstances.

Government funding streams for family support work, coupled with support from other funders, such as the Big Lottery and Children in Need, enable family support services to be provided by third sector organisations. These third sector organisations support families in a range of different ways. Some of them provide home visiting support, and may utilise either paid staff or volunteers to befriend parents with young children and provide additional support to them. The organisation that is the subject of this study, Home-Start, is one such organisation. The next section will provide more details about Home-Start, describing the support it provides and previous research relating to it.

1.3   About Home-Start

Home-Start UK is a family support charity whose vision is "For every parent to have the support they need to give their children the best possible start in life" (Home-Start 2017a, p.4). It works with families at risk of social exclusion, primarily with children under 5 years old. The majority of families receiving support receive it in the form of home visiting support from volunteers. These volunteers visit the family on a regular basis and provide support tailored to the needs of each individual family. This may take the form of practical support, either helping the parents to carry out tasks in the home, or supporting them to use other services. Home visitors may provide emotional support for parents, or alternatively carry out activities with the children in the family. Many of the volunteers are parents themselves, and have all been through a training programme prior to support starting. In some cases, where families have particularly complex problems, support may be provided by a paid worker, rather than a volunteer. In addition to this core home visiting support programme, Home-Start also provides support for some families through group sessions, and runs a specific school readiness programme to help prepare children for starting school.

Home-Start originated in Leicester in 1973, however, since then it has spread across the UK and internationally. In the UK support is provided by a network of local Home-Start schemes, each of which is an individually constituted third sector organisation. There are currently around 250 individual Home-Start schemes in the UK (Home-Start 2017a, p5). Home-Start also works internationally with support being provided to families in 22 countries across five continents (Home-Start Worldwide 2018).

Home-Start support is based on a theory of change (Kenkre and Young 2013) as illustrated in Figure 1.1. This theory of change postulates that social support provided by Home-Start can lead to improvements in parental well-being resulting in increased feelings of parental competence. This in turn leads to more adaptive parental behaviour and improvements in child behaviour.

Figure 1.1. Home-Start's Theory of Change
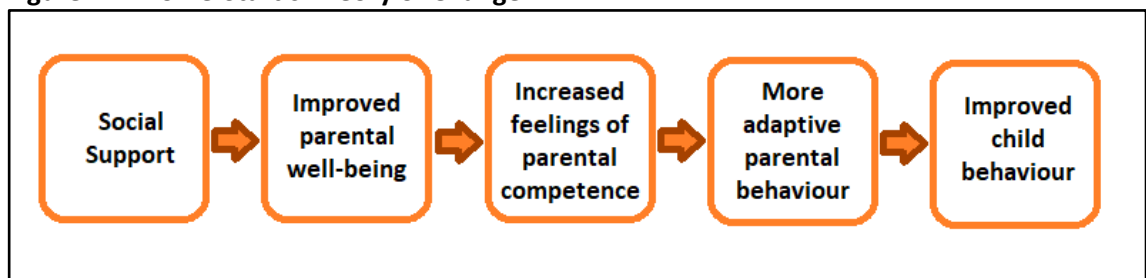
Moran and Ghate (2013) suggest that Home-Start's impact might be considered in terms of its effect on parenting efficacy. Perceived parental efficacy is defined by De Montigny and Lacharite (2005) as, "beliefs or judgements a parent holds of their capabilities to organize and execute a set of tasks related to parenting a child." Self-efficacy theory was developed by Bandura (1977) who suggested a number of determinants of self-efficacy beliefs. In their consideration of how these might apply to perceived parental efficacy, De Montigny and Lacharite (2005) consider the greatest contributors to parent's confidence in parenting, would be their experience of parenting. There are, however, a number of other determinants of parenting efficacy and it may be through these that Home-Start support is able to improve it. They include learning by observing others, verbal persuasion and an appropriate physiological and affective state. It might be that Home-Start parents with issues relating to emotional well-being might need support to contribute to their emotional and physiological states. This fits in with the theory of change and social support leading to improvements in parental well-being. However support might also help parents by verbal persuasion and observing. In the context

of home visiting this might mean home visitors suggesting different way of doing things, or interacting with the children in a particular way. This suggests changes could also occur in different ways to those described by the theory of change. Home-Start support is multifaceted and needs-based and not all families receiving support from Home-Start indicate problems with their emotional well-being. It might be, therefore, that different mechanisms exist when a parent's needs relate to different issues such as coping with the day to day running of the household, or the children's behaviour.

Home-Start has been the subject of a range of research studies and evaluations. Among the studies examining how effective Home-Start support is, there is a mismatch between the findings of quantitative and qualitative work. Qualitative studies have shown how parents value Home-Start (Shinman et al 1994, Bagilhole 1996, Oakley et al 1998, Frost et al 2000, McAuley et al 2004, MacPherson et al 2010). Quantitative evaluations (McAuley et al 2004, Barnes et al 2006, Hermanns et al 2013), however, have produced more mixed results, an effect also found in the wider family support literature (Moran and Ghate 2013).

Bagilhole (1996), for example, highlighted that mothers who had received Home-Start support reported feeling less pressured, depressed, isolated and lonely, and some indicated better relationships with their children or partners, or practical changes. There had been a high incidence of mental health problems and depression among the mothers, and many reported that if it wasn't for the Home-Start support they would have needed a social worker, or would have ended up in a mental hospital or prison. These findings have been backed up by further qualitative studies highlighting how much families value Home-Start's work (Shinman et al 1994, Oakley et al 1998).

There are also two mixed-methods evaluations of Home-Start, which combined experimental designs with qualitative interviews with parents (McAuley et al 2004, Barnes et al 2006). The qualitative aspects of these studies also highlight the value of Home-Start to parents. McAuley et al (2004) described how mothers attributed improvements in their mental health to Home-Start and discussed how much they value the support. More than four fifths of mothers receiving Home-Start support indicated that they thought the volunteer's support had made a difference to the stresses they had been experiencing. While a minority of the mothers discussed how Home-Start had not met their expectations, three-quarters of them suggested that Home-Start had met their expectations, and some made very positive comments:

"It was brilliant, it really was…As I say, I spent more time with the child where normally you would have the children here running about… I would give it 10 out of 10."(parent, quoted in McAuley et al 2004, p.34).

MacPherson et al (2010) reported on interviews with 23 Home-Start mothers. All of them made at least one positive comment about the support they had received. However, in addition to the positive comments some parents had reported difficulties with the support, including problems with the administration of the schemes, mismatches between the families and the volunteers, and problems associated with the way the support was withdrawn.

These qualitative findings suggest that the support provided is more valuable for some parents than others, with the overriding impression being a positive one, with many parents valuing the Home-Start support. However McAuley (2004) and MacPherson et al (2010), were discussing the qualitative parts of mixed methods studies, and the quantitative findings from those studies do not point to such clear cut benefits.

McAuley et al's (2004) study included 80 families who were receiving Home-Start support, and 82 comparison families, all located either in Northern Ireland or southern England. In spite of the qualitative analysis indicating that many mothers value the support they had received from Home-Start, there were no significant differences between the intervention and control group on a series of quantitative measures when assessed after 10 to 12 months. These included measures of parenting stress, maternal mental health, maternal self-esteem, child development and maternal social support.

Barnes et al (2006) report on the quantitative elements of the study discussed by MacPherson et al (2010). Although the intervention they tested was provided by Home-Start it was different to Home-Start's normal form of support. The focus was on support for mothers with new babies, mothers were recruited while pregnant and volunteers started visiting before the babies were born. Three different groups of families were involved in the study, those receiving the Home-Start intervention (n=92), those in comparison areas (n=178) and those who had been eligible for the Home-Start intervention but did not receive it (n=66). However, the results reported that at 12 months there were few differences between the intervention and comparison groups on many of the outcomes. There were, however, some differences between the intervention and control groups in relation to parenting distress. Those receiving support had dropped significantly in relation to parental distress, while changes in the control groups were not significant. However the authors also report that the supported families were

less likely to be offering their children healthy food after 12 months than those in control groups, and highlight a lack of evidence in relation to any effect relating to parenting, organisation of the home or the use of health services.

It is not clear why there is a mismatch between the findings of the qualitative and quantitative studies of Home-Start, and it is plausible that there are issues with the research designs of both types of study that have contributed to this effect. For example, there might be issues relating to the sampling of participants for inclusion in the qualitative studies that have resulted in those who found the support more useful, being more likely to take part.

The reasons why both McAuley et al (2004) and Barnes et al (2006) concluded that they had failed to find any evidence for the effects of Home-Start's intervention on families requires consideration. One possibility is that Home-Start did not add anything of value to the families, however, this would appear to contradict a number of findings from qualitative studies including the qualitative interviews with those who took part in the same studies (McAuley et al 2004, MacPherson et al 2010). In fact Barnes et al (2006) did appear to show a reduction in parental distress in the supported families. In the case of McAuley et al's (2004) study, the mothers receiving Home-Start support do make greater improvements in measures of their mental health and self-esteem than those in the comparison group. The effects were not statistically significant, but this might have been because of the relatively small sample sizes used. As highlighted above, meta-analyses considering the effectiveness of home visiting programmes tend to identify small effect sizes (see for example Sweet and Appelbaum 2004). The results might therefore actually indicate an effect, but only a small one, and only in relation to some of the outcomes measured.

The two studies (McAuley et al 2004, Barnes et al 2006) were both subject to critical appraisal by Barrett (2007) who highlighted a number of problems with the research designs employed. In relation to McAuley et al's (2004) study criticisms include that the "pre-trial" assessment took place after the intervention began, that follow up interviews might have occurred too early for support networks to have taken effect and that the scale used to measure child development was only suitable for children under three. Also crucially Barrett points out that the comparison and study group contain unequal numbers of families living in Northern Ireland and southern England. With respect to Barnes et al's (2006) findings, Barrett (2007) highlights that those receiving support from Home-Start on this study were not referred by Home-Start's usual referral mechanism, so that this cannot be said to be a study of Home-Start as it usually operates.

Barrett (2007) also discusses the difficulties of trying to detect differences in maternal emotional state when the home visiting intervention is carried out among mothers of new-borns. All mothers of new-borns are likely to be in a state of heightened anxiety, and these levels will drop naturally with time as they adjust to their situation. These natural changes, she suggests, may obscure changes due to weaker influences, and that a more refined analysis may be needed to detect such supranormal effects.

Another possibility is that Home-Start was having an effect but that the particular measures used in these studies were not appropriate for measuring the effect it is having. The support Home-Start volunteers provide is tailored to the needs of individual families and because of this it might be expected that different outcomes improve in different ways for different families. These improvements may not have been detectable using the outcome measures used.

There is a particular challenge in evaluating home visiting services that are needs-based and multifaceted. Services which are needs-based are more heterogeneous in nature, and are necessarily working through a range of different mechanisms to support families. If programmes are working on changing different outcomes in different families then this creates challenges for evaluation. Azzi-Lessing (2011) highlights the problems created in the evaluation of family programmes because of the emphasis on experimental designs as the 'gold standard.' Simpler interventions, in which all participants receive the same services are more easy to evaluate, compared to multifaceted interventions. Where all participants on a programme receive the same service then changes in one outcome measure for all participants would be expected. Where programmes are multifaceted, and needs-based, different work will be going on with different families. Different outcomes might need to be measured. Azzi-Lessing (2011) discusses how successful programmes working with highly vulnerable families are often needs-based, however, replication of programmes is easier when they are more tightly controlled, a situation she describes as an 'unfortunate paradox.'

The challenges of using randomised control trials to evaluate programmes that are needs-based are also highlighted by McCall and Green (2004). They suggest an understanding of what works in these programmes should be based on a variety of methodological approaches, using within-treatment analyses in addition to experimental designs. Given the emphasis from all governments in the UK on programmes for families with children which are evidenced-based, this puts programmes that are needs-based at a disadvantage.

Research carried out on Home-Start in the Netherlands has, however, provided evidence of a link between Home-Start support and positive outcomes. Asscher et al (2008a) report on a study of 54 Home-Start mothers and 51 comparison mothers with children aged between one and a half and three and a half. The results showed that after around six months mothers receiving the Home-Start intervention had made improvements relative to the comparison group in relation to some of the measures of perceived maternal competence, parenting consistency and more sensitive behaviour when interacting with their child. However, no significant differences were found in relation to child behaviour measures between the two groups. Hermanns et al (2013) report on a four-year follow-up with the same families. This showed that after four years there was evidence of an increase in responsiveness in the Home-Start parents, and for children in the Home-Start group there was a significant decrease in affective problems and anxiety problems. A follow-up study has shown these effects to be sustained after ten years (Van Aar et al 2015) with parents who had received Home-Start support reporting greater feelings of competence, showing more consistent and non-rejecting parenting and their children were showing fewer behavioural problems. The same authors also carried out a study to test a mediational model for Home-Start's intervention (Deković et al 2010). This found that receiving Home-Start support was related to a greater increase in maternal sense of competence, which in turn predicted an increase in supportive parenting and a decrease in the use of inept discipline.

These Dutch studies have provided evidence to back up Home-Start's theory of change. Namely evidence that Home-Start can have an impact on perceived maternal competence (Asscher et al 2008a), that these changes in maternal competence mediate the effect of Home-Start on maternal behaviour (Deković et al 2010), and in the longer term there is a reduction in problems for the children in the families receiving Home-Start support (Hermanns et al 2013). Questions still remain, however, about why their results are so different to the quantitative studies carried out in the UK (McAuley et al 2004, Barnes et al 2006). These differences may have arisen because of the different circumstances in which support was provided by Home-Start in the UK and in the Netherlands. Alternatively, they could be attributable to the ways the studies were carried out.

While these studies compared families receiving Home-Start support with families receiving no support, a recent study carried out in the Netherlands (Smallegange et al 2018) looked at differences between Home-Start support and other forms of professional care provided to families. All the families had children between one and a half and three and a half years old,

and the study found that there were either no differences, or only minor differences, between the two groups on most of the outcomes they looked at. There were, however, considerable demographic differences between the families recruited to the different types of support, with those receiving the Home-Start intervention having lower incomes, lower levels of education and being more likely to be from a non-Western background. This may indicate that the type of support that Home-Start delivers is more appealing or accessible for those from these sorts of backgrounds.

Section 1.1 set out the rationale for looking at how the outcomes of support are affected by both the way support is provided, and the family's situation. This included the idea that home visiting support might be effective for some families but not others and this provides an incentive for understanding the circumstances in which it is effective. The inconsistent results found across experimental studies of Home-Start coupled with the positive comments arising from qualitative studies, suggest that Home-Start support may also be effective for some families and not others. There is, therefore, an imperative to develop an understanding of who it is effective for. Home-Start support is multifaceted, with families receiving support in different ways. Because of this it provides a useful arena for exploring the effects of different aspects of support.

This study will focus specifically on home visiting support for families in adverse situations, and Home-Start also provides a useful vehicle for exploring this, particularly in light of Smallegange et al's (2018) recent findings that Home-Start can reach more vulnerable families then some other forms of support. Family adversity can be considered in different ways and there may be a particular need for support to help parents in adverse situations who are struggling with their emotional well-being. The next section will explore these issues and how they relate to this study.

1.4   Supporting parents in adverse situations

Since home visiting support may be particularly effective for families who struggle to access services outside the home (Finello et al 2016), it is an approach that may be particularly helpful for families living in adverse situations. There is also an additional imperative for identifying how well services can support families in adverse situations because of the impact that these situations have on children.

Adverse experiences in childhood have been associated with poor physical and mental health outcomes in both later in childhood (Kerker 2015) and adulthood (Felitti et al 1998, Bellis et al 2015). Many of the studies focusing on their effects look at children who have experienced multiple adverse experiences, but there is also evidence that a range of individual risk factors are associated with an increased likelihood of poor childhood outcomes. For example, associations have been identified between child behaviour problems and previous experience of maltreatment (Cicchetti and Carlson 1989), exposure to inter-parental violence (Kitzmann et al 2003, Wolfe et al 2003), parental substance misuse (Velleman and Templeton 2007), temporary housing (Waldron et al 2001) overcrowded housing conditions (Dockery et al 2010) and poor parental mental health (Mäntymaa et al 2008, Treyvaud et al 2010, Maybery et al 2009). There is also evidence of increased behaviour problems in the children of refugee and asylum seekers (Van Ee et al 2012), in disabled children (Roberts and Lawton 2000), and in the children of some disabled parents, including parents with chronic pain (Evans et al 2007) and multiple sclerosis (Bogosian et al 2014).

Where studies have examined the timing of exposure to adversity in childhood, adversity appears to have an impact on children even when experienced in the very early years. This is shown, for example, by Flouri et al (2010), who found a correlation between the number of stressful life events a child experiences in the pre-school years and child behaviour problems. More recently, McKelvey et al (2017) found an association between adverse experiences experienced in very early childhood and poor outcomes. With respect to behavioural and emotional outcomes even the adverse experiences that the child had had by the time they were one year old impacted on outcomes by age three.

The effects of adversity experienced by such young children may be explained, at least in part, by the effects those experiences are having on their parents. Several studies looking at the relationship between multiple risks and adverse child outcomes have identified mediating effects associated with parenting (Burchinal et al 2006, Trentacosta 2008, Mistry et al 2010).

In Section 1.1 Bowlby's (2005) attachment theory and the importance of a good parent-child relationship for children in the first few years of life were discussed. If the impact of adverse situations on children is mediated by parenting, then the effect of such adversity on those parents and the parent child-relationship needs to be considered. Webster-Stratton (1990) highlights how the quality of the way the parents interact with their children mediates the impact of stress on children in the family. She discusses how a number of stressors have the potential to disrupt parenting, with parents becoming more irritable, punitive and critical.

Importantly she also highlights mediators of the relationship. One of these was the parent's psychological functioning, with depression in parents leading to parenting that can be irritable, disruptive, or rejecting towards children. Another mediator of the relationship is the level of social isolation the family experiences. She highlights associations between social isolation and dysfunctional parenting and conversely the buffering impact of social support on the impact of stressful situations on parents.

The idea that improvements in parental well-being can impact on parenting behaviour is backed up by Belsky's (1984) model on the determinants of parenting. Belsky (ibid) suggested that the way a parent parents, is influenced by different factors, grouped into three domains: the parent's psychological resources, issues relating to the child and the parent-child relationship that results, and contextual sources of support and stress. The impact of stress on the parent's psychological resources may therefore have a big impact on their parenting.

This highlights how important it is to support parents in these adverse situations who may be struggling with their emotional well-being. It is because of this that this study will focus on families in adverse situations, and look specifically at the parent's emotional well-being and how it changes during support.

So far this chapter has set out the rationale for this study. It has highlighted the problems with current research in the home visiting field and the need to develop a better understanding of which aspects of support work better for families in different circumstances. It has also explained why the study will look specifically at families in adverse situations, and why changes in parental emotional well-being will be explored. In the next section these ideas will be pulled together enabling a set of research questions to be framed.

1.5   Research questions

This chapter has set the scene for this study. It has highlighted the importance of the early years of a child's life for their future development, and the need for effective services to support families with young children. It has considered the particular value of home visiting, and previous research which has shown that where effects of home visiting have been identified, effect sizes are often small. The idea that home visiting may be effective for some families and not others has been discussed. This highlights the need for a better understanding of how the way support is provided, and a family's situation, affect the outcomes of support. The problems of families in adverse situations have also been considered, as has the idea that

these adverse situations can affect young children because of the effects they have on the emotional well-being of their parents. This has provided a rationale for considering home visiting support particularly for families in adverse situations and for exploring changes in parental emotional well-being over the course of support.

This study aims to develop a better understanding of the relationship between the nature of home visiting support and changes in parental emotional well-being for parents in different adverse situations. It will consider these issues by addressing four research questions:

1. How do self-rated parental feelings of coping with emotional well-being and other aspects of parenting and family life change over the course of home visiting support?

2. How does the nature of support relate to improvements in parental emotional well-being?

3. How do adverse family situations affect improvements in parental emotional well-being?

4. How does the nature of support affect improvements in parental emotional well-being for parents in different adverse situations?

Figure 1.2 depicts the relationships explored through the first three research questions. The first research question concerns changes in emotional wellbeing and other issues over the course of support. These changes are depicted by the thick arrow in Figure 1.2. Home-Start's theory of change and the relationship between social support and improved parental well-being has already been discussed. The multifaceted nature of Home-Start support and the idea that there may be alternative mechanisms through which Home-Start may work has also been highlighted. Because of the interest in adverse family situations and the relationship they have with parental stress, then it is the relationship between Home-Start support and parental emotional well-being that will be the major focus of this study. However the first research question provides the opportunity to identify if changes parents make in their emotional well-being during home visiting support are similar to changes parents make in coping with other issues.

The three remaining questions concern how other factors are related to changes in emotional well-being. This study will also consider issues relating to the parents, particularly the adverse situations they find themselves in, and the nature of the support provided to them. Question 2 will look specifically at the nature of support and changes in emotional well-being, depicted by the higher of the brown arrows in Figure 1.2, while Question 3 will look at the effects of the

family's situation, depicted by the lower brown arrow. However the these issues are all interrelated with, for example, the family's situation and level of coping, affecting each other and the way support is provided. These relationships are depicted by the dotted arrows and will have to be taken into consideration when interpreting the analysis.

Figure 1.2 Relationships to be examined through research questions 1, 2 and 3
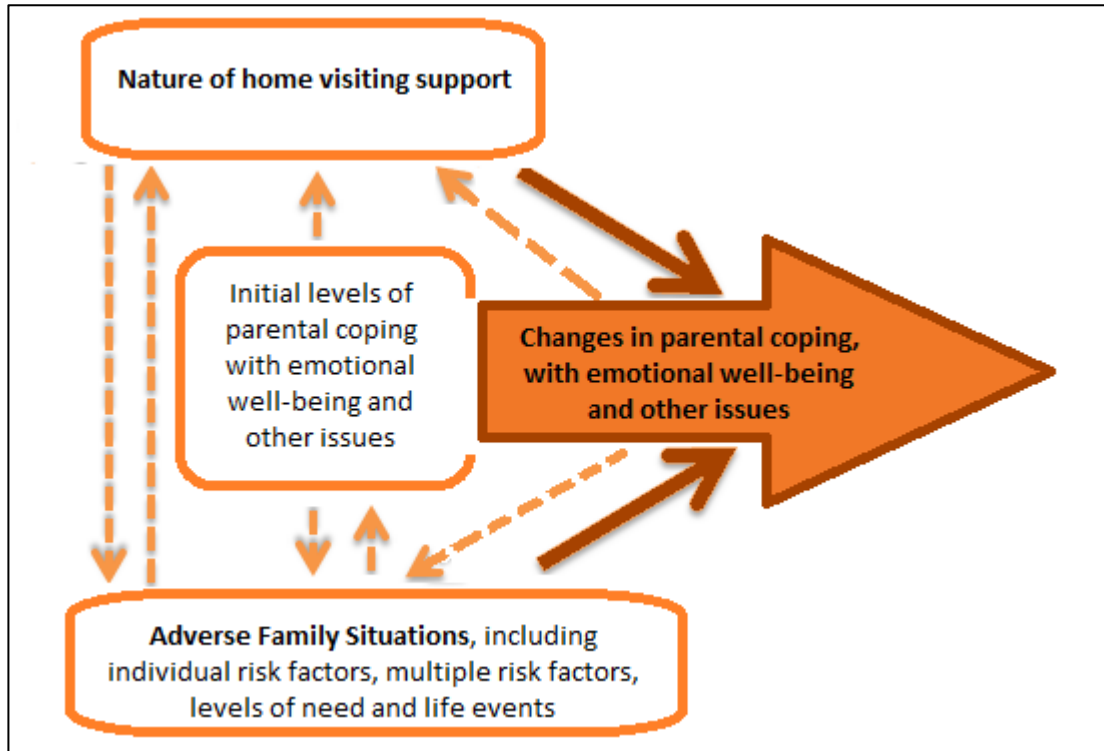
Figure 1.3 Relationships to be examined through research question 4
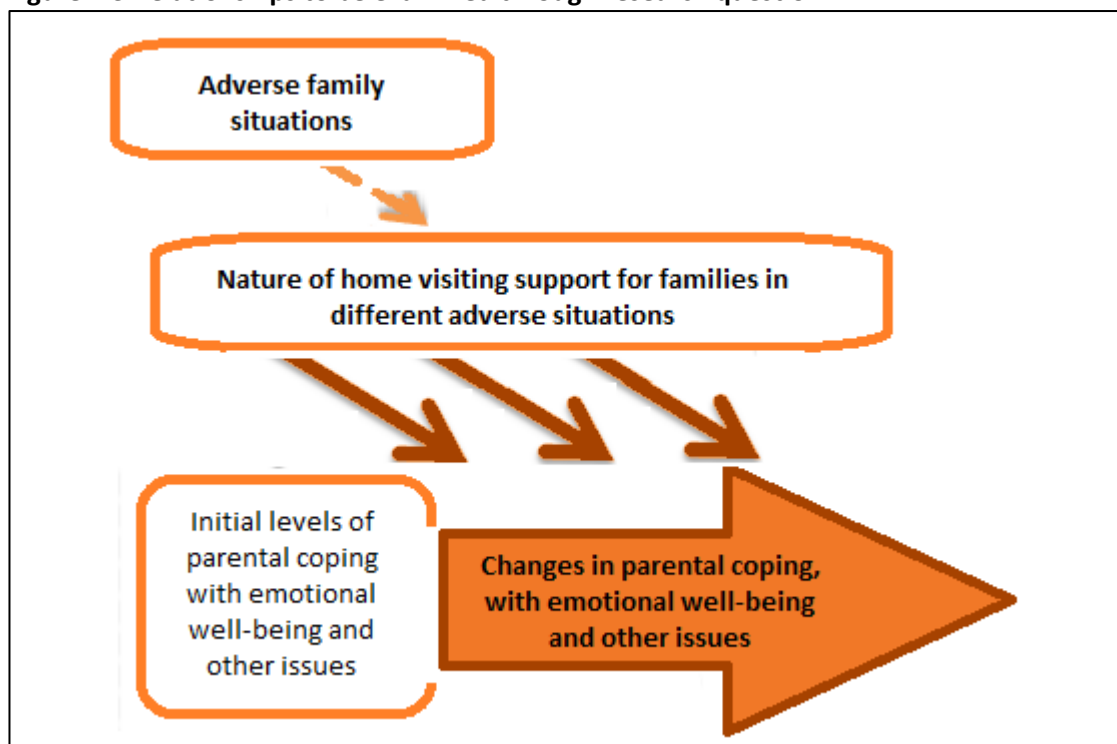
The interrelationship between the nature of support and the family's situation forms the basis for Question 4. The family's situation may affect the way support is provided, and may also affect the relative importance of different aspects of support for affecting changes in parental emotional well-being. This is depicted graphically by Figure 1.3. Question 4 enables the differential effects of the nature of support for families in different situations to be examined.

These questions will be answered through the analysis of Home-Start's administrative data using a within-service design. This design fits in with the approach advocated by McCall and Green (2004) of using within treatment analyses in addition to experimental designs to find out what works in evaluation research. The rationale for this approach will be further developed over the next two chapters of this thesis. Before going on to those chapters, the next section will briefly describe the structure of the rest of the thesis.

1.6   Structure of the thesis

This thesis is set out over nine chapters. This introductory chapter has described the rationale for the study, explaining why this research was framed to look at how different aspects of home visiting support and family situations, are related to changes in parental emotional well-being over the course of support.

Chapter 2 provides a detailed investigation of the home visiting literature examining what previous studies can tell us about these issues. It considers the evidence-base concerning the relationship between different aspects of the way support is provided and the outcomes of home visiting support. This includes how the duration and frequency of support relate to its outcomes. It also considers what is known about how the person providing the support affects outcomes. The chapter then explores home visiting support for parents in different adverse situations, including the effects of these situations on the way support is provided and support outcomes. The chapter culminates by reflecting on the research questions in light of this evidence base.

Chapter 3 describes the methodological approach that will be used to answer the research questions. This is a within-service design, based on the longitudinal analysis of Home-Start's administrative data. The reasons for this approach are set out together with the epistemological basis for it and ethical considerations. The advantages and challenges of using administrative data in research are then discussed, and the Home-Start administrative dataset introduced. The details of the Home-Start referral and support process are set out and the data collected at different points during it considered. The process through which this data was used to create various sets of variables for use in the analysis is outlined, and the strengths and weaknesses of the resulting variables discussed.

Chapter 4 describes the way that parental changes in coping with a range of issues occur over the course of support. This is an important starting point for the study for both empirical and methodological reasons. Empirically the chapter provides information about the things parents feel they are having problems coping with. Patterns of problems are identified and the way coping changes over the course of support is explored. This analysis is also important in helping to understand the data better, in order to develop methods for data analysis to be used in subsequent chapters. One of the facets of administrative data, as compared to data collected for research purposes, is that it can be messy and the researcher needs to take time to understand it and the process through which it was collected. One of the methodological challenges with Home-Start's administrative data is that different families have different amounts of data relating to how well they are coping. This happens for a variety of different reasons. These are explained and explored in Chapter 4, and ways of dealing with this in the analysis discussed. The Chapter concludes by proposing a method to explore the influence of other factors on changes in coping with emotional well-being and other issues in subsequent chapters.

Following this there is a short chapter, Chapter 5, which describes the data analysis methods that will be used in the subsequent chapters. It also sets out the approach to reporting used throughout the rest of the thesis.

Chapter 6 concerns the relationship between the way support is provided and changes in emotional well-being. Different aspects of the way support is provided are explored, including whether it is provided by a volunteer or a paid worker, the type of activities that occur during home visits, and the frequency and length of home visits. Patterns of support are explored and the relationship between these aspects of support and changes in emotional well-being

assessed. These changes in parental emotional well-being are also contrasted with how changes occur in parent's ability to cope with other aspects of parenting and family life.

Chapter 7 focuses on the family's situation. Adversity in families and its relationship with changes in parental emotional well-being is considered in different ways. First, the relationship between changes in parental emotional well-being and individual risk factors that families have at the start of Home-Start support are investigated. Then the effects of the complexity of the family's problems and their level of need are considered, and finally the effects of stressful life events that occur during the course of support are investigated.

Chapter 8 pulls the work on the nature of support and the family situation together to look at how support is provided to families in different situations. The large size of the dataset means that subsets of data, using only families in certain circumstances can be used, to compare the relative importance of different aspects of support in improving coping among families in different situations. By so doing the study is able to provide a new understanding about the aspects of support that are important for families in different situations.

The final chapter, Chapter 9, is the conclusion. It pulls all the findings together discussing them in the context of earlier studies. The implications of these findings for policy and practice are set out, together with areas for further research. The chapter then concludes by highlighting the unique contribution to knowledge that this work has provided.

This chapter has set out the rationale for this research looking at how the nature of support and a family's situation effect changes in parental emotional well-being over the course of home visiting support. In the next chapter the home visiting literature will be explored in more detail to determine what is already known about how both the family situation and the nature of support are related to changes in outcome measures during home visiting support.

CHAPTER 2

Research on Home Visiting

2.1 Introduction

In the last chapter the rationale for the research was set out. The use of home visiting to support families in adverse situations with young children was discussed, and the apparent disconnect between qualitative and quantitative studies exploring the effectiveness of both Home-Start, and other home visiting support programmes, highlighted. Arguments discussing the need for more research examining whether the home visiting support might be working for some families in some circumstances, and to identify the effective ingredients of home visiting support, were explored. The research presented in this thesis is designed to fill this gap in knowledge.

This chapter will provide a thorough investigation of the literature in this area to find out what previous studies can tell us about home visiting for families in adverse situations and the relative importance of different types of support for them. It will look at what is known about the effects of different components of support on outcomes and also look at home visiting support for families in different adverse situations.

A wide range of literature has been explored in order to inform this chapter. This includes all previous studies of Home-Start and the systematic reviews and meta-analyses of home visiting programmes directed at families with young children. Searches were also carried out to identify literature exploring different aspects of the way home visiting is provided, and the effects of home visiting for families in different circumstances. Because of the extent of the existing literature these searches were limited to include those aspects of support that could be investigated in this study by the data available in Home-Start's administrative data. This means that, with respect to the way support is provided, studies were examined which reflected on the impacts of the dosage of support, including frequency of visits, length of individual visits, overall duration of support, the time an individual spends waiting for support to start and the effects of visits cancelled and who the support was provided by (volunteer, professional, paraprofessional). In terms of looking at home visiting support for families in

different circumstances, literature providing evidence about each of the circumstances that could be investigated using Home-Start's administrative data, were explored. These were domestic violence, substance misuse, parental mental health, families at risk of child maltreatment, parental disability, families with a large number of children, families with a disabled child, families with housing problems, asylum seeking and refugee families, and parents who remain at home while their partner is in prison. In addition to this, literature looking at multiple risks and the effects of life changing events that happen over the course of home visiting support, was also explored.

The chapter is set out in a further three sections. The next section will look at the effective components of home visiting support. It will collate evidence from studies which look at different aspects of the nature of support and its relative efficacy. This includes quantifiable aspects of support including the duration of support and the frequency of visits. It will also look at who the home visitors are, for example the differences in support provided by professionals, other paid staff and volunteers.

Section 2.3 will consider issues relating to adverse family situations and home visiting support. Different ways of considering adversity are explored, including individual risk factors, multiple risks and stressful events. The literature exploring home visiting for families in these different situations is considered. This includes looking at how support is provided, what is known about how effective it is and how likely families in different situations are to drop out of support early. There is also a discussion about how these situations affect the way support is provided.

The final section concludes the chapter by pulling the findings together, and discussing their implications for the four research questions.

2.2 The effective components of home visiting support

The term "effective components" is being used in this thesis, to refer to the active ingredients of an intervention, in other words those elements of the intervention that are responsible for its effects. Korfmacher et al (2008) identified two broad dimensions conceptualising parent involvement in early childhood home visiting support: participation and engagement. The family's participation in home visiting support, equates to the quantity of support that a family receives, and is arguably the more easily measured of the two concepts. A family's engagement is related to the quality of the contact with the home visitor. Previous studies

provide empirical evidence relevant to both these dimensions. Some studies have looked at the quantity of support a family received. There is also evidence relating to the home visitor, including their qualifications, training and supervision, some of which may arguably affect the quality of that contact. Building on this theoretical framework this section will consider the evidence relating to the effective components of support by looking first at the quantity of support, before looking at aspects of support relating to the home visitor that may affect the quality of the contact.

2.2.1 Quantity of support

Korfmacher et al (2008) suggest a number of ways in which the quantity of the contact can be explored. This includes the total number of hours of support, its frequency, the mean length of contact visits, the entire duration of the family's participation in the programme, and a ratio between the proportions of visits that were completed compared to those defined by the programme. There is some evidence from both Home-Start research and the wider home visiting literature about the effects of these factors on the efficacy of home visiting. Findings from Home-Start studies are clearly relevant for this study. However, findings from studies of other home visiting programmes may also be of interest. It is important when considering the findings of these studies to bear in mind the amount of flexibility that different programmes have in the quantity of support provided and the implications this has on the generalisability of findings. Where a programme is needs-based, as Home-Start support is, then differences in the amount of support provided may be dependent on a family's needs. A shorter overall duration of support or fewer visits may be an indication that the family managed to make improvements in a shorter period of time. Whereas if a programme specifies duration or the number of visits expected, then fewer visits, or a shorter duration might be associated with a lack of engagement or early withdrawal from services. Of course, these are also plausible explanations in a programme in which the duration of support is based on need, but they are not the only explanations.

Before starting to explore the quantity of support in more detail, it is also worth clarifying the difference between the terms duration and length used in this discussion. In this thesis, when the term 'duration' is used, it refers to the entire duration of time in which the family stays in home visiting support, i.e. in days, months or years, from the date when the support started, until the date that they have their last visit. In contrast, 'length' of visit, is used to describe the average length of time that home visitor stays with a family on each individual home visit, i.e. in minutes or hours.

Concepts relating to the duration of support

Several previous studies of Home-Start (McAuley et al 2004, Barnes et al 2006, Asscher et al 2007) have considered aspects of the quantity of support. McAuley et al (2004) reported that the duration of support was not related to the outcomes. A similar finding was highlighted by Barnes et al (2006) who reported no significant difference between the total number of home visits a family received and the amount of change in outcome scores. Barnes et al (ibid) acknowledge that, since the support is needs-based, the number of visits provided may be related to the family's circumstances. They suggest that because of the needs-based nature of support this might "not be sensitive enough to identify ways that parenting could be improved" and that the variation in the numbers of visits were not reflected in the 12 months outcomes. However, there is an obvious flaw in their argument. The fact that the overall change in outcomes was the same *regardless* of the family's circumstances and the number of visits they had, could also be suggesting that the needs-based support was effective for these families. Volunteers could be providing them with enough or the right sort of support to improve by a given amount, with those who needed more support to get there, receiving more support.

Asscher et al (2007) used a composite measure of the intensity of support. This combined the total number of visits with the number of visits per month and the length of those visits. They looked at the effect of this composite measure on changes in parenting and identified that when the programme was delivered with more intensity then parents did not make such big improvements in their parenting behaviours. The authors suggest that this indicates a less intense version of the programme may be more effective in changing parenting behaviours. However, again they have not considered the challenges in interpreting the effects of the nature of support when support is needs-based. Families may have been receiving more support because they need more support, and were struggling to make improvements.

Among the wider home visiting literature, findings about the duration of support and effectiveness are inconsistent. This is illustrated by Sweet and Appelbaum's (2004) meta-analysis of home visiting, in which no consistent effect was found between either the intended programme duration or number of home visits and outcomes. The meta-analysis only considered end of treatment outcomes, and while many of the studies considered programmes of fixed duration, some were unbounded and therefore the duration of support for families varied according to need. It may also be that the presence of these programmes

where duration was based on need may have also had an influence on these findings. A more detailed look at the individual studies and the fidelity with which the programmes are administered, would probably be needed to further understand the relationship.

This has implications for this study, which will use data from families where the duration of support is dependent on their needs. The findings from both Barnes et al (2006) and McAuley et al (2004) suggest that families will make similar changes regardless of the duration of support. This effect will need to be checked. If families make similar changes regardless of the duration of support, then it may actually mean that it is important to consider the duration of support as well as the final outcome when considering the effectiveness of support. If a parent in one family is able to make sufficient improvement in their emotional well-being within a few months, while another parent takes a couple of years to reach a similar level, then the factors related to that faster improvement are worth investigating. These are all families with young children. Improvements in parental emotional well-being are essential because of the negative impact that the poor emotional well-being can have on parenting, and the knock-on effects for children in their early years. There is therefore a clear incentive for examining the time that it takes for emotional well-being to improve. The shorter the time period taken for improvements to be made, then the sooner it benefits the parent-child relationship.

Frequency

In the wider home visiting literature, several studies have provided evidence that a higher frequency of home visits is related to increased efficacy of home visiting programmes (Powell and Grantham-McGregor 1989, Olds and Kitzman 1993, Nievar et al 2010, Flemington et al, 2015). Nievar et al (2010) report that studies in their meta-analysis that were classified as high intensity programmes, i.e. those that had at least three visits per month, were more than twice as effective as those that were visited less than three times a month.

Qualitative evidence from some Home-Start studies also suggests that more frequent visits might be beneficial for families. Frost et al (2000) reported on 46 interviews with Home-Start parents and suggest that mothers receiving Home-Start support were more likely to see improvements in their emotional well-being if they had received regular support from the volunteer or organiser. McAuley et al (2004) reported that some Home-Start mothers indicated they would have liked the support to be more frequent. Quantitative measures of the frequency of visits in McAuley et al's (2004) study showed a decrease in the frequency of visits over time. However, the study did not find any association between frequency and

outcome measures, a finding which the authors suggest might be because of the lack of variation in frequency across the sample. However, the same issues discussed in relation to duration above apply here. Where support is needs-based, an effect on final outcomes might not be expected if support is given sufficiently to reach a final ideal level.

Length of Visits

Barnes et al's (2006) study of Home-Start families looked at the families most likely to have longer individual visits. They found a positive correlation between the average length of individual visits and parental dysfunctional child interaction measured early in the programme. This suggests families who are reporting problems with the parent child interaction receive longer visits. This may be due to the needs-based nature of Home-Start support and additional time the volunteers were spending with the families. However, the study did not indicate if there was any association between the length of the visits and outcomes of support.

Very few other studies in the wider home visiting literature, have also looked at this effect, though there are some exceptions to this. Wen et al (2016) examined the effects of length of home visits in a study of a home visiting service provided to mothers in late pregnancy and shortly after birth. They found that longer home visits were associated with increased engagement in home visiting support. Raikes et al's (2006) found no relationship between the mean length of the visits and a variety of outcomes. However, their study used Early Head Start data, and in this programme support is designed to be 90 minutes long. With Home-Start the length of the visit can vary according to the needs of the family. If the visits are of a more prescribed length, it is not clear if any relationship between length and outcomes would be the same as the relationship when the length of visits is needs-based. Given Barnes et al's (2006) finding that the length of visits is related to poorer parent-child interactions it is possible that the length of visits may be associated with greater need and the relationship with changes in outcomes needs to be considered in this context.

Wait

The length of time that a family have to wait for support to start might vary for a number of reasons, including finding a suitable volunteer because of either, issues relating to the family's needs, or the availability of home visitors. Qualitative evidence has suggested this can have a negative impact on parents. For example, McAuley et al (2004) indicate that waiting too long for support to start can mean that it is not provided at the time when it was needed.

MacPherson et al (2010) report on maternal concerns about the lack of communication from Home-Start while waiting for a suitable volunteer, and highlight that a long wait can result in support not being accepted when eventually offered. While long waits can have a negative impact, it is not clear what effect having to wait for support to start would have on the efficacy of support once it starts.

Cancelled Visits

Korfmacher et al (2008) suggested that the percentage of visits cancelled is another useful measure of the quantity of support. Unlike some other family support programmes, Home-Start support is needs-based and so there is not a prescribed number of visits. However it may still be that some visits are planned but do not take place and that this could be indicative of a lack of engagement in the programme. McLeish et al (2016) highlight that disadvantaged parents enrolled in another UK volunteer home visiting programme frequently cancelled visits. They suggest that persistence on the part of the volunteer is important to tackle this. However, visits might also be cancelled by volunteers, and McPherson et al (2010) report that a lack of information about the cancelation of visits by volunteers was one of the problems Home-Start mothers identified with volunteers. In spite of these issues there is very little evidence about the circumstances in which the cancellations are occurring, nor the effect they have on outcomes of support.

The discussion above has highlighted a number of aspects of the quantity of support provided to parents which could benefit from further exploration. These include the duration, the number of home visits, the frequency of support, length of visits, the amount of time families spend waiting for support to start and the number of visits that are cancelled. The next section will consider what the literature can tell us about how issues relating to the home visitor affect support.

2.2.2 The Home Visitor

The quality of the support provided by the home visitor is of clear importance in the effectiveness of home visiting programmes. McCurdy and Daro (2004) highlight a number of issues relating to the provider of family support that effect parental engagement including how sensitive they are to the parent's cultural background, the way the provider interacts with the parent, their caseload and their training.

One aspect of the ways home visiting support is delivered, that has been subject to much debate, concerns whether support is provided by professionals, other types of paid workers (such as paraprofessionals), or volunteers. In fact it has been suggested that the credentials of home visitors might be one of the most "controversial debates" in the home visiting field (Rapoport and O'Brien-Strain 2001).

Home-Start home visiting support is provided predominantly by volunteers, but some schemes also provide paid workers. Qualitative research with Home-Start mothers has highlighted benefits of volunteer support, including that volunteers do not bring professional concerns or stigma, are neutral and would not judge them, and that they were able to develop a close confiding relationship (Frost et al 2000). Similar sentiments were recognised by McLeish et al (2016) in relation to another UK-based home visiting programme. While recognising that volunteers are not a substitute for professionals, the authors suggest that volunteers may be accepted by parents who would not engage with other services, and that volunteers are in a position to build up relationships of trust and equality with parents. This may be particularly effective when volunteers have had very similar problems to the families they support (McLeish and Redshaw 2017a).

While volunteer support has some clear benefits, McLeish and Redshaw (2017b) highlight the variability in outcomes among families receiving home visiting support from volunteers. Some volunteers reported that the well-being of some extremely vulnerable women had been transformed by support, whereas for other women the gains were more subtle. There was a variability in the length of time it took for the relationship of trust between parents and volunteers to develop. Some parents seemed happy to open up about their problems after very few visits, but for others this took longer. The authors suggest further research into whether the impact of volunteers support depends on the mother's needs and circumstances.

While volunteer support may have some advantages, studies have also pointed out disadvantages. Bagilhole (1996) highlighted how pressures on social services were resulting in families who should have been supported elsewhere being referred to Home-Start. The study took place over 20 years ago, so we do not know how much this is an issue today, but if families have particularly complex problems it may be that volunteer support is not what is suitable for them. MacPherson et al (2010), also highlighted potential difficulties including families not being able to contact the volunteer and problems associated with the way the support was withdrawn, sometimes because of unforeseen circumstances relating to the volunteer.

While some qualitative evidence highlights the potential benefits of volunteer support, less is known about the relative effectiveness of volunteers and paid workers in improving parental coping among Home-Start families. Smallegange et al (2018) in their recent study comparing Home-Start support provided by volunteers, with professional care, concluded that there were very few differences between the two groups on a number of measures. However the study did not look at the relative differences in Home-Start support provided by either volunteers or paid workers.

The issue of home visitor credentials has been addressed in several meta-analyses of the wider home visiting literature, though these have largely considered the differences between support from professionals and paraprofessionals. These meta-analyses have provided inconsistent results. Some studies found no difference between support provided by professionals and paraprofessionals (Nievar et al 2010, Casillas et al 2016). Sweet and Appelbaum (2004) found professional home visitors were associated with higher effect sizes than paraprofessionals when considering child cognitive outcomes. However when considering potential child abuse outcomes effect sizes were higher for paraprofessionals compared to both professionals and non-professionals. Olds and Kitzman (1993) carried out a systematic review of home visiting support in which they indicate that support for vulnerable families is more effective when professionals are used rather than paraprofessionals. However the results were less clear cut than this conclusion suggests. There were studies among those that they reviewed that used paraprofessionals and found significant effects on outcomes, and those that used professionals and did not. Filene et al's (2013) meta-analysis found visits from professionals were associated with larger effects on child physical health outcomes but smaller effects on birth outcomes, and had no effect on other outcomes. The authors suggested that this might be because of different types of professionals being used or because there was other programme differences between the programmes that used professionals and non-professionals. However, another possibility is that different types of home visitor work best with different families in different situations.

As well as the home visitor's qualifications and employment status, other aspects of their training, support and supervision appear to be important (Casillas et al 2016, McLeish and Redshaw 2017a). Volunteers in McLeish and Redshaw's (2017a) study, highlighted the personal difficulties they had had in coping with some of the situations and suffering that they encountered in the families they visited. They stressed the importance of regular supervision as key to dealing with this. The importance of supervision for home visitors is also backed up by findings from Casillas et al's (2016) meta-analysis which showed programmes in which

home visitors were able to have reflective supervision were more effective than those with more basic forms of supervision.

Training of home visitors is also an important feature and needed to help them form respective relationships with parents (Azzi-Lessing 2011). While there is evidence suggesting that volunteer home visitors value the training they have been given (McLeish and Redshaw 2017a), the content of training required will depend on the home visiting programme, and the prior qualifications and experience of the home visitor. Casillas et al (2016) considered the impact of different types of training in their meta-analysis of home visiting programmes. This suggested that training including roll play activities was related to higher effect sizes of home visiting programmes.

This brief review of the effective components of home visiting support has considered the components associated with a greater likelihood of improved outcomes. Problems with identifying the influence of the duration of support in needs-based services have been identified, highlighting a need for this study to develop a method which compensates for this. There appears to be good evidence that the frequency of home visiting support and good supervision may be related to improved outcomes, in many home visiting programmes, though this has not been confirmed with respect to Home-Start support. With respect to other components of support the evidence is either more scarce, for example with respect to the length of time parents spend waiting for support to start, or less consistent, such as the evidence regarding who the support is provided by and the average length of visits. Inconsistent results may be an indicator that some factors are important in some circumstances but not others. For example it might be that families in some situations might benefit better from the support of a professional, or paraprofessional, while in other situations the support of a volunteer might be preferable. The next section will therefore consider the different situations that families receiving home visiting support may be in, and look at what evidence there is regarding home visiting support for families in those situations.

2.3   Family situations and home visiting support

Chapter 1 discussed the detrimental impact that a range of adverse family situations can have on outcomes for children. This included evidence that adverse childhood experiences can impact on outcomes in both later childhood and adulthood. The role of parenting in mediating the effects of adversity experienced in families with young children was discussed and the rationale for working with parents who are stressed as a result of adverse family situations was

set out. This chapter has considered home visiting as a support mechanism for such families, and examined how different aspects of home visiting support are related to outcomes. What has not yet been considered is how this support works specifically for families in adverse situations. This is an issue that will be addressed in this section. It will start by examining family adversity in more detail, and the range of family situations that have been associated with adverse outcomes for children. The literature relating to home visiting support for families in adverse situations will then be explored.

2.3.1 Family adversity

Studies looking at the impact of adverse childhood experiences (ACEs) on outcomes for families have tended to focus on certain key adverse childhood experiences. These include different forms of child abuse, domestic violence, substance misuse, parental mental illness, having a household member incarcerated and parental separation/divorce (Dube 2003, Bellis et al 2015, Kerker 2015 McKelvey et al 2017). Typically these studies count the individual number of ACEs that a family has, and have identified associations between the number of ACEs experienced and adverse outcomes.

An approach to exploring family problems in relation to the number of problems that a family has rather than the nature of the individual problems was pioneered by Rutter (1979). In his work he identified a correlation between multiple risk and childhood psychiatric disorders. While one risk factor did not appear to have any effect on the likelihood of mental disorder, multiple risk factors did, with four risk factors resulting in a tenfold increase. Rutter (ibid) used a slightly different set of risk factors to those used in studies of ACEs, (severe marital discord, large family size, low social status, maternal mental disorder, paternal criminality and foster placement), but the principle was fairly similar: multiple indicators of adversity in the family were associated with a greater likelihood of adverse outcomes. Following Rutter's (1979) work numerous additional studies identified a relationship between cumulative risk in families and child behavioural outcomes (Sameroff et al 1987a, Biederman et al 1995, Deater-Deckard et al 1998, Forehand et al 1998, Greenberg et al 2001, Atzaba-Poria et al 2004, Appleyard et al 2005, Mistry et al 2010), as well as cognitive outcomes (Sameroff et al 1987b, Gutman et al 2002, Burchinal et al 2006, Ayoub et al 2009) and child maltreatment outcomes (Brown et al 1998, MacKenzie 2011).

The selection of risk factors used to explore the effects of multiple risk in families varies from study to study. In addition to those risk factors commonly used in studies of ACEs and those

used by Rutter (1979) they have included whether the family is headed by a single parent (Sameroff 1987, Deater-Deckard et al 1998, Burchinal et al 2006, Trentacosta et al 2008, Mistry et al 2010, MacKenzie et al 2011), whether there is a teenage pregnancy (Deater-Deckard et al 1998, Trentacosta et al 2008, MacKenzie et al 2011), parental occupation (Sameroff 1987), parental education and skills (Ayoub et al 2009, Burchinal et al 2006, Sameroff 1987), household overcrowding (Sabates and Dex 2012, Trentacosta et al 2008) and physical disability (Sabates and Dex 2012). There are also a range of risk factors relating to the family's economic situation that have been used including parental unemployment (Ayoub et al 2009, Mistry et al 2010), whether they are in receipt of social assistance (Ayoub et al 2009, MacKenzie et al 2011, Mistry et al 2010) and socio economic status (Appleyard et al 2005, Deater-Deckard et al 1998).

The rationale for examining the effects of multiple risk factors, as opposed to the effects of individual risk factors, centres on the idea that risks can interact with each other changing their effects. Rutter's (1979) early work, found not only a correlation between the number of risk factors and mental disorders, but also found the relationship was not linear. Risk factors appeared to potentiate each other. However, this is not the case with all studies of multiple risks, as some studies found a linear relationship, for example Appleyard et al (2005).

It may therefore be just as important to consider how individual risk factors are related to adverse outcomes for children, and there is much research highlighting these relationships. Child behaviour outcomes, for example, have been found to be related to previous child maltreatment (Cicchetti and Carlson 1989), inter-parental violence (Kitzmann et al 2003, Wolfe et al 2003), parental mental health (Mäntymaa et al 2008, Treyvaud et al 2010, Maybery et al 2009), post-natal depression (Grace et al 2003), substance misuse (Velleman and Templeton 2007), parental incarceration (Parke and Clarke-Stewart 2001, Murry et al 2012), temporary housing (Waldron et al 2001), overcrowded housing conditions (Dockery et al 2010), and socio-economic status (Dodge et al 1994). Evidence also suggests an increased likelihood of behavioural problems among the children of refugee and asylum seeking parents, potentially because of posttraumatic stress experienced by parents (Van Ee et al 2012) or through protracted stays in asylum centres (Nielsen et al 2007). Disability in the family is also associated with behavioural outcomes. Previous research has identified an increased likelihood of behavioural problems in both disabled children (Roberts and Lawton 2000), and their non-disabled siblings (Breslau et al 1981). Evidence of the effects of parental disability on children is more mixed, though there is evidence that some conditions, including chronic pain (Evans et al 2007) and multiple sclerosis (Bogosian et al 2014) are related to child behaviour problems.

Some aspects of a family's situation are not risk factors for child behaviour problems but are related to other adverse outcomes in children. The size of the family is a good example of this. A large number of children in the family does not appear to be a risk factor in the long term for child behavioural problems. In fact the opposite may be true. Taanila et al (2004) found children in large families had the lowest prevalence of behaviour problems, with the highest prevalence occurring in families with only one child. Large family size does appear, however, to be related to an increased likelihood of child maltreatment, particularly neglect (Stith et al 2009) and is correlated with lower educational attainment (Booth and Key 2009). There is further evidence suggesting that the maternal time inputs are related to child outcomes, particularly cognitive outcomes (Bono et al 2016), highlighting the importance of problems that may arise in families because of the demands of looking after multiple children.

In addition to these factors describing stress in families, stressful events may occur, and these can have a negative impact on children. Life events are "psychologically significant events that occur in a person's life," (Lancaster et al 2010). They include a wide range of issues including bereavements, serious illnesses or injuries or becoming unemployed. Cochrane and Robertson (1973) devised a life event inventory used in much subsequent work on life events. In determining what should be classified as a life event, they highlighted that some events described things that would be unpleasant, but some might be pleasant in the long term, such as moving house. Stressful life events have been associated with depression in adults (Brown and Harris 1978, Lancaster et al 2010), and with lower parenting satisfaction and efficacy (Zayas et al 2005), an association that appeared to be mediated by maternal depressive symptoms. These effects have been identified in early childhood (Flouri et al 2010) and have been associated with depressive symptoms in mothers being enrolled in a home visiting programme (Price and Masho 2014).

An alternative to looking at the number of risk factors that a family has, is to consider their level of need. Hardiker et al (1991) describe a system for identifying levels of needs in children's social work. The system has subsequently been adopted by Home-Start in the UK to classify the families they support (Home-Start 2017c). The system is based on four levels. Families placed at the first level are considered only to need universal services aimed at preventing problems arising. Families are placed at the second level if problems are beginning to develop and support is needed for the early identification and resolution of those problems. Families at the third level have chronic well established problems. For these families action is

needed to mitigate against the worst effects of these problems. Families are placed at the fourth level if things have broken down either temporarily or permanently.

So far we have examined a wide range of evidence exploring the relationship between family adversity and child outcomes. Some studies have looked at this using a cumulative approach, while in other studies an approach based on the effects of individual risks on outcomes has been used. The evidence suggests that the more risk factors a family has, the greater the likelihood of poor outcomes for the children in that family. While using a cumulative approach has clearly been useful for looking at the overall impact of risk factors on families, it is not clear if such an approach is also useful when looking at how to support families through home visiting. For example, it is not clear what the relative impacts of home visiting support are for families with multiple risks when compared to those with fewer risks. Nor do we know what sort of support is more effective for families with different risk factors. The next section considers the evidence relating to home visiting support for families in these different adverse situations.

2.3.2 Home visiting support for families in adverse situations

The adverse situations described above are all found within the population of families receiving home visiting support, including support from Home-Start. Kenkre and Young (2013) describe Home-Start families has having complex circumstances and multiple needs. They studied a population of families receiving support from Home-Start in 2011/12. Of the families referred to Home-Start that year, 34% were headed by a lone parent, mental health was an issue among 26%, post-natal depression was indicated in about 15%, domestic abuse suspected in 13%, substance misuse in 4%, and 3.3% had had a teenage pregnancy. Disability can affect both the children and parents in Home-Start families (Shinman et al 1994, Frost et al 2000, McAuley et al 2004), with professionals interviewed in Frost et al's study (2000) identifying families with disability as one of the family situations they consider suitable for referral to Home-Start. Other adverse problems identified in families referred to Home-Start include poverty, housing problems (Oakley et al 1998), child protection concerns (Gibbons and Thorpe 1989, Frost et al 2000, Oakley et al 1998) and families with an incarcerated household member (Shinman et al 1994). Many Home-Start schemes work with refugee and asylum seeking families (Home-Start 2017b). Families are also referred to Home-Start because they have multiple young children (McAuley et al 2004), with Frost et al (2000) reporting that referrers feel it is a suitable source of help for families who are over-burdened.

There are clearly a diverse range of issues and problems facing families receiving Home-Start support. Since the support they receive is needs-based, different situations the families find themselves in may result in support being provided in different ways. This raises several questions. How does the family's circumstances affect the way support is provided to them? Does Home-Start have the same impact on families in all these situations? What is the relative importance of the different components of support for improving outcomes for families in these different situations?

The effectiveness of home visiting for families in different situations

In considering individual adverse family situations and the effectiveness of home visiting programmes, it is useful to distinguish between family situations that are more malleable and those that are more permanent. Malleable risk factors are risk factors that are capable of being removed. Where risk factors are more malleable then home visiting programmes may work by removing or changing those adverse situations. Whereas with more permanent risks the focus is on supporting families to cope with bringing up children mitigating against the effects of the adversity.

Duggan et al (2004) focus on the potential for home visiting to remove malleable risk factors in their study of families enrolled in Hawaii's Healthy Start Program. It examined risk factors for domestic violence, substance misuse, and parental mental health. They found that among families who received a high dose of the service there was a reduction in physical partner violence and maternal problem alcohol, although the support did not appear to remove the other risk factors examined, including those relating to maternal mental health and illicit drug use. The results, with respect to substance misuse, can be contrasted with a the results of a systematic review looking at the potential of home visiting for supporting mothers with drug and alcohol problems both after and before birth (Turnbull and Osborn 2012). This concluded that there was not enough data to suggest that home visiting improved the health outcomes for the baby or mother. However, the authors pointed out that much of this was due to methodological limitations with a number of the studies, which were particularly likely to arise because of losses at follow up.

There are also several studies that highlight home visiting's effectiveness at preventing child maltreatment (Geeraert et al 2004, Avellar and Supplee 2013), however, again there are methodological issues that can make it difficult to be sure of such effects. The presence of home visitors in the home has been identified as having a surveillance effect (Barlow et al

2007, Green et al 2017). This means the home visitor's presence may result in child abuse concerns being recognised and reported. For example (Barlow et al 2007) found more children on the child protection register in a home visited group compared to a control. While such an effect clearly highlights the potential for home visiting to help prevent child abuse, it creates a methodological challenge if subsequent reports of child maltreatment are used to measure its effect.

There is arguably less evidence about the effectiveness of home visiting for families with more permanent risk factors. McAuley et al (2004) report that more than half of the Home-Start mothers in their sample indicated a child had a special need, including attention deficit hyperactivity disorder, speech problems or autism, with quite a high proportion indicating more than one child with such a problem. At the follow-up interview some of these mothers reported less stress, often as a result of additional services for the child, while others were reporting similar or higher levels of stress than at the start of support.

In discussing the physical health/disability issues among mothers, McAuley et al (2004) indicate that some mothers appear to improve while others have remained the same. They discussed the issues of one mother with a physical disability (registered blind), and highlighted how for this mother the situation was now more stressful as her child was now older and more active. However, besides this there is very little evidence about the particular needs of parents with disabilities and home visiting support. In fact, Kilkey and Clarke (2010, p133) describe disabled parents as being "largely absent from research focusing on either family support or parenting support." There also appears to be a lack of evidence about the relative effectiveness of home visiting support for families in other adverse situations, particularly those situations that are less prevalent in the population, such as for example, asylum seekers and refugees and those who remain at home while their partners are in prison.

There is a small amount of evidence regarding family size and home visiting. Fergusson et al's (2005) analysis of a home visiting family support programme in New Zealand suggests that family size had no effect on either the participation in or benefits of the programme. Lanier and Johnson-Reid (2014) examined a nurse home visiting programme in the USA and found similar levels of engagement and retention between first time mothers and those with other children. However. those with other children were more likely to have a report of child maltreatment following support, an effect they suggest might be because of the association between larger family sizes and parenting stress. The differences in findings with respect to

family size between these studies may be because of different outcomes being measured, or because of differences between the programmes or the contexts in which they are provided.

With respect to life events there is evidence that those who have recently experienced a life event are more likely to indicate a need for parenting support services (Asscher et al 2006). There is also evidence suggesting that home visiting can increase a parent's resilience to dealing with life events that happen after the programme (Izzo et al 2005).   What is less clear is how life events happening during the course of support affect its efficacy. For example, how do bereavements or serious accidents affect changes in emotional well-being among those receiving home visiting support? Additionally, what is the effect of events that are less stressful in the long term but stressful in the short term, such as having another baby or moving house?

While there are variable amounts of research relating to the efficacy of home visiting support for different adverse situations, there is very little research directly comparing the relative efficacy of home visiting support for families in these different situations. There are two studies (Raikes et al 2006, Asscher et al 2007) that looked at the relationship between demographic factors and the outcomes of support. In both studies the demographic factors had different affects depending on the outcome measure being considered. Asscher et al (2007) conclude that the participating characteristics they considered had little effect on outcomes. However these were demographic factors and not the adverse situations we are interested in here.

Given the associations highlighted above about the effects of multiple adversity on outcomes for children, it is useful to consider the efficacy of home visiting support for families with multiple risks. There is evidence that this type of support may be appealing to families with multiple risks. Asscher et al (2006) found that cumulative risk in families in the Netherlands was related to parents identifying a need for support. Where studies have considered the effectiveness of home visiting support for families with multiple risks, outcomes appear to be similar to those with fewer risks. Ferguson et al (2005) looked at how the number of disadvantages that families on the New Zealand based Early Start programme had was related to the programme's efficacy. The disadvantages they looked at included maternal childhood stress and difficulty, exposure to child abuse, domestic violence and welfare dependence. They found no relationship between multiple disadvantages and the programme's efficacy.   In Raikes et al (2006), the indicator of multiple demographic risk appeared to have no significant association with the outcome measures in any of the models developed. What this suggests is,

that in spite of multiple risk being associated with negative outcomes for families per se, home visiting may be just as effective with those families who have multiple risks as they are with those who have fewer risk factors. Given the policy imperative to mitigate against the effects of multiple risk, this is an important issue. However, as stated above Raikes et al (2006) concentrated on demographic risks, and Ferguson et al (2005) on a mixture of current adverse situations and adversity experienced by the mother in her own childhood. These findings need to be replicated with of current adversity to be confident of this effect.

There are also additional ways of considering the level of a family's problems and the effectiveness of home visiting support. Asscher et al (2008b) looked at whether the degree of change experienced by families receiving Home-Start intervention in the Netherlands was related to their initial level of problems. They found that those with the most problems went through the greatest degree of change. However in this study the initial level of problems was considered in terms of their scores on a number of measures relating to maternal well-being, parenting behaviours and child problem behaviours.

As well as considering how family circumstances are related to outcomes of support, there is also a need to be mindful of the fact that not all families complete the support programme. Several types of adverse situation have been associated with early drop out from support. Flemington and Fraser's (2016) study of an Australian nurse home visiting programme found that mothers experiencing domestic violence were more likely to leave the programme early compared to other mothers. Roggman et al (2008) found higher rates of drop out from the American Early Head Start programme among families with single mothers, those with more changes of residence and those with multiple risks. Lower rates of dropout occurred in families with a disabled child or among mothers with poor English skills. Turnbull and Osborn (2012) highlight high levels of dropout among families with substance misuse problems. This needs to be taken into account when considering the findings of home visiting programmes. We have for example already discussed studies that have found home visiting to be effective at reducing rates of domestic violence (Duggan et al 2004), or found that multiple risks are not related to outcomes (Ferguson et al 2005). Such findings may only relate to those who remain in support. This does not mean they are not important findings, but there is a need to be clear if results apply to all families or only those who remain in support.

The evidence with respect to the relative efficacy of home visiting support for families in different adverse situations is patchy. While evidence suggests that home visiting is effective for some types of families there is a lack of evidence directly comparing the effectiveness of

home visiting for families in different situations. Two studies are exceptions to this: Asscher et al (2007) and Raikes et al (2006), however, these concentrated on demographic factors rather than adverse situations. Raikes (2006) used a within-sample design, and a similar approach could be used to look at the relative changes in outcomes for parents in different adverse situations. It is also possible that families in different situations improve in different ways because they have different types of support. The way families in different situations are supported is considered in the next section.

How support is provided to families in different circumstances

A number of previous studies of home visiting support including those studies looking at Home-Start's work, discuss how support is provided to families in particular circumstances. A lot of this evidence is qualitative and it is hard to make direct comparisons between the effects of different situations. However several themes emerge.

Many studies talk about the need for families in adverse situations to receive emotional support, and many explain why it is important for those families. For example Paris (2008) explains how refugee and asylum seeking mothers needed emotional support because of both trauma relating to immigration, and raising an infant in a country they were not familiar with. The need for social support for these parents is also backed up by McLeish and Redshaw (2017b) who highlight the difficulties that families in the asylum system can have in maintaining a social network because of being dispersed under the asylum support system. Emotional support may be common for many Home-Start parents, and sometimes this may not have been recognised at the start of support. For example, Shinman et al (1994) describe how parents of disabled children often need emotional support, and that this may not have been identified initially, but becomes apparent as home visitors get to know them.

Sometimes more practical methods of support are discussed. For example Shinman et al (1994) highlight how disabled parents sometimes need transport, while McLeish and Redshaw (2017a) highlight how home visitors had acted as interpreters for parents who did not speak English well. McAuley et al (2004) report that mothers can feel overwhelmed by the demands of looking after multiple children of different ages. Problems with isolation were also described, because of the practical difficulties of taking multiple young children outside the home.

Kenkre and Young (2013) demonstrate how the type of support offered to families starting support with Home-Start varies according to their needs. Families who identify that they are

having problems coping with multiple young children, managing their children's behaviour or being involved with their development are more likely to be offered support in which activities with children are carried out. These families are also more likely to offered practical support, as are families where the parent is having problems coping with their own mental health.

The important role of home visiting support in helping families access other services is often highlighted. Kenkre and Young (2013) highlight how Home-Start has helped families to access other services either by providing contact details for those services, transporting families to them, accompanying them to appointments, discussing the services with them, or looking after their children while they attend. This support helps families to access a range of services, including universal health services such as doctors and dentists, but also specialist services such as mental health services, debt counselling, housing and benefits advice and legal support.

Further evidence of a home visiting programme's ability to support parents to access other services has also been provided by Green et al (2017). The authors linked data from a home visiting service in Oregon, USA, to the county's administrative data, and found that compared to a comparison group, those who received the home visiting service, were subsequently more likely to have been enrolled in substance abuse treatment services. While Love et al (2002) provide evidence that the USA-based Early Head Start programme has been effective in supporting families with disabled children to access other early intervention services.

Tandon et al (2005) discuss the importance of the role of home visitors in supporting families with domestic violence, mental health problems and substance misuse issues to access specialist services relating to these issues. Their analysis of a home visiting programme in the USA, highlighted that a number of families felt that these specialist services would have been of benefit to them, but they did not receive support from their home visitors to access them. In a further study (Tandon et al 2008) home visitors relate problems that they have in supporting families to access these services, including that parents often have more immediate concerns, such as housing or financial problems. The home visitors also felt they had a lot of knowledge but not necessarily the communication skills to support families in these situations. Similar sentiments have been echoed by qualitative analysis carried out in the UK. In McLeish and Redshaw's (2017a) study some home visitors also indicated that they felt out of their depth dealing with issues such as domestic violence, mental health problems or child protection.

Several studies have highlighted the unpredictable nature of supporting families in adverse situations, because of the potential problems and crises that might arise among those families. The unpredictable nature of home visiting support was highlighted by Hardy (1989) cited in Bennett et al (2007) when explaining how their programme didn't function as expected. Many home visitors arriving at a family homes reported being immediately confronted with crises in the families they were visiting, and many of these required immediate attention including the threat of eviction, problems accessing heat, food, electricity, clothes and so on.

Turnbull et al (2013) discussed similar problems among families with housing problems in a Canadian home visiting programme. Staff of the programme highlighted how difficult it was to deliver other parts of the programme's curriculum when basic housing needs were unmet, as it was those housing problems that were at the top of the parent's mind. They also noted how once these families were properly housed they often made continual improvements.

This evidence clearly highlights how different types of support are important for families in different adverse situations and suggests that value of a needs-based approach. However very little of it relates to the quantifiable aspects of support considered in Section 2.2.1 above. Barnes et al (2006), provide details of how some demographic characteristics are related to the amount of support families in their study receive. This showed, for example, that mothers who were not employed or were in lower status occupations received more months of support, than those with higher status work. It also found longer individual visits were associated with families in which there were three or more children and also with families with non-white mothers. However, while these figures are interesting, they do not tell us how the amount of support varies for families in adverse situations.

Overall the evidence reviewed in this section suggests different family situations can result in support being provided in different ways, but we have not yet considered what impacts this has on the outcomes of support. This will be considered in the next section.

Effective components of support

We have now considered the evidence relating to the relative effectiveness of home visiting support for families in different situations, and how families in those different situations are supported. What has not yet been considered is what aspects of support are particularly effective for families in which situations.

The evidence in relation to these issues is much more limited. There are some studies that touch on the relative importance of the credentials of the home visitor for families in certain situations. For example Sweet and Appelbaum (2004), indicate that effects sizes for the outcomes of home visiting support were greater for families at risk of child abuse if they were visited by paraprofessionals rather than professionals or non-professionals. This contrasts with Casillas et al's (2016) meta-analysis, which found no difference in effect sizes among programmes using paraprofessionals, professionals or teams combining the two. In contrast, in a qualitative study, McLeish and Redshaw (2017a) highlight the value of volunteer home visitors for asylum seeking mothers, because some asylum seeking mothers were fearful of seeking support from other services in case they might be judged. However, these studies do not directly compare the relative effects of volunteer and paid worker support for families in different adverse situations.

Asscher et al (2007) considered the interaction effects between participant demographic characteristics and programme effects on parenting outcomes, in their study of Home-Start in the Netherlands. The programme characteristics considered included the overall intensity of the programmes as well as measures of its integrity and parental satisfaction with it. Overall not many effects were found and where they were found they were not consistent across different parenting outcomes. The authors suggest that this might show that different aspects of support affect different outcomes differently. Their study was carried out with a very small sample size, (N=54), which they concede may have made it difficult to detect differences in subgroups of the sample. The authors make a couple of recommendations which are pertinent for this study. Firstly they highlight that because of the differential effect of the support on different outcomes, then the effects of support on multiple outcomes should be considered in evaluation studies. They also recommend that their study be repeated with a much bigger sample of families. The analysis presented in this thesis is not a repeat of their study. It focuses on parental emotional well-being rather than parenting outcomes, and it relates to families in adverse situations, rather than demographic characteristics. However, as Asscher et al (ibid) recommend, it will need to use a much bigger sample of families. In fact it is likely that some adverse situations may be relatively infrequent in the populations of Home-Start parents, and this will require a much bigger sample size to ensure that such risk factors are sufficiently prevalent in the sample.

This chapter has explored the evidence relating to the nature of home visiting support and home visiting support for families in adverse situations, and highlighted a number of

interesting findings. The next section pulls these findings together and looks at their implications for the research questions.

2.4   Discussion and reflections for research questions

This chapter has highlighted gaps in the research regarding what works in terms of home visiting support for whom and in what situation. This has implications for the research questions set out at the end of Chapter 1.

The first question asks how self-rated parental feelings of coping with emotional well-being and other aspects of parenting and family life change over the course of home visiting support. The study will therefore identify how improvements in emotional well-being among Home-Start parents occur, and how this relates to changes in other issues. The review of the literature in this chapter has highlighted the complicated relationship between the duration of support and the overall amount of improvement. This suggests that it will be important to consider not only how much emotional well-being changes but also the time it takes for those changes to occur.

The second research question concerns the nature of support and its relationship with improvements in parental emotional well-being. This chapter has explored the empirical evidence regarding the importance of different components of home visiting support. Some aspects of support, particularly the frequency of support and regular supervision of home visitors, appear to be related to improved outcomes for families. For other components, such as the length of visits, or the credentials of the person providing the support, then effects are less clear cut. There are also aspects of support whose effects appear to be under-researched, such as the time spent waiting for support to start. By answering the second research question this study will be able to identify if effects identified in previous studies, such as the effect of frequency on outcomes, apply to the Home-Start families in the data. Where previous studies have identified inconsistent effects, there will be an opportunity to identify what the relationship is with respect to Home-Start support. There will also be an opportunity to provide new knowledge in those areas which are under researched, such as the effect of the time the families spend waiting for support to start.

The third question concerns adverse family situations, and asks how they affect improvements in parental emotional well-being. Literature in this area has also been considered, and different ways of considering adverse situations explored. These include looking at individual

risk factors, multiple risk factors, levels of need and life events. All these different ways of conceptualising adverse family situations can be used to answer the third research question. While there is evidence of support being effective for families in certain situations, much of this research does not directly compare families in different situations. Such research would enable any family situations associated with a greater likelihood of improved outcomes, to be identified.

The third research question also provides the opportunity to look at whether the type of risk factor or the number or risk factors has more effect on the changes in emotional well-being. While a couple of studies (Ferguson et al 2005, Raikes et al 2006) provide evidence that the number of risks may not affect outcomes of home visiting support, the measures of cumulative risk used were not based solely on current adverse family situations. The literature review also highlighted how certain family situations are associated with a greater likelihood of dropping out of support (Roggman et al 2008, Turnbull and Osborn 2012, Flemington and Fraser 2016). This is an effect that would need to be factored in when considering how family situations are related to outcomes.

The way support is provided to families in different situations was also discussed and it is evident that those situations can affect the nature of support. The inconsistent effects of the nature of support on changes in parents identified in the first part of this Chapter could also be explained if certain aspects of support might be more effective for families in certain situations. However evidence highlighting what aspects of support are affective for families in different situations is limited. One study (Asscher et al 2007) considered the interrelationship between demographic factors, aspects of support and outcomes. However the sample size was very small and the authors recommended that it should be repeated with a larger sample. The fourth question of this study will enable these issues to be studied further. It asks how the nature of support affects improvements in parental emotional well-being for parents in different adverse situations. This enables the nature of support for families in those different adverse situations to be considered and goes beyond what any of the studies in this literature review have done, to look at the relative importance of the different aspects of support for families in different adverse situations.

In order to answer this final question the analysis will look at changes in coping among subgroups of families. To do this a very large dataset is required, with sufficient detail about the situations of those receiving support and the way support is provided to them. Home-Start's administrative dataset provides just such a set of data.   It includes information about

the situations of the families receiving support and the support provided to them, and it is this administrative data that has been used for the research presented in this thesis. The next chapter will outline the methodological approach through which it was analysed.

CHAPTER 3

Methodology

3.1 Introduction

Chapter 2 provided a thorough investigation of the literature relating to both Home-Start and other home visiting programmes. This was carried out specifically to look at what previous studies have told us about how both a family's situation and the nature of support, affect the efficacy of that support. This provided evidence that certain aspects of the way support is provided, such as the frequency, may be related to improved outcomes of support. However with respect to other aspects of support, including the home visitor's credentials and the length of visits, then the evidence is inconsistent. The idea that certain aspects of support may be more important for families in certain situations was discussed and a variety of ways of considering adverse family situations considered, including individual risks, multiple risks, levels of need and life events. The need for research which compares outcomes for families in different adverse situations at the end of support was highlighted, as was research looking at the relative importance of different aspects of support for families in different situations. The chapter concluded by discussing how these findings relate to the research questions. This chapter will outline the methodology employed to answer those questions.

The research will be carried out using a within-service design. This will be done through the longitudinal analysis of Home-Start's administrative data. This chapter will explain why such an approach was taken and how this will add to the existing body of home visiting research. It will highlight both the advantages and challenges of using administrative data for research, before introducing Home-Start's administrative data and explaining how variables were derived from it for analysis.

The Chapter will not, however, provide the details of the quantitative data analysis methods used to analyse those variables. Chapters 1 and 2 raised several analytical challenges in exploring changes in parents receiving support that is both multifaceted and needs-based. One of these is that the duration of support is needs-based so support may continue as long as a family needs it. Outcomes for families may be similar, but the time taken to reach them may

vary. The need for a method which takes this into account has already been highlighted. There are also analytical challenges because of the multifaceted nature of the Home-Start support with parents receiving support in different ways to help them to cope with different issues. In order to develop analysis methods that take these issues into account some preliminary analysis relating to changes in parental reports of coping with their emotional well-being and other issues was carried out. This analysis, which is set out in Chapter 4, enabled methods used for the subsequent analysis to be developed. These methods are then described in Chapter 5.

This chapter is divided into two main sections followed by a short discussion section. The next section describes the approach to the research. It explains why the research design has been selected to answer the research questions and outlines the epistemological position on which the research is based. The advantages and challenges of using administrative data are set out and the ways they relate to the Home-Start data discussed. The ethical issues that arise in relation to the study are also considered. The second half of the chapter introduces the Home-Start data. Data is collected at different stages of the Home-Start referral and support process, so the section starts by explaining this process in detail before looking at the data collected at each stage. The variables derived from the administrative data used in the analysis are then introduced. This includes variables that measure changes in coping, variables relating to the nature of support and variables concerning the family's situation. In each case the way that the variables were derived from the administrative data is considered, and their strengths and weaknesses discussed. The data provided by Home-Start for this study included certain families who could not be used in the analysis. This was because of either issues relating to the family, the way support was provided or the quality of the data. These issues are also explained and details of the size of the dataset used for the analysis provided. Finally, the chapter concludes with a short discussion about the data and the challenges that need to be addressed before the quantitative data analysis can proceed.

3.2   Methodological Approach

The research was carried out through the longitudinal analysis of Home-Start's large administrative database. This section will highlight the advantages and challenges of working with administrative data, and look at the epistemological and ethical issues associated with it. It will start by considering the research design employed and why this was selected to answer the research questions.

3.2.1 Research design

A longitudinal design was chosen as this enables parental emotional well-being over the course of home visiting support to be investigated. The administrative data is able to facilitate this by providing data at different time points. Data is also available about the family's circumstances and the nature of support so that these, and their relationships with changes in coping, could be explored. The majority of the analysis consisted of the quantitative analysis of the data in this database; however, a small amount of qualitative content analysis was also carried out.

Since this study focuses on differences in the way support is provided, it required a dataset in which all families had been receiving support, and for whom there was variation in the way support has been provided. This meant that it used a within-service design similar to that employed by Raikes et al (2006) in their study of Early Head Start data. Their study looked at how the nature of the Early Head Start home visiting support affected the outcomes of support, while controlling for demographic factors. While the Early Head Start data was collected with data from a control group the study employed a within-sample design and did not use the control group data. Using only those who receive support, the study was able to investigate programme conditions that were associated with certain outcomes. This approach differs from much of the previous home visiting research, which has relied either on qualitative analysis or quantitative analysis using experimental designs, utilising both home visited and control groups. Because there is no control group we cannot be certain that any changes in emotional well-being are due to the home visiting support. However, by using a large dataset this method allows us to look in detail at relative differences in families receiving support in different ways and in different situations.

The research presented in this thesis goes beyond Raikes et al's (ibid) research. It will look not only at the effects of the nature of support on outcomes when controlling for family circumstances, but also at what the effects of the nature of support are on outcomes for families who are in different circumstances. Asscher et al (2007) tried to examine these issues in Home-Start in the Netherlands, but their sample was too small to be confident of effects. In order to do this a very large sample of families is needed, and the types of family circumstances investigated have to be sufficiently prevalent in the data. The data also has to hold sufficient information about the way the support is provided.

Home-Start's administrative dataset provided such an opportunity. It is a large dataset providing detail about the way support is provided to families who come from a range of

different circumstances. The needs-based nature of Home-Start support also ensures that there is sufficient variety among the families in the way support is provided to enable the relationship between the nature of support and changes in emotional well-being to be explored.

The content of Home-Start's administrative data will be discussed in Section 3.3. However, before going on to that, a number of more general issues relating to the analysis of administrative data will be considered. The next section will look at the epistemological stance on which the analysis of the data is based.

3.2.2 Epistemological perspective

The analysis was undertaken from a critical realist perspective. This philosophy is based on the ideas of Bhaskar (2008) and conceives that, while there is an objective reality, it is not possible to understand the social world simply through empirical observation. Reality is considered to be produced by a number of generative mechanisms, and these exist at different levels including the physical, chemical, biological, psychological and social. All the generative mechanisms at different levels work together to create the reality that exists. Mechanisms may work with or against each other. Where they work against each other they may cancel each other out.

For this research we are interested in the generative mechanisms that contribute to parental perceptions of coping, with their emotional well-being and other issues, both at the start of support, and more importantly as they change over the course of support. This is being done for quite practical reasons: to understand what aspects of support are important for families in different situations. However, within this we have to be aware of the vast array of mechanisms that might be working with and against each other to impact on parental emotional well-being. In Chapter 2 we discussed some of the potential influences, including factors relating to the support itself and factors relating to the family's situation. For any such factor, that influences parental coping, there will be mechanisms through which they have their effects, but there will also be other factors working through other mechanisms, with and against each other to contribute to the reality of parental coping that exists. The social support provided by Home-Start might be acting on mechanisms at a social level of reality; however, it will interact with mechanisms at all levels and this may impact on the overall effect.

The mechanisms underlying a parent's ability to cope are therefore so complex that any empirical study to understand them is necessarily limited. Danermark et al (2002) discuss the implications of a critical realist epistemology for methods used for social research and highlights how it is important to understand how different methods convey knowledge about generative mechanisms. Since previous studies of Home-Start, and other home visiting support programmes, have frequently relied on experimental designs, or been qualitative studies, then an alternative approach would add to the body of understanding. By analysing a large administrative dataset, this study will be taking a different approach, and this will enable the mechanisms underlying parental coping to be explored in different ways.

The approach to how knowledge can be gained from the administrative data can be further considered in the light of new epistemological ideas about data-driven science emerging from the study of big data. These ideas have originated from the biological sciences (Kelling et al 2009), however, their application to social sciences and humanities have been explored by Kitchin (2014). The traditional approach to quantitative analysis is based on deductive designs through which hypotheses are tested.   However, data-driven science is based on a combination of inductive, deductive and abductive reasoning. In addition to deductive analysis, when large amounts of data are available hypotheses may also be generated from the data by inductive or abductive reasoning. Though, as emphasised by Kitchin (2014), the development of hypotheses in this way needs to be contextualised and situated in theory. Big datasets have the capacity to produce spurious correlations (Calude and Longo 2017). Generating theory based on inductive or abductive reasoning alone could therefore lead to misleading findings unless it is grounded in the findings of previous studies. Any theory generated in such a way would not be the end point of the research. It would then need to be tested using a deductive approach. Findings derived from this analysis will therefore be produced through a mixture of deductive logic, and theory developed through inductive/abductive logic. Such theory will need to be considered within the context of previous research and may help provide a basis for future research.

As well as influencing the epistemological approach to the research, there are a number of other advantages and disadvantages for using administrative data for social research. These will be reviewed in the next section.

3.2.3 Administrative data and social research

Administrative data is data that is obtained from the operation of an administrative system (Elias 2014). It contrasts with data collected via surveys or experimental studies in that the data has not been designed for research purposes (Connelly et al 2016). This provides it with both advantages and disadvantages compared to other types of data.

One of the advantages is that it usually has large sample sizes, potentially covering whole populations of interest or relevant individuals (Card 2010, Connelly et al 2016, Woollard 2014). Such large populations create an opportunity to study sub-groups (Connelly et al 2016), a facility that will be utilised in this thesis to study Home-Start families in different situations. Additionally administrative data can potentially cover huge amounts of detail (Woollard 2014), and are often collected in a longitudinal fashion (Card et al 2014). Both these facets apply to the Home-Start data and are important in this analysis.

Another facet of administrative data that is of great value for this study is its potential to collect sensitive information from people with greater accuracy than survey data. Survey data can be influenced by social desirability bias (Nederhof 1985) potentially stopping respondents to surveys answering questions truthfully. It has been noted that administrative data may be able to provide more truthful responses than survey data because of the potential for issues such as misreporting and recall being overcome (Calderwood and Lessof 2009, p56). George and Lee (2001) highlight how administrative data can hold more accurate information about sensitive issues relating to families including abuse, mental health and substance misuse.

It is also possible that the administrative data collected by Home-Start offers a more accurate picture of home visiting support as it is usually provided, compared to data collected through experimental study designs. Nievar et al (2010) in discussing the problems of experimental research in assessing home visiting support highlight how small concentrated pilot studies may produce different results to home visiting programmes when they are applied at a larger scale. This might be because of the concentration on a smaller group, and quality of supervision given to home visitors. The ability of administrative data to show support 'as it is' may present a more accurate picture.

There are, however, challenges to working with administrative data, as described by Connelly et al (2016). The data is often messy, requiring considerable data cleaning. It is often complex, consisting of different fragments which need to be combined and recoded. Unlike survey data,

the data does not usually come with documentation explaining what the variables are, and it is important the researcher understands the data collection process and how this may have influenced the data provided. Not only this, but there are concerns about the quality of the content of administrative data, with potentially high levels of inaccuracy or internal inconsistencies (Woollard 2014, Connelly et al 2016). All these issues apply to Home-Start's administrative dataset. The particular details about combining and recoding the Home-Start data, as well as data cleaning, and the reliability of the resulting variables will be addressed in section 3.3. However, before that, the next section will look at the ethical issues relating to the study.

3.2.4 Ethics

Before commencing with the analysis, ethical issues were considered and procedures put in place to ensure that the data was dealt with ethically. The research did not involve the collection of any new data. Consent for Home-Start's administrative data to be used for research relating to the evaluation of Home-Start support was obtained from the families by Home-Start at the start of support. During their first visit from a Home-Start member of staff, each family is provided with information about Home-Start's confidentiality and data protection procedures. The staff explain how the data collected from them is used both by the scheme and Home-Start UK for monitoring and evaluation purposes. The parents/carers sign to confirm their agreement to this (see page 3 of Home-Start's Initial Visit Form, in Appendix A).

The data did contain a range of sensitive information, including information relating to child protection issues in the family, domestic abuse, substance misuse and both mental and physical health conditions. However, the information about the families' names, addresses and other contact details were not contained in the data files provided. Postcode data was also deleted from files used in this analysis. Families in the data were therefore unidentifiable. In addition to the quantitative analysis, qualitative content analysis was carried out in relation to housing problems and stressful events that occurred during support. Information contained in these comments was kept confidential and reported in such a way to highlight the types of problems that occurred rather than highlight the problems of any individual family.

Ethical approval for the research was granted from Cardiff University's School of Social Sciences Ethics Committee in October 2015.

This section has explained why the analysis of an administrative dataset was selected for this research. It has considered some of the advantages and disadvantages of this approach, as well as the epistemological and ethical considerations made before the research commenced. However, so far, few details have been provided about the specific contents of the Home-Start administrative data. This will be introduced in the next section.

3.3   Study Methods: Home-Start's administrative data

This section will provide a description of Home-Start's administrative data. This data is collected at various stages of the Home-Start referral and support process. The section therefore starts with a description of the referral and support process before going on to describe the data collected at the different stages of it.

3.3.1   The Home-Start referral and support process

Home-Start support is delivered by a number of Home-Start schemes, each an individually registered third-sector organisation. Home-Start UK is an umbrella organisation for the individual schemes, providing them with a variety of support and training, and lobbying for the needs of Home-Start families, volunteers and schemes across the UK.

Although each scheme is an individual organisation, each provides support using the Home-Start model and families are referred to local Home-Start schemes using the same referral process. Figure 3.1 provides a description of the Home-Start referral and support process. Referrals come from a variety of sources. Kenkre and Young (2013) report that the largest proportion (43%) of referrals, between April 2011 to October 2012, came from health visitors, however referrals also came from other professionals including social workers and community organisations, whilst 15% were self-referrals.

Once referred to Home-Start an Initial Visit to the family is carried out by a member of staff from the local Home-Start scheme. This visit enables Home-Start to assess the suitability of support for the family and what type of support would be the most useful. For a proportion of families this visit may not take place. This might be because Home-Start is unable to contact the family or the family does not wish the visit to go ahead. If both the family and Home-Start are in agreement that support would be suitable for that family, then a Match Placement occurs. This means that an appropriate form of support is identified. This may be in the form of home visits either by a volunteer or paid worker, or by attending group support, or possibly

a combination of these. If home-visiting support is planned, then at this stage the volunteer or paid worker will pay their first visit to the family accompanied by the member of the Home-Start staff who carried out the Initial Visit.

Figure 3.1 The Home-Start Referral and Support Process
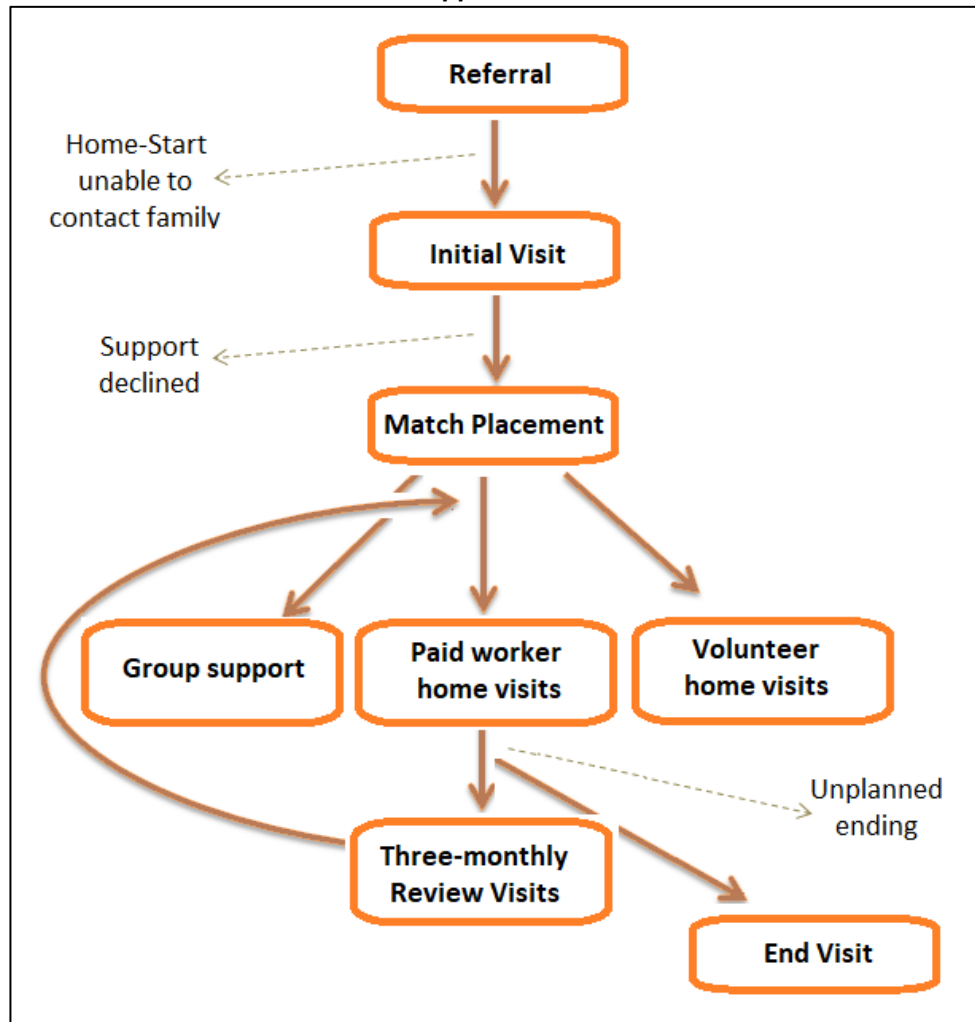
Ideally the support should start shortly after the Match Placement, however, sometimes there is a delay because of practical reasons, such as for example, a shortage of suitably trained volunteers. Every three months the local Home-Start scheme will carry out a Review Visit with the family. This provides an opportunity to discuss how the family's support needs have changed and any other changes within the family. For some families the way the support is provided may change. For example, it is possible that someone who has been receiving the support of a paid worker, may change to receive the support of a volunteer, or start attending groups. Because the support continues for as long as is needed there is a great variation between families in terms of the number of Review Visits that will take place.

At a time when both the family and Home-Start agree, an End Visit will be planned. This will usually happen because the family no longer needs support, but sometimes it will happen for other reasons. For example it might be agreed that the family's needs might be better met by an alternative service, or there may be safety concerns. Alternatively the volunteer's situation may change and they may no longer be able to support the family, or there may be issues within the Home-Start scheme, such as a lack of funding that means support has to stop. For a proportion of families support may end abruptly, in an unplanned way, and there is no opportunity for an End Visit. In these cases an Unplanned Ending Form will be completed.

3.3.2 The structure of the administrative data

Since April 2011 the majority of Home-Start schemes in the UK have been collecting data from the families they work with through a central monitoring evaluation system set up by Home-Start UK. Schemes enter data about the families onto an online administrative database system. Some of the data entered into the administrative data system are collected via a series of forms, completed at different stages of the referral and support process.

Table 3.1 provides a summary of the forms through which the data are collected. A copy of each of the forms is available in Appendix A. In addition to the data added via forms, the administrative data system contains a range of additional information added directly by schemes. This includes information about the Match Placement and information about additional support provided by the Home-Start scheme for the family. This includes phone calls, letters and meetings carried out by the Home-Start staff on behalf of the families.

By holding this information, the administrative database provides a unique and detailed source of information about Home-Start support, and the families receiving it. It holds not only information about the families' situations at the start of support, but detailed information about how support was provided and changes in the families as they occur throughout support.

The dataset provided for this study included all families referred to Home-Start between April 2013 and March 2015. When the data was initially exported many of the families were still being supported by Home-Start. While this did not affect the data provided in the Referral and Initial Visit forms it did affect data collected during and at the end of support. Therefore the data collected via some of these forms was re-exported at later dates. Table 3.1 provides details of the dates the data from different forms were exported from the system. These re-

exports of the data meant that the majority of families had completed support when the data was exported. However there were some families who may still have been receiving support when the final data was exported. This issue is discussed in Chapter 4.

Table 3.1 Forms used to collect data added to Home-Start's Administrative Data System

Name of Form	When it is completed	Who it is completed by	Date Exported from System
Referral Form	Referral	External Referrer	Summer 2015
Initial Visit	Initial Visit	Member of Home-Start scheme's staff	Summer 2015
Referral/Initial Visit Form for Self-Referrals	Initial Visits for self-referred families	Member of Home-Start scheme's staff	Summer 2015
Volunteer Monthly Structured Diary	Monthly	Volunteers working with family	January 2017
Paid worker Structured Diary	Monthly	Paid worker working with family	January 2017
Group Diary	As groups occur	Member of Home-Start scheme's staff running group	Not used
Review Form	At Review Visits (approximately every three months)	Member of Home-Start scheme's staff	June 2016
New Child in Family	If an additional child is born	Member of Home-Start scheme's staff	Not used
End Visit Form	At the End Visit	Member of Home-Start scheme's staff	October 2016
Unplanned Ending Form	If the support ends without an End Visit	Member of Home-Start scheme's staff	October 2016

As is common in administrative data, a considerable amount of data cleaning was required before the data could be used for analysis. Data needed to be recoded and combined to create variables suitable for analysis. The next section will describe this process and the variables that were derived from it.

3.3.3 Variables in the data

The analysis utilised data collected via most of the forms highlighted in Table 3.1. Data was made available for all families referred to Home-Start between April 2013 and March 2015. This data came from 262 different Home-Start schemes. The data from these forms were exported in the form of separate CSV files which were subsequently imported and analysed in SPSS. Each family had a unique reference code which enabled data from different forms to be combined.

Variables were derived from this data in order to answer the research questions. These included a set of variables that report on how parents feel they are coping, both with their emotional well-being and other issues. There are also variables relating to both the nature of support and the family's circumstances. These variables were derived from the data in different ways. Some variables were derived quite simply from the data available, while others were more complicated to construct. Some required the collating of information from repeated measurements, while others were derived through content analysis. A description of these variables and how they were derived is provided below.

Measuring Coping

This study concerns how parental improvements in coping with a range of different issues occur over the course of home visiting support. The primary interest is improvements that parents make in coping with their emotional well-being. However, as discussed at the end of Chapter 2, not all parents starting Home-Start support have problems coping with their emotional well-being. Others start support reporting problems coping with a range of other issues (Kenkre and Young 2013). Because of this, this study will start by looking not only at how coping with emotional well-being changes, but also contrast this with improvements in coping with other issues.

In order to investigate changes in coping a suitable measure of how parents feel they are coping is required. Home-Start's administrative data includes a set of 'coping measures,' which were used for this purpose. Parents are asked how they feel they are coping with a series of issues, and provide scores on a six-point scale, rating how well they feel they are coping with the specific issue that day. A zero indicates that they feel they are not coping at all well, while a five indicates they feel they are coping very well. Scores on coping measures are taken at the Initial Visit, every Review Visit and finally at the End Visit if the family had one. This means that

these measures can be used to assess changes in coping over time (See respective forms in Appendix A).

Parents provide scores for up to 14 different coping measures. Some of these relate to the parent themselves such as how they are coping with their physical or mental health. Other coping measures concern issues relating to their children such as how they are coping with their child's health, or managing their child's behaviour. Some coping measures concern issues relating to the household, such as managing the day to day running of the home, or the budget.   There are also coping measures that will only be relevant to families in certain situations, such as coping with multiple births/children under 5. The analysis in Chapter 4 will look at 12 of these coping measures. The variables names of the twelve coping measures and the questions that they apply to are available in Table 3.2.

Table 3.2 Coping Measure Variables

Variable Name	Parents asked how well they feel they are coping with:
Children's Behaviour	Managing Children's Behaviour
Children's Dev/Learning	Being involved in the Children's Dev/Learning
Physical Health	Coping with physical health
Mental Health	Coping with mental health
Isolation	Coping with feeling isolated
Self-Esteem	Parent's self-esteem
Child's Physical Health	Coping with child's physical health
Child's Mental Health	Coping with child's mental health
Household Budget	Managing the household budget
Running the home	The day to day running of the home
Conflict in Family	Stress caused by conflict in the family
Multiple children under 5	Coping with extra work caused by multiple birth/children under 5

The coping measures available in the administrative data therefore provide a score for how well the parent reports themselves to be coping with a given issue that day. These simple scores contrast with measures used in many of the randomised control trials that have been carried out in relation to Home-Start and other home visiting programmes. Many of these have used standardised tests to assess issues relating to parental well-being. For example several studies (McAuley et al 2004, Barnes et al 2006, Asscher et al 2008a) have used elements of the Parenting Stress Index (Abidin 1995). While standardised scores would clearly provide advantages, including the ability to compare results across studies, they are not available in the administrative data. The Home-Start data is being collected primarily for Home-Start schemes to monitor whether or not improvements have been made. Compared to

the standardised measures such as the Parenting Stress Index, the measures used by Home-Start are short and can therefore be collected regularly by schemes. An obvious strength is the frequency with which they are taken enabling changes in coping to be measured over relatively small time scales. The range of needs they cover also enable differences in changes in coping with different issues to be explored. However, it is a small unvalidated scale which may be subject to floor and ceiling effects. It also has to be remembered that the score reflects how the parent chooses to indicate they are coping. There may be factors that make a parent either indicate that they are coping better or worse than they really are with a certain issue. The coping measures, therefore, reflect reports of parental feelings of coping, rather than parental coping *per se*.

Since families have different numbers of Review Visits, and not all families have End Visit data, there is quite a variation in the numbers of coping measure scores available per family. There are also some Home-Start schemes that have opted not to use the individual coping measures to assess changes in parental coping but have used an alternative set of overarching coping measures. The families in these schemes cannot therefore be used in the analysis. Of the schemes that collect individual coping measure scores, there are differences in the way scores have been collected. Some schemes provide scores for all coping measures for all families, while others only provide scores when coping with a particular issue had been identified as a support need. These issues created a number of challenges for the analysis of how coping improves over time. These issues and how they were resolved will be discussed in Chapter 4.

Nature of support variables

The analysis requires relationships to be identified between changes in coping and the way support is provided. The variables relating to the way support was provided were derived from the volunteer/paid worker diaries (See Appendix A). These are completed by home visitors on a monthly basis and provide information about what happened during each home visit. Data from these visits was collated to form a set of variables relating to the nature of support. Data is provided for all visits that are planned for a family including those cancelled. Where visits go ahead further details are provided about the activities that happen during the visit. Families received anywhere between three and 209 visits. A substantial amount of recoding was therefore required to collate information from these visits into a small set of variables describing the nature of support for each family.

In Chapter 2 the dimensions of support identified by Korfmacher et al (2008) were discussed. These suggested that when considering the nature of home visiting support it is useful to consider both the quantity and quality of support. This approach has been used in subsequent studies, e.g. Raikes et al (2006), and will also be adopted here.

Collating information provided through the diaries enabled a number of variables relating to the quantity of support to be developed. These enabled many of the aspects of support discussed in the literature review to be considered, including the duration of support, the frequency of visits, and percentage of visits cancelled. The diaries also enabled the development of one categorical variable that described who the support was provided by, a volunteer, a paid worker or a mixture between the two. However, there were some aspects of support which could not be investigated using the information available in the administrative data, such as the issues relating to supervision and training. Details of the nature of support variables are available in Table 3.3.

There is variation in the numbers of families for whom data is available for different variables. Several variables are calculated using dates and where dates were missing or the data entered for them impossible, this resulted in missing data. This applied to Duration, Wait and Frequency. Cases were also coded as missing data if the values calculated were unfeasible. For Average Length the data was coded as missing if the average length of visits was greater than eight hours. This may have occurred if either the number of visits or the start and end times for the number of visits were added incorrectly. For Frequency cases were coded as missing if they suggested visits happened more frequently than three times a week.

The four variables at the bottom of the table indicate the proportion of visits in which different types of activity were indicated. The variables are calculated from tick boxes, which indicate if a certain type of activity has happened on a particular visit or not. The total number of visits in which an activity occurred is divided by the total number of visits the family had. It is possible that these activities may have occurred on some visits but not been reported. Therefore they can only be said to represent that the occurrence of a particular activity was reported, rather than if it happened. It is not clear if there is any reason that home visitors might be any more likely to under-report one type of activity compared to any other. There were a small number of families in the data who received a number of home visits, but for whom no types of activities were recorded in any visit. This may be an indication that these home visitors, or the schemes that they were placed by, had decided not to complete this part of the form. Because of this it was decided to exclude these cases from the analysis. Another limitation of these

variables is that they only indicated the proportion of visits in which a certain type of activity occurs, and provide no information about the amount of time during the visit dedicated to each activity.

Table 3.3. Details of the nature of support variables

Nature of Support Variable	How it was calculated
Service Delivery	Categorical variable indicating if all visits are provided by volunteers, paid workers or a mixture of the two
Number of Home Visits	Total Number of Home Visits that occurred
Duration	Number days from first home visit to end visit
Wait	The wait for start of service. Time in days between the initial visit and the first home visit
Percentage cancelled	Percentage of planned visits that were cancelled. Total number of cancelled visits divided by the total number of planned visits (multiplied by 100)
Average Length	Average length of a visit. Total length of all visits (The sums of all the end times minus the start times) divided by the number of home visits. Given in hours.
Frequency	Number of home visits (that occurred) divided by Duration then multiplied by 7 to give frequency per week
Proportion Practical	Proportion of all the visits that occurred for which home visitors indicated practical support was provided
Proportion Children	Proportion of all the visits that occurred for which home visitors indicated activities with children were provided
Proportion Emotional	Proportion of all the visits that occurred for which home visitors indicated emotional support was provided
Proportion Services	Proportion of all the visits that occurred for which it was indicated the family was supported to use other services

While it is necessary to be mindful of the weaknesses described above when using these variables, they also provide a very high level of detail about the nature of needs-based home visiting. For some families the diaries have been completed by home visitors over a long period of support. Home-Start support is also needs-based so this is valuable information for highlighting how support can be provided in different circumstances. This provides a unique opportunity to use the variables to explore how the nature of support impacts on improvements in parental coping.

Adverse family situations

Section 2.3.1 of the literature review provided a discussion of family situations that can be described as adverse. These include a number of individual risk factors, and studies were cited illustrating the negative impact that these can have on children. The tradition of looking at

multiple risks was also discussed, as was the impact of life events on families and ways of considering the complexity or level of a family's problems.

A number of variables were derived from the Home-Start administrative data to indicate family adverse situations in this study. This included variables indicating individual risk factors, variables relating to the family's levels of need and risk, and information about life events that occur during the course of support.

Individual Risk Factors

Eleven risk factors were used and these were selected for a number of different reasons. Table 3.4 provides a summary of the risk factors, together with information about how they were derived, evidence of their association with adverse child outcomes and information about their limitations.

Many of the risk factors are those used commonly in previous studies of adverse childhood experiences, including domestic abuse, family substance misuse, families where someone is incarcerated and families where there are child maltreatment concerns. In this study this latter group are identified as families with at least one child with a child protection plan.

Ten of the 11 risk factors are risk factors for negative child behaviour outcomes in later childhood. The rationale for studying risk factors that are risks for child behaviour outcomes centres around Home-Start's theory of change, and the idea that improvements in parental feelings of coping lead to improved child behaviour. The children in the families with these risk factors are at a higher risk of negative child behaviour, highlighting the imperative for investigating the efficacy of home visiting support for these families. By investigating the families with a particular risk factor for child behaviour outcomes it is possible to determine if changes in parental emotional well-being are as likely in these families as they are in other families. Additionally these risks factors will also be utilised in the development of a cumulative risk index.

Table 3.4. Risk Factors

Name of Variable	How it was derived	Evidence of Association with adverse child outcomes	Limitations
Asylum Seeker/ Refugee	The Referral Form contains separate boxes to indicate if the main carer or their partner are refugees, asylum seekers or if a claim is pending. These were combined to create a single asylum seeker/refugee variable indicating if either the main carer or their partner was an asylum seeker/refugee.	Nielsen et al 2007, Van Ee 2012	In order to increase frequency variable relates to either parent being refugee or asylum seeker. Additionally refugees and asylum seeker are counted together.
Child Protection Plan	This variable indicates if any child in the family has a child protection plan. It is derived from information on the Initial Visit Form.	Cicchetti and Carlson 1989	It is unclear what the relationship is between the main carer and the person they feel the child may experience significant harm from is.
Disabled Child	This variable indicates if the main carer considers any child in the family to be disabled. It is collected at referral and updated throughout support. Information about this variable for each of the children in the family was combined to create a dichotomous variable indicating if there is at least one disabled child in the family.	Breslau et al 1981, Roberts and Lawton 2000, Woolfson 2004	Not clear what type of disability the child has.
Disabled Parent	The Referral Form asks whether the child's main carer or their partner considers themselves to be disabled. These two variables were combined to provide a new variable indicating if either the main carer or their partner considered themselves to be disabled.	Evans et al 2007, Bogosian et al 2014	Not clear what type of disability the parent has. Disability in the main carer and their partner has been coded together however there may be differences between being disabled and having a disabled partner.
Domestic Abuse	Domestic abuse is indicated on the Referral Form through a tick box.	Kitzmann et al 2003, Wolfe et al 2003	We do not know which member of the family the victim is or who the perpetrator of the domestic abuse is, or whether the victim and perpetrator are currently living together or not.

Table 3.4. Risk Factors/cont

Housing Issues	The Initial Visit form includes a question about the family's housing. Indications that the family were living in temporary accommodation, or overcrowded accommodation were combined to create the dichotomous Housing Issues variable. In addition content analysis of open ended comments was carried out and comments which suggested temporary or overcrowded accommodation were classified as having housing issues, including those that indicated that the family was homeless, staying in a refuge, or staying in National Asylum Support Service Accommodation.	Waldron et al 2001, Dockery et al 2010	Many housing issues may not be included
Large Family Size	This was derived from the information about children in the family taken at referral and updated throughout support. The total number of children in each family was calculated and those families with three or more classified as having a large family size.	Booth and Key 2009 Stith et al 2009	
Mental Health Issues	The Referral Form provides a tick box to indicate if there are any mental health issues in the family.	Mäntymaa et al 2008, Maybery et al's 2009, Treyvaud et al 2010	No additional details are given about the type of mental health issues, who in the family they apply too nor their severity.
Post Natal Depression	This information is collected from the Referral Form through a tick box indicating whether there is post-natal depression in the family.	Grace et al 2003	
Prison	The Initial Visit Form asks if any main family carer is in prison. A tick box is provided for response.	Murray et al 2012, Parke and Clarke-Stewart 2001	We do not know how long the parent/carer has been in prison, nor if they were resident in the household before they went to prison.
Substance Misuse	Referrers indicate substance misuse in the family by ticking a box	Velleman and Templeton 2007	We are not aware who in the family has the substance misuse problem, nor what type of substance they are misusing.

One additional risk factor, large family size, was also used. There is little evidence of this having an impact on behavioural outcomes, however, there is a body of evidence suggesting a link between larger family size with lower educational attainment (Booth and Key 2009) and the likelihood of child maltreatment, particularly neglect (Stith et al 2009).

The choice of variables was also limited by the information available in Home-Start's administrative data. Information about these variables was obtained either through the Referral Form or the Initial Visit Form (See Appendix A). Information about the children may also be updated throughout the duration of support. For families that self-refer, the information that would have otherwise been collected through the Referral Form is collected at the Initial Visit via a specific Initial Visit for Self-Referrals form. The data collected through these forms had to be of sufficient quality. For example, a variable relating to parental employment was not used because the responses to this question contained a large amount of missing data.

The limitations highlighted in Table 3.4 relate to specific variables, however, there are also some more general limitations. Much of the data is collected by referrers, which means it is collected by a wide range of different people across the UK, with different levels of accuracy and different ways of interpreting questions. They are completing the form in order for the families to receive additional support, and not primarily as a data collection exercise. There may also be differences in the way families relate to different referrers, both because of their roles and their characteristics.

Some variables are derived only from tick boxes (Mental Health, Post-natal Depression, Domestic abuse, and Substance Misuse) with the presence of a tick indicating a factor is present. However, given the amount of missing data in other variables it has to be questioned whether the absence of a tick truly indicates that a risk is not present. This could result in the underreporting of risks.

Compounded by this is a problem that different Home-Start schemes are engaging with the administrative data system in different ways. The data used in this analysis comes from 262 different Home-Start schemes. Visual scans of the data in SPSS, when sorted by scheme also identify blocks of empty data, where families have been given a code number but little else about the family has been recorded in the administrative data system. There was a potential danger that such families might be incorrectly recorded as having no risk factors. This problem

was resolved by excluding families whose Initial Visit forms contained large amounts of missing data (See Section 3.4 below).

A number of the questions are very unspecific in nature, such as for example referrers are asked to tick if substance misuse or mental health issues apply to a family. We are not aware how severe the problems are, what substance is being misused or mental health issues exist and who in the family has these problems. It will be important to remember that these variables should only be considered to indicate that that the referrer considers these issues to apply to the family. While some variables did not make it clear who in the family certain types of problems related to, there were other variables where it was possible to determine if it was the family's main carer (i.e. the person who was completing the coping measures), or their partner. This applied to the disabled parent category and the asylum seeker/refugee category. However these were recoded together so that they applied at the family level. This was done for two reasons. Firstly the frequency of these variables was relatively low so it was only by looking at them at the family level then the prevalence of the risk factors became sufficient to include them in all the models developed in the study. Second, by aggregating to family level the measures maintained parity with the level of measurement for other risk variables.

There is also potential for the risk factors relating to personal issues to be underreported at referral if the referrer did not know about them. However, as noted above, while these issues may be underreported, collecting evidence about such sensitive issues through administrative data may be more reliable then asking about them through surveys. In this case the information is being collected by the referrer because of the knowledge that they have about the family, and the problems they face. Families may be more inclined to discuss these issues with the referrer/and or Home-Start in order to gain the support they required. This may result in better response rates to some of these more sensitive issues than would be obtained through a survey. This may therefore be considered a strength of the data.

Variables indicating the complexity of problems

In addition to looking at the individual risk factors, additional variables were developed to look at the complexity of the problems that the families have. This was done in two ways. Firstly the family's level of risk was determined by developing a cumulative risk index. The second method involved utilisation of the families Hardiker Level of need as indicated on the initial visit form. Table 3.5 provides a summary of these variables.

Table 3.5 Complexity Variables

Name of Variable	How it was derived
Cumulative Risk	Calculated by summing ten risk factors for child behaviour outcomes together
High Risk	Recoding Cumulative Risk in to a binary variable so that families with 3 or more risks are classified as high risk
Hardiker Level	Family's Hardiker Level of need as determined on the Initial Visit Form

A variable to indicate the family's initial Hardiker level was derived from the question available in the Initial Visit Form, and the cumulative risk variable was calculated from the risk factor variables. Since the risk factors were all binary categorical variables it was straight forward to create a cumulative risk index. This was done by summing together the number of risk factors for child behaviour problems that each family had, following the method first used by Rutter (1979). Only the 10 risk factors that are risk factors for child behaviour problems were used to derive this index. A recoded binary version of this variable was also created to indicate if the family fell into a high risk category. Families were coded as high risk if they had three or more risk factors.

Life Events

Variables relating to stressful life events were derived by content analysis from information recorded by home visitors in the Paid Worker/Volunteer Diaries. These forms include a section for home visitors to record information about a variety of types of life events that happen to the family through an open-ended comment box and a date. Spaces are provided for several different categories of life event (See Appendix A), however not all of these were suitable for content analysis. Some were not used because the frequency of comments was too low, and others were not used because they contained a large number of ambiguous comments. Much research on stressful life events has evolved from the work carried out by Cochrane and Robertson (1973) who devised a life event inventory. In determining what should be classified as a life event, they highlighted that some events described things that would be unpleasant, but some might be pleasant in the long term, such as moving house. Because of this it was decided to use both events that might be considered to be stressful overall, such as bereavements, and events that might be positive overall but stressful in the short term, such as moving house, or having a new baby. In this research a similar approach was taken and life

events were selected, some of which were stressful only in the short term and some of which were adverse events even in the long term.

Content analysis is a technique in which many words from text can be classified into fewer categories (Weber 1990, p 12). Hsieh and Shannon (2005) highlight different approaches to qualitative content analysis. One of these is directed content analysis in which theory is used as a starting point for analysis, and preconceived categories are used. Because the aim of the content analysis in this research was to derive binary variables to indicate if stressful events had occurred within a family, this approach was initially favoured. The intention was that categories would indicate whether the stressful event had occurred or not. For some categories of event, such as for example the birth of a new baby, this approach proved to be straight forward. However, for some categories of stressful event the comments relating to a given family indicated much more complicated situations. For example, comments provided in the 'change in relationship status' box could indicate a series of changes over the course of support. It was therefore necessary to carry out a more conventional form of content analysis in which there were no preconceived categories and use this to develop a way of classifying these events as stressful or not.

The content analysis of the open-ended comments was carried out in a separate data file from the other information held about the family. This reduced any potential bias in the coding of data. Because the analysis was being carried out as part of a doctoral study, no second rater was used to code the data and assess reliability. This is therefore a potential weakness with the analysis and this needs to be acknowledged.

The content analysis resulted in six binary life event variables. The names of these variables, how they were derived and their limitations are set out in Table 3.6

In addition to generating variables the content analysis enabled a greater understanding of the sorts of stressful events that occur to families receiving Home-Start support. Because of the value of this, Chapter 7 includes a description of the sorts of comments that were made.

This section has described the variables that have been derived from the administrative data that will be used in the analysis to look at changes in coping, and how they are influenced by the family's situation and the nature of support. However, little has yet been said about the numbers of families for whom this data is available. This issue will be addressed in the next section.

Table 3.6. Life Event Variables

Name of Variable	How it was derived	Limitations
Bereavement LE	Whether a bereavement/miscarriage occurred during support	It was not possible to know how close the parent was to the person who had died. Therefore this variable may include bereavements that had a big impact, and those that had very limited impact on the parent.
Birth LE	Whether there was a new birth in the family over the course of support.	
Housing LE	Whether the families either moved house or were planning to move over the course of support	Some moves were more stressful than others. Some moves may have been planned but not occurred.
Relationship Breakdown LE	Whether there were indications of severe relationship breakdown/instability at any time during support. These included divorce, separation, or other indications of serious relationship problems.	Not clear how stressful the relationship changes were for the parent
Physical Health LE	Serious physical health problems indicated for any family member over the course of support.	Some comments meant it was not possible to tell who in the family experienced the physical health problems
Mental Health LE	Serious mental health problems indicated for any family member over the course of support.	Some comments meant it was not possible to tell who in the family experienced the physical health problems

3.3.4 Number of families receiving support

Home-Start UK made two years' worth of administrative data available for the research in this thesis. The dataset provided contained information about the families referred to Home-Start between April 2013 and March 2015. Families are added onto the system as soon as a referral is made, therefore not all the families in the dataset ended up being supported. Of those that were supported some were supported through Home-Start groups rather than home visiting support, and therefore do not fall into the remit of this study. Additionally, while the Home-Start administrative data system is available for all Home-Start schemes to use, some Home-Start schemes have opted not to use it fully. Basic information about families may be provided but details about the support are not given, or changes in parental coping were not available so data from these families could not be used in the analysis.

The dataset exported from Home-Start held information on 46,792 families referred to Home-Start. However not all these families ended up receiving support. Of the 46,792 families only 35,480 received an Initial Visit from the Home-Start scheme, and Match Placements were made for 25,789.

This study is concerned only with those who received home visiting support. Some families received only group support. There are also families who received one or two home visits, possibly together with group support, but regular home visiting was not provided. It was decided to look only at those who had received at least three home visits.   This left 15,194 families.

While the emphasis of Home-Start's work is on work with families with young children, there are a small number of schemes that may have funding to carry out specific projects with families with older children. The emphasis in this research is on families with young children, so those families who do not have a child aged under 5 at the time of the Initial Visit, were removed from the dataset. This also meant that families were excluded if they did not have data about the children in the family, or if the children's dates of birth were missing. Removing these families left 14,139 families.

As discussed above the analysis utilised a series of 12 coping measures. However, not all schemes provide information about these coping measures, some have opted to use an alternative set of fewer collated coping measures. Families without any data for any of the 12 coping measures also had to be removed from the data. This reduced the size of the dataset to 10,897.

The discussion of the data above also highlighted how high levels of incomplete or missing data on forms could lead to problems with some of the variables. This created particular problems for variables relating to some of the risk factors and the activities carried out during support. Cases were therefore removed if they had very large amounts of data missing from the initial visit form (172 families) or no data in the volunteer/paid worker diaries, for any activities which had been carried out during any of the visits (110 families). Twenty-four families fell into both categories. Once these cases had been removed from the data it resulted in a dataset of 10,639 families. This includes families who had both planned and unplanned endings.

These 10,639 families will be used for the analysis in the next chapter. However, much of the analysis will require smaller subsamples of the data. This may be, for example, because the analysis is looking only at families with specific needs or in a particular situation. Because of this the numbers of families used in each piece of analysis will be indicated together with the results.

3.4 Discussion

This Chapter has described the methodology used to answer the research questions. This is a within-service design carried out through the longitudinal analysis of Home-Start's administrative data. The reasons for this design and the advantages and challenges of working with administrative data have been discussed, as well as the epistemological and ethical considerations. This Chapter has also introduced Home-Start's administrative data and explained how it is collected. A number of variables derived from that data have been described. The ways these variables were derived has been outlined together with their strengths and weaknesses.

Three different categories of variable have been described: A set of coping measures, the nature of support variables, and variables describing adverse family situations. The coping measures reflect how parents report themselves to be coping with a range of different issues, and are taken at various stages during support. These will be used in Chapter 4 to explore patterns of parental coping and changes over the course of support. In subsequent chapters the effects of the other variables on changes in parental coping with their emotional well-being and other issues, will be explored. Chapter 6 will look at how the nature of support variables affect changes in coping, while Chapter 7 will look at how changes in emotional well-being are affected by the family's situation.

Changes in the coping measure scores therefore play in important role in the analysis throughout this thesis. However, having derived the coping measures from the administrative data, there were still issues about them that needed to be examined before the methods through which the analysis could take place could be determined. The Home-Start data contrasts with data that might have been collected through, for example, an experimental design in which all families may have provided scores for the same measures of parental coping at the same time points. Instead, the Home-Start administrative data provides different numbers of coping measures scores for different families. Some Home-Start schemes collect scores for all coping measures from all families, while others only collect scores when families

have indicated a particular need. Families also have different durations of support and this means different numbers of Review Visits, and only some families have data from End Visits. Where End Visits have occurred, they have occurred across different time scales. It is not clear how these issues will have influenced the scores taken on the coping measures, and how they can then be used to look at the way different factors affect changes in coping. There are also issues relating to the scale of the coping measure themselves that need to be explored including the potential for floor and ceiling effects, and regression to the mean.

Connelly et al (2016) discuss the importance of the researcher understanding the circumstances in which administrative data is collected and highlight how administrative data does not come with documentation explaining what variables mean. In the case of Home-Start's administrative data there was a need to understand the coping measures more fully in order to develop the methods through which they could be used to explore how other factors affect changes in parental coping. Because of this, Chapter 4 will explain how the coping measures were explored in more detail. This will provide some substantive findings, answering the first research question regarding how parental coping improves over the course of support. As well as the substantive findings the Chapter sets the way for the analysis in subsequent chapters, concluding with a methodological proposal regarding how the coping measures can be used to answer other research questions. Details of the data analysis methods used in Chapter 4 will be provided at the beginning of that chapter. Details of the data analysis methods, to be used in subsequent chapters will then be provided in a short Data Analysis Methods chapter, Chapter 5.

CHAPTER 4

Parental Changes in Coping

4.1 Introduction

This chapter looks at how parental coping in Home-Start parents changes over the course of Home-Start home visiting support. In Chapter 3 the Home-Start's administrative data was introduced. This includes a series of coping measures which Home-Start uses to monitor changes in how well a parent feels they can cope with a number of different parenting and family issues. Coping measure scores are taken at the family's Initial Visit from Home-Start, at each Review Visit and at the End Visit. They enable changes in the parent's self-reported coping to be evaluated. In this chapter changes in these coping measure scores over time will be explored. This will be done for two reasons.

First, it will be used to answer the first research question: "How do self-rated parental feelings of coping with emotional well-being and other aspects of parenting and family life change over the course of home visiting support?" This will consider whether parental coping improves over the course of support and also the time taken for those improvements to be made. This chapter will also look at one aspect of the nature of support: its duration. By doing this, it will start to answer the second research question which concerns how the nature of support affect changes in coping. This research question will be answered more fully in Chapter 6, however, it is necessary to look at the relationship between duration and changes in coping at this stage because of the role that the duration of support may play when support is needs-based. In Chapter 2, the challenges of measuring the impact of a programme that is needs-based were considered. It may be that families are given enough support to reach a final level of coping. This could result in overall changes in an outcome measure being relatively small, but the amount of time taken to reach that stage varying. The analysis set out in this chapter will consider this issue, as well as differences that occur because of the way support ends, and how changes in coping vary according to the coping measures.

Second, a greater understanding of the coping measures is required in order to develop a method to explore how other factors affect improvements in coping. In Chapter 3 a number of

the challenges with working with administrative data were discussed. One such challenge is that when data has not been produced primarily for research purposes there is a need to get to know the data better and understand the processes through which it was developed and what it is that is being analysed. A number of complications arise in using the coping measures because there are different amounts of data available for different families. There are three main reasons for this. First, families have different durations of support and therefore data from different numbers of Review Visits. Support can finish in different ways, with some families having data from an End Visit, while others finish support in an unplanned way with no End Visit data available. Additionally there are a range of different coping measures in the data, with different families reporting problems coping with different issues. Some Home-Start schemes may collect data for all coping measures from all families, while others only collect data from those who have indicated a problem in coping with a particular aspect of family life, resulting in additional missing data. This chapter works through these problems to investigate if there are any patterns of change in coping measure scores, how improvements relate to final scores and if any differences are identifiable between different coping measures.

The chapter is set out in a further five sections. It starts with a brief section explaining the methods which will be used to explore the coping measures and how they change. This is followed by a section exploring what the coping measures mean in more detail, and whether there were any particular patterns to the parental coping problems that the parents had. The main focus of this study is on changes in parental emotional well-being, however, as previously highlighted not all parents starting support from Home-Start have poor emotional well-being. Exploratory factor analysis is used to look for latent factors in the coping measures to highlight different patterns of parental coping problems. This section ends with a discussion of what patterns of coping problems might mean and how they relate to Home-Start's theory of change.

Section 4.4 looks at the different numbers of coping scores reported for different families. Some families only have data for a few coping measures, while others have data for most or all coping measures. The idea that coping scores may only be provided by some Home-Start schemes when a particular coping need is identified is discussed. This leads to an investigation into whether coping scores change in the same way depending on reported initial levels of coping. In doing this, both the impact of ceiling effects, and implications of regression towards the mean, are considered.

The fifth section is dedicated to a thorough investigation of how coping measure scores change over time. It starts off looking at how the number of review visits a family has affects changes in coping. This enables observations to be made about how mean coping scores change over several time points and how this varies among families. Families leave Home-Start in a number of different ways, some with a planned End Visit and final score, and some in a less planned way. Changes between those with End Visit data and those without are therefore compared. This section assesses the overall relationship between the duration of support and the coping score change. While the analysis suggests that the majority of families with an End Visits show improvements, standard deviations show there is a variation across this pattern. Because of this the percentages of families who do not show any improvement for a given coping measure are also investigated, and the reasons why these families may have left support explored.

The final section of the chapter pulls these findings together and considers both the methodological and substantive conclusions that can be drawn from them.

4.2   Data analysis methods for exploring coping scores

Two main methods were used to explore patterns within the coping scores, and their changes over time.

First exploratory factor analysis was carried out to determine if patterns exist in relation to the types of issues Home-Start parents perceive themselves as having problems coping with. Exploratory factor analysis has a number of uses including reducing the number of variables and enabling the generation of theory (Williams et al 2010). Not all families in the data have scores for all coping measures, this means that reducing the number of variables is not possible in this case. However, an examination of latent factors enables theories about parental coping needs to be explored in more detail.

Principle axis factoring was chosen as the extraction method since this method does not assume multivariate normality (Fabrigar et al 1999). The rotation method selected was direct oblimin. This is an oblique method of rotation and as such is recommended in situations where factors may be correlated with each other (Costello and Osborne 2005).

Following the exploratory factor analysis the rest of the chapter investigates changes in coping scores by looking at changes in mean coping measure scores together with their standard

deviations. As described in Chapter 3, parents provide a score from 0 (not coping very well) to 5 (coping very well) in relation to how they perceive themselves to be coping with each of the coping measures. Because it is unclear what meaning parents attribute to the ratings they provide it is appropriate to think of this as an ordinal scale, and methods suitable for the analysis of ordinal scales were therefore used. It was decided to use the mean scores for families at different time points to explore changes in coping, since this can be an appropriate method for looking at changes in scales. However caution needs to be taken in attributing meanings to the means (Marcus-Roberts and Roberts 1987). Spearman's Rho correlation coefficients were also used, in this case to look at the relationship between the duration of support and the raw score change in coping over the course of support. Spearman's Rho was used because the variables were not normally distributed.

Before proceeding with the chapter the terms used to describe the data must be set out. The term 'coping score' will be used to describe a family's score on a coping measure. T1 will be used to describe the Initial Visit which is the first time that coping scores are recorded for families. Each subsequent review visit will be referred to as Tt where t is the measurement occasion.

4.3 Patterns of coping problems

This chapter seeks to find out how parental coping improves over the course of Home-Start support. Since Home-Start support can help parents to improve with a range of different issues the analysis of coping problems started by examining what these issues are and if there are any common patterns to the issues parents feel they are not coping with. The study is primarily interested in changes in parental emotional well-being over the course of support. Some of the coping measures introduced in Chapter 3, appear to relate to emotional well-being, including parental self-esteem, isolation and mental health. However, it is not clear if parents who report they are not coping with one of these issues are likely to report they are not coping with the others, nor if there are any other coping needs that are particularly associated with poor emotional well-being.

Home-Start perceives the coping measures introduced in Chapter 3 to be related to four different domains of parenting needs. The form through which this data is collected sets out the coping measures so that they are divided into four sections: Parenting Skills, Parenting Well-being, Child's Well-being and Family Management (See Appendix A). The coping measures set out under these domains, are shown in Table 4.1. While these domains of need

may be useful for Home-Start schemes to consider the sorts of issues that families are having problems coping with, it is not clear whether parents fall in to different groups with some identifying needs that fall under one domain, while others identify needs relating to other domains. Alternatively, there may be other patterns of need that are common in families. Factor analysis was therefore performed to identify if this was the case.

Table 4.1 Domains and Coping Measures

Domain	Coping Measure
Parenting Skills	Children's Behaviour
	Children's Dev/Learning
Parenting Well-being	Physical Health
	Mental Health
	Isolation
	Self-Esteem
Child's Well-being	Child's Physical Health
	Child's Mental Health
Family Management	Household Budget
	Running the home
	Conflict in Family
	Multiple children under 5

Not all families provide coping measures scores for all coping measures. The factor analysis was therefore limited to those who have coping measure scores for all 12 coping measures (n=1,857). The rotation converged in 6 iterations. The Pattern Matrix for the factor analysis is shown in Table 4.2.

Table 4.2 Pattern Matrix Principal Axis Factoring for Coping Measures

	Factors loadings*		
	Factor 1	Factor 2	Factor 3
Children's Behaviour		.578	
Children's Dev/Learning		.460	
Physical Health			.301
Mental Health	.700		
Isolation	.630		
Self-Esteem	.829		
Child's Physical Health		.500	
Child's Mental Health		.681	
Household Budget			.325
Running the home			.743
Conflict in Family	.338		
Multiple children under 5			.473

* Factor loadings <0.3 supressed

The results suggest three latent factors within the coping measures. These latent factors appear because of correlations between the variables used in the analysis (Tabachnhick and Fidell 2013,p.660). Such correlations are considered to be present because of underlying processes. In this case these are the coping measure scores the families indicated at the Initial Visit, and so the latent factors in this instance might be considered to indicate patterns of coping problems. Parents who have, for example, low scores on a coping measure that load on to a particular factor are more likely than other parents to also have low scores on the other coping measures that load onto that factor. Likewise those who score highly are more likely to have high scores on the other coping measures that load onto the same factor.

The factor loadings presented in the table indicate how strongly the coping measures are associated with the latent factors. The closer to 1 these figures are the stronger the association, while lower figures suggest that the coping measures are not strongly associated with the latent factors.

Four coping measures are associated with Factor 1. Three of these load relatively highly, and all relate to aspects of the parent's emotional well-being: Mental Health, Isolation and Self-Esteem. The fact that these three coping measures load together like this suggests that parents who are not coping well with one of these issues often also indicate that they are not coping with the others, while those who are coping well with one are more likely to indicate they are coping well with the others. This suggests a common pattern of needs relating to parental emotional well-being and provides a good reason to use these coping measures to look at changes in parental emotional well-being. It overlaps with the Parenting Well-being domain used by Home-Start. However, unlike the Parenting Well-being domain the Physical Health coping measure does not load on it. Conflict in family also loads on this factor, but much more weakly. This is also easy to understand. Those who are having problems coping with stress because of conflict in the family are also likely to have problems with their emotional well-being. The factor loadings are lower and this may mean that these parents are having problems coping with some additional issues as well. Additionally, not all families with emotional well-being problems have problems coping with stress in the family, and it might be this that accounts for the lower factor loading.

Four coping measures load on Factor 2: Children's Behaviour, Children's Dev/Learning, Child's Physical Health and Child's Mental Health, although on the whole the factor loadings are lower than they were for Factor 1. These are the four coping measures that Home-Start places in its' Parenting Skills and Child's Well-being domains. The fact that they are loading on one factor

here suggests a degree of commonality between the parents indicating problems coping with these issues. These are also issues that relate to the children or one of the children in the family. Factor 2 may, therefore, suggest coping needs that are associated with a child or children in the family, as opposed to issues relating to the parent themselves. However, although these coping measure are associated with one another, the factor loadings suggest that that association is not as strong as it is for Factor 1.

The remaining coping measures load onto Factor 3, though with the exception of the Running the Home coping measure, the factor loadings are all quite low. This means these coping measures are only weakly associated with whatever the factor represents. The Running the Home coping measure has a reasonably high loading so it might be that this factor is capturing something about coping with running the home on a day to day level. However, low factor loadings suggest more variation in the patterns of coping. Because of this it is more useful to think of these as a selection of different individual issues that parents might have difficulty coping with.

The possibility that these factors occur because of the way Home-Start forms are set out and the idea that these domains have been suggested to the parents when they are asked how they are coping, needs to be considered. Overall, there is some overlap between the factors identified through the factor analysis and the domains of parenting need that Home-Start uses. However, the factors are not identical to the Home-Start domains of coping. Parents with physical health problems do not appear to fall into the same category as those with emotional well-being issues. Issues that Home-Start classifies as relating to the child's well-being also appear to fall into the same category as those issues Home-Start describes as parenting skills. These differences suggest that the associations cannot be entirely attributable to the Home-Start domains, and the way the form as been put together. Instead it suggests there are patterns in the nature of problems the families have.

It is also worth reflecting on how these issues fit in with Home-Start's Theory of Change and other theories relating to improvements in parenting self-efficacy discussed in Chapter 2. Home-Start's theory of change (Kenkre and Young 2013) suggests that Home-Start works because social support can lead to improvements in parental well-being which in turn lead to greater feelings of parental competence. It is possible that there might be a different mechanism of change according to the patterns of parental coping difficulties highlighted by the factor analysis. It is easy to see how this theory might apply to those whose difficulties are associated with the coping measures that load onto Factor 1. These coping measures are

associated with parental emotional well-being and therefore fit in with the theory of change, in which social support is aimed at improving parental well-being. However, does this apply equally to those families where the parental concerns centre around issues relating to their child, or around more practical matters? It might be that improved parental well-being may contribute in part to increased feelings of competence in these families, but there might also be alternative indirect pathways based perhaps on more practical knowledge or experience that the needs-based family support Home-Start provides. In other words it might be that for some families the social support Home-Start provides works by improving parental well-being, while for others it works by improving parental knowledge and understanding. This illustrates the multifaceted nature of Home-Start support and the different types of work that is being carried out with different families.

An interesting question arising from this is whether patterns of coping problems relate to improvements in coping. Do parents whose coping issues relate to their emotional well-being improve in the same way as those whose coping issues relate to concerns about a child? This will be considered throughout this chapter. The next section starts considering how to look at changes in coping over the course of support. In particular it will look at the methodological problem created by families having different numbers of coping measure scores reported.

4.4   Variations in the number of scores reported

The 10,639 families, whose data we are using, each provide scores for at least one coping measure, however, as mentioned above not all families provide scores for all coping measures. This is illustrated by Figure 4.1 which shows the cumulative number of families providing different numbers of coping scores at the Initial Visit.

There are 1,857 families who provide scores for all 12 coping measures, but the majority do not. Three hundred and ninety-three families only provide scores for one coping measure. It is not clear why some families have scores for all or most coping measures and some have scores for only a few. Some scores may not be provided as they are missing at random. However it seems likely that there is a difference in approach to completing scores by different Home-Start schemes. As described in Chapter 3, the data relates to 262 different schemes. It may be that some schemes get scores from every family regardless of the families' problems, while others only record scores from those who have identified a need coping with a particular issue. An analysis of the distribution of the numbers of families in schemes who have scores for all or most coping measures confirms that the variation occurs according to scheme. Figure

4.2 shows the distribution of the percentage of families in each scheme who have provided coping scores for at least 10 coping measures.

Figure 4.1 Number of families providing different numbers of coping scores
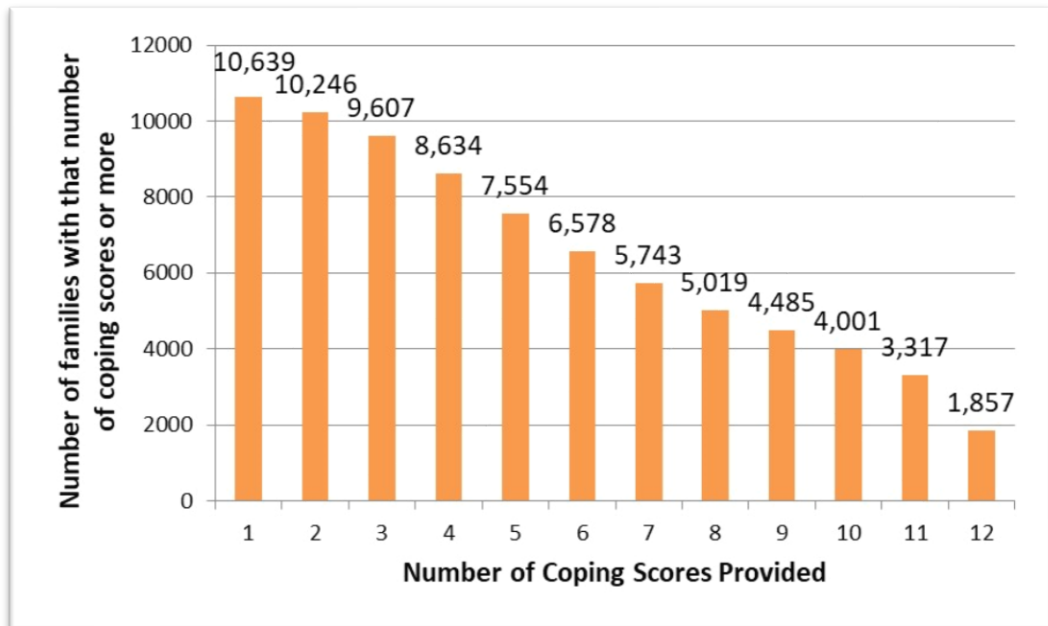
Figure 4.2 Distribution of the Percentage of families in each Home-Start schemes who have provided scores for at least 10 coping measures at initial visit
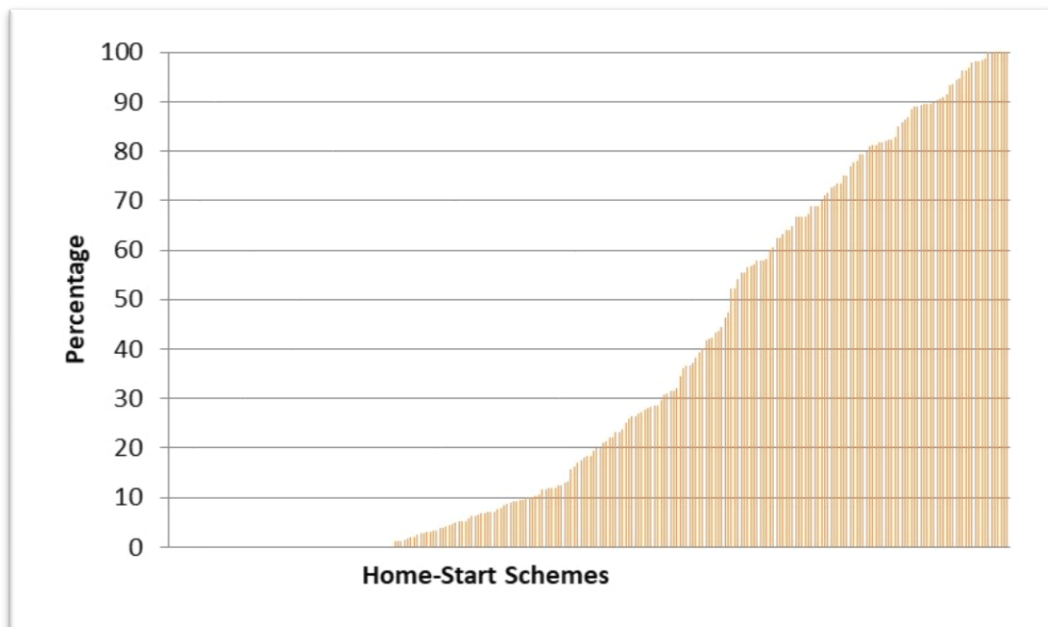
For 70 Home-Start schemes there are no families with scores for at least 10 coping measures, suggesting that these schemes do not try to take coping scores from families for issues that they do not feel the family needs support coping with. While at the other end of the spectrum there are schemes from whom most families provide scores for most coping measures. There

are 23 schemes in which more than 90% of the families have scores for at least 10 coping measures.

This has clear implications for the way analysis is to be carried out. Before deciding how to handle the methodological implications of this problem it is worth investigating the relationship between initial score and improvements in coping. This is of substantive interest in itself, as it will enable us to understand if changes in mean scores are related to parents' initial scores. If initial scores affect the way mean scores change, then this will have an impact if different coping measures have different proportions of families who have reported scores.

In order to examine how the initial coping measure scores relate to the final coping measure scores, a categorical variable was created for each coping measure according to whether parent's scores at Initial Visit were high, medium or low. Scores were placed into the low category if a parent had reported a 0 or a 1, medium if it was a 2 or a 3, and high if they scored a 4 or 5. Only families with data at each visit were used. Mean coping scores at the first, second and third review visits were calculated and compared for parents in different initial coping score categories. Figures 4.3 to 4.5 show the changes in mean coping scores for three coping measures, Children's Behaviour, Self Esteem and Running the Home. Mean scores and their standard deviations for all coping measures are available in Table C1 (Appendix C).

The largest improvements in coping scores can be seen in those families with the lowest initial coping scores, an effect apparent across all coping measures. Standard deviations also appear to be highest for those with lowest initial coping scores at subsequent visits. This could be because it is a genuine effect with those with the greatest needs making the greatest improvements, however, this is a small scale and likely to be affected by ceiling effects. It would not be possible for those in the highest initial category to show the same improvement as those in the lowest. They are already near the top of the scale. Additionally they do not need to: they are already coping well. The higher standard deviations for those in the lowest category may also be indicative of the fact that there is more 'room' for these families to improve.

This analysis also reveals that there is a decrease in coping scores for those who had scores in the highest category at initial visit across all coping measures, suggesting that the results may be affected by regression towards the mean. Jerrim and Vignoles (2013) describe regression to the mean as a statistical phenomenon which occurs when repeated measures are used to examine changes in scores over time. It may have been caused because random fluctuations

in the initial coping scores of Home-Start families resulted in some families being 'incorrectly' categorised as initial high need or initial low need. Parents are asked what their needs are at Initial Visit and how well they feel they are coping with each of the parenting measures that day. It might be that parents feel something is an issue for them in general, but that the day of the Initial Visit happened to be a good day (or the opposite that it is not usually a problem but that it happened to be a problem on the day of the visit).

So long as there is no relationship between errors in scores at T1 and errors at T2 then all the effects of the initial test errors will have occurred between T1 and T2 (ibid). This means we can examine changes between T2 and T4 to explore how initial need affects changes. Figures 4.3 to 4.5 all show a steep regression towards the mean between T1 and T2 and a much smaller effects between T2 and T4, but with the group with the low scores at initial visit still improving more than those with medium scores. However, can we assume this is a genuine effect or might the errors in coping scores at T1 and T2 be correlated? There could be reasons for correlations, for example, perhaps the same member of staff might come for several time points and a different member of staff come at later time points and solicit a different type of response.

However, this might also be a genuine effect. This is a small scale and there is a ceiling affect. Those who start at higher levels do not have the scope to increase at the same rate as those who start from lower levels. Therefore it is, perhaps, not surprising that those with the lowest initial scores are improving at faster rates.

It may also be that this is not just because of the ceiling effect but also because this is the group of families that Home-Start is having the most impact on. These families have identified a problem with a particular issue, and the support is targeted at helping them with this issue. These findings are akin to the findings of Asscher et al (2008b) which suggested two different groups of families within the data obtained from a study of Home-Start in the Netherlands. The Home-Start intervention appeared to be having the most positive effect for families who had the greatest need prior to the intervention.

Figure 4.3 to 4.5. Mean Coping Scores T1 to T4, by initial scores

Figure 4.3. Mean Coping Scores T1 to T4, by initial scores Children's Behaviour
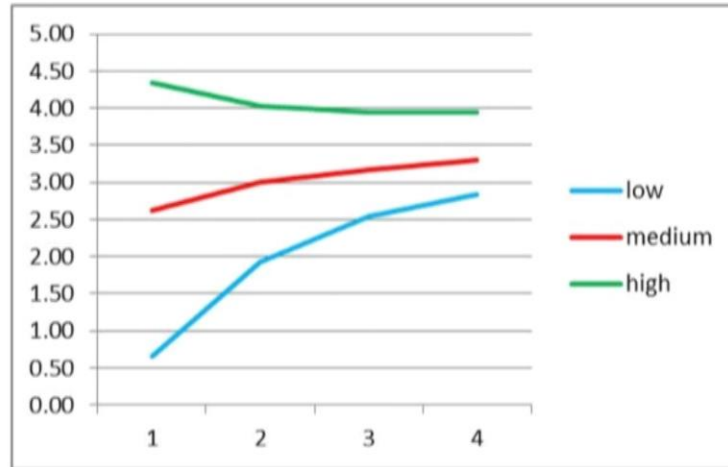
Figure 4.4. Mean Coping Scores T1 to T4, by initial scores Self-Esteem
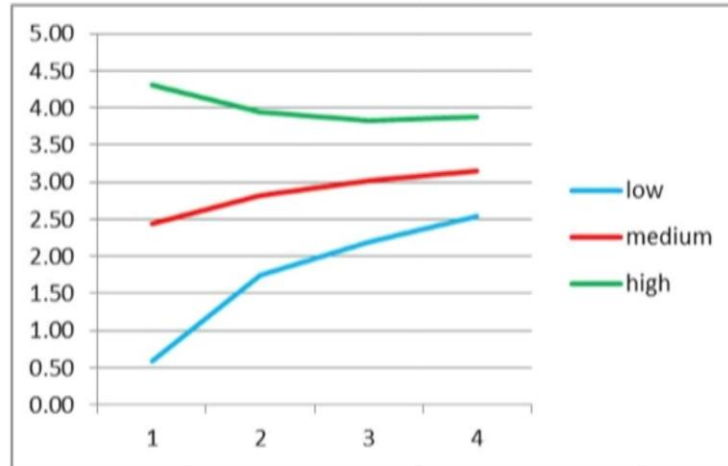
Figure 4.5. Mean Coping Scores T1 to T4, by initial scores Running the home
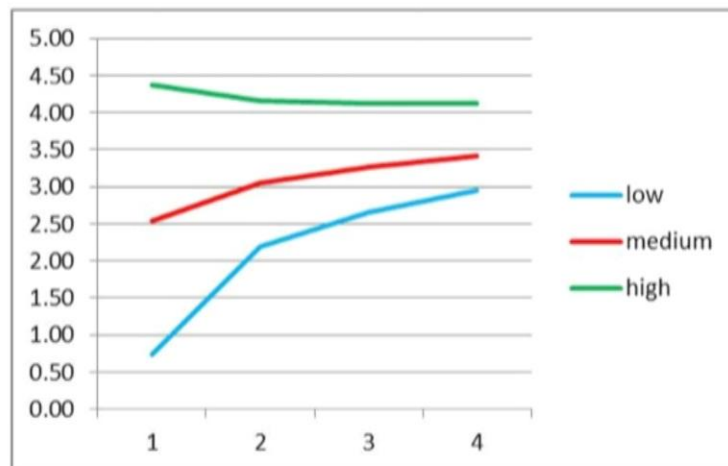
Another point to make in relation to this is that it is the improvements made by those with the lowest coping scores that are of the greatest substantive interest to us. These are the families that have identified themselves as coping the least well with a given issue. Home-Start is working with them to help improve their coping in those areas, and it is these improvements that we are interested in. Because of this a more accurate picture of how improvements in coping occur may be gained by only looking at those who have indicated that they have low initial coping levels. Looking only at those with low initial coping scores would also provide a solution to the problem that not all schemes have provided scores for all families. If only those families who have initially reported a 0 or a 1 are used, then we are looking at those families with initial low coping for that coping measure regardless of what other scores were reported. This effect has implications for exploring the relationships in multifaceted services and outcomes. It suggests that, where not all families identify needs in coping with a specific issue then changes in outcomes would not be expected for those families. This reduces the overall effect size expected.

The analysis of changes in coping in the rest of this thesis will therefore only consider families who report initial low levels of coping for a given coping measure. This means that slightly different subsets of families will be used depending on the coping measure being investigated. The next section will look in detail at how changes in coping vary over time for families.

4.5   The duration of support and changes in coping

We have already highlighted the need to understand the relationship between the duration of support and changes in coping. In Chapter 6, the effects of different aspects of the nature of support on changes in coping will be explored. However, with respect to the duration of support there are reasons to explore this earlier in order to make decisions regarding how the rest of the analysis will be carried out. This section begins this process by looking first at how coping changes for families with different numbers of review visits and then considers what effect the way support ends has on this relationship. Finally, the numbers of families who do not improve are considered and the reasons why this might be happening are discussed.

4.5.1 The effect of the number of review visits

The number of families with responses to coping measures varies considerably at different time points. This is illustrated by Figure 4.6, which shows the numbers of families who have

provided responses to the Children's Behaviour and Self-Esteem coping measures, at different timepoints. It contains only those with initial scores of 0 or 1.

The numbers of families providing a score decreases quite dramatically with each successive review visit, a pattern that is found across all coping measures. There are four possible reasons why this might be happening. First, the families may no longer be having support. Second, the families may be having support but they may not have a problem with this particular coping measure at that time point and in some schemes that will mean that they have not been asked for a score. Some data may be missing at random. Finally there may be a small number of families in the dataset who were still having support when the data was exported so for these families the next review visit might not have happened 'yet.'

Figure 4.6. Number of families with scores for coping measures at different time points
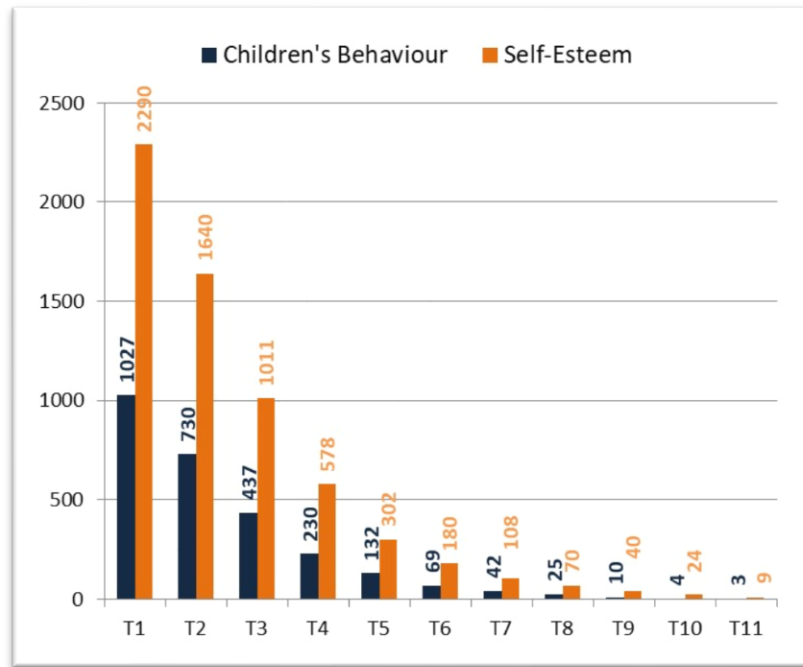
Home-Start support is needs-based, and where possible families will continue to have support for as long as it is needed. It is likely therefore that a large amount of the reduction in the number of families with data at subsequent review visits is because families are no longer having support.

To find out what affect the number of review visits has on changes in coping, mean coping scores at different time points for those with different numbers of review visits were explored. Figures 4.7 to 4.9 illustrate these changes in mean coping scores for three of the coping measures.

Figures 4.7 to 4.9. Mean Coping Scores T1 to T5, by number of review visits

Figure 4.7. Children's Dev/Learning

Figure 4.8 Mental Health

Figure 4.9. Running the home

One Review Visit — Three review visits
Two Review Visits — Four review visits
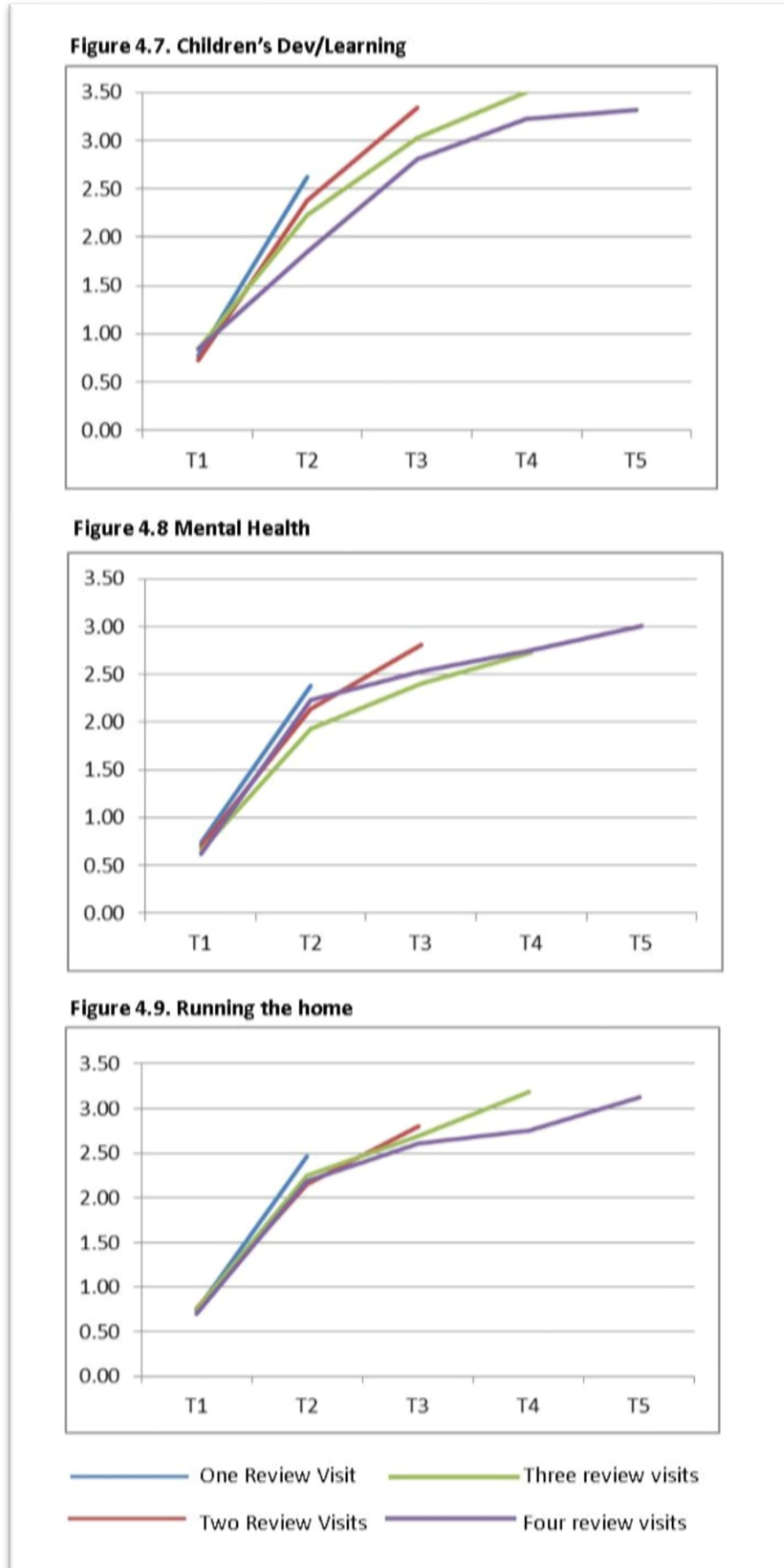
Full mean scores and standard deviations for all coping measures according to numbers of review visits are available in Table C2, Appendix C. Again only those families with initial low coping scores were used. The analysis was also limited to those with between one and four review visits (T2 to T5). This was because there were very few families who had had initial low levels of coping with some of the coping measures and who were still receiving support at subsequent time points.

Some observations about improvements in coping can be made. First, the mean scores go up between the Initial Visit and the final Review Visit for all coping measures. This happens regardless of the final total number of Review Visits.   This does not mean that scores for all families go up, but on the whole the mean scores increase.

There is a slight tendency for those with fewer review visits to increase more rapidly than those with a larger number of visits. The means at time T2 are higher for those who will only have one review visit then they are for the other families. This is illustrated by the steep gradients of the blue lines above. For the Children's Dev/Learning this feature applies at every time point. This ties in with the needs-based nature of Home-Start support. Families who do not improve so quickly will need support for longer, resulting in more review visits. However, this is not the pattern for all coping measures. For example, with the Running the Home coping measure, initial improvements in the mean are quite similar, regardless of whether the families will go on to have two, three or four review visits.

Another feature that is fairly consistent relates to the values of the final mean scores. These tend to be higher for those families who have had more review visits. In fact, for those who have only one review visit the mean scores are quite a bit lower than those who have more review visits. This would suggest that coping continues to improve the longer families stay in support. However, before coming to any conclusions about that we need to factor in the reasons why the support ends. These will be considered below.

4.5.2 Outcomes of support

Home-Start support ends for a number of different reasons. Home-Start and the family can plan together to end the support because they feel that the family no longer needs it. Alternatively they may feel that the family's support needs are better met elsewhere, or the family may decide they no longer want the support for another reason. In these cases an End Visit is carried out by Home-Start staff and an End Visit Form completed. This form collects

information about why the support is ending and the coping measures are completed a final time. However, there are a proportion of families in the dataset for whom support ends in an unplanned way. When this happens an unplanned ending form is meant to be completed and there is no possibility of the final coping measure scores being collected. Table 3 sets out the reasons why support has finished for the 10,639 families. There are 915 families for whom we do not know the outcome of support. These families were either still having support when the data was exported or data relating to the end visit was missing.

Table 4.3. Frequency of Different Support Outcomes

Outcome	*f*
Family becomes unobtainable	112
Family no longer requires Home-Start support	6206
Family prematurely ends support	139
Home-Start identifies family's needs better met via alternative service	330
Safety concern or statutory intervention results in withdrawal of service	51
Other comment given	41
Data missing, but form completed	690
Total with End Visit Form Completed	7569
Unplanned ending form completed	2155
No end data	915
Total	10639

Exploring the relationship between the presence of End Visit data and changes in coping scores is important to identify how changes for those without planned endings differ from those with End Visit data.

Graphs showing the differences in the changes in mean coping scores for those with different numbers of review visits with and without End Visits were plotted for all coping measures. Figure 4.10 shows the graph for the Mental Health Coping Measure, while mean coping scores at different measurement occasions for all coping measures are available in Table C3, Appendix C. Figure 4.10 includes all those with low initial coping scores who had data at every time point for each number of review visits, with and without End Visit data. The final score for those with End Visit data is the score taken at the End Visit. Families are more inclined to have unplanned endings towards the beginning of support and therefore the numbers with unplanned endings are very low when greater numbers of review visits are considered. Because of this only those with between two and four review visits were considered.

Figure 4.10 Coping Scores T1 to T5, by number of review visits for those with and without End Visit Data, Mental Health Coping Measure
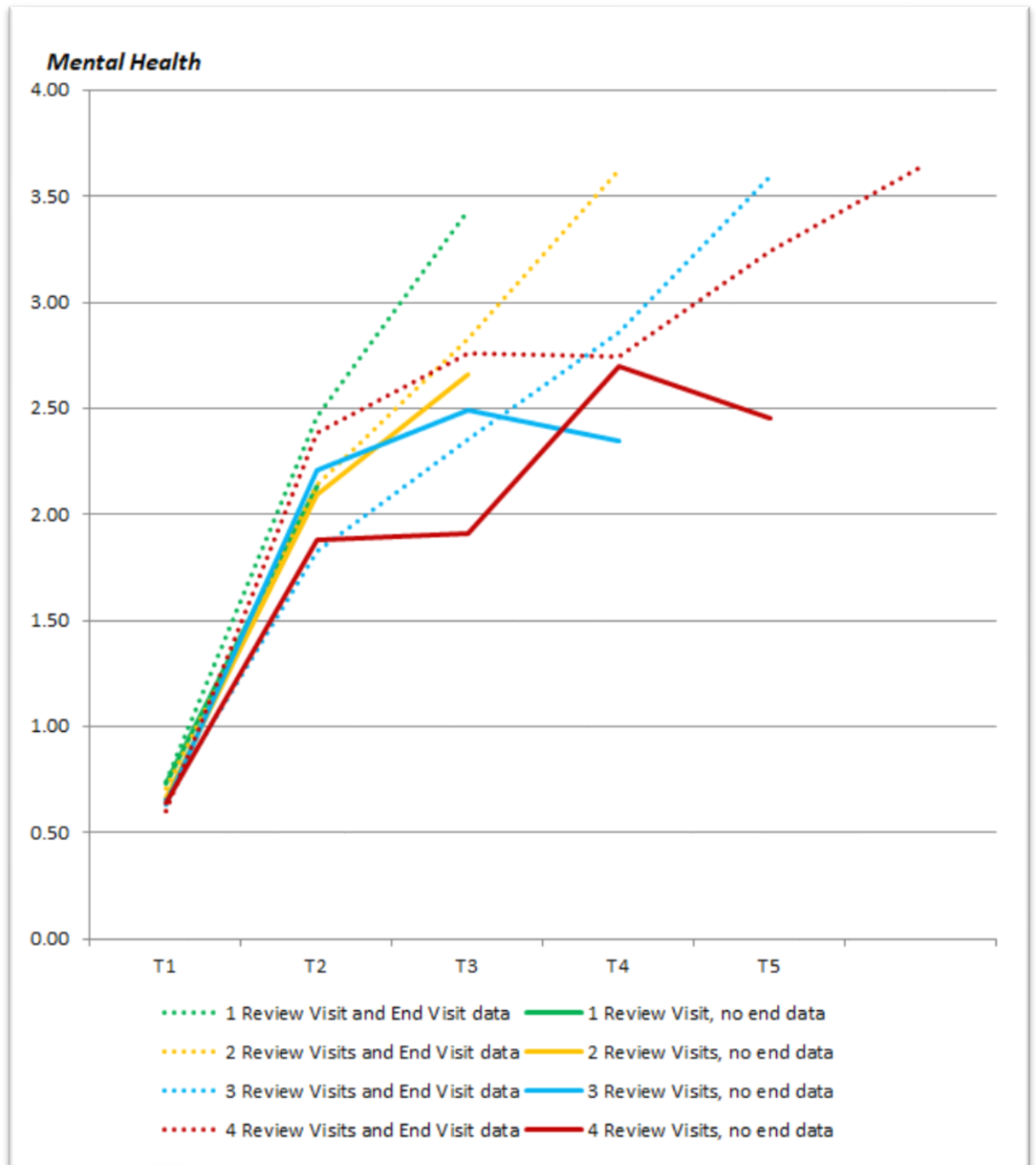
A number of observations can be made from exploring the differences in changes in mean scores for those with and without End Visit data. First, all the mean scores taken at end visits are higher than the respective last scores for those with the same number of review visits (i.e. taken at the last review visit). This applies to all coping measures and all numbers of review visits. This is not really a surprising finding: those with the End Visit data have had a planned ending, and therefore a higher likelihood that support is finishing because they no longer need it. They also have an additional period of support between the last Review Visit and the End Visit during which coping scores can continue to improve.

Additionally, in most cases where there is End Visit data the mean scores at the last Review Visit before the End Visit are higher than they are for those with unplanned endings. This suggests that those (or some of those) who do not have End Visits after this visit are already not improving at the same rate, or not improving at all, at this stage. We cannot tell from this analysis, if it is the case that all the families are not doing as well, or if some are doing as well and some are doing even less well. However, the standard deviations tend to be bigger in those without End Visit data at later review visits, than they are for those with End Visits at the same time point. So this may be an indication that some families are already not finding support as effective, while for others the reasons for support stopping might have occurred abruptly. There are some exceptions to this, though in the majority of cases the means scores are lower among those with unplanned endings.

Additionally even among those without End Visit data, the last mean coping scores taken across all coping measures are higher than initial scores. This happens for all coping measures and all number of review visits. It suggests some improvements happen even among those without End Visit data. Though again this is the mean and doesn't imply that there are not individual families for whom there is no improvement at all.

In section 4.1 we discussed patterns of coping needs and identified latent factors within the coping measures relating to parental emotional well-being and coping with issues associated with children. While there are obvious differences to the way improvements occur over different coping measures, these appear to be related more to the individual measures and there does not appear to be any obvious patterns relating to the latent factors identified.

By looking only at those with End Visit data the means scores taken at the End Visits are very similar to each other regardless of number of Review Visits. Mean scores for those with higher numbers of Review Visits tend to be slightly higher than those with fewer Review Visits but the effects are small, and not always apparent. For example, with the Running the Home coping measure the mean scores for those with four Review Visits, is lower than those with three Review Visits. This suggests that the effect, identified in Figures 4.7 to 4.9, of those with more Review Visits having higher eventual coping scores is in part caused by those with no end data having lower coping scores. In the literature review, the challenges of looking at the outcomes of support within needs-based services were discussed. It was highlighted that scores might be very similar if support is given in sufficient ways to reach a final point. These findings suggest that such an effect is happening here. Home-Start will stop the support when

the families are ready. They are likely, therefore, to have reached a similar level of coping, a level at which Home-Start feels it is appropriate for support to stop.

In order to check this effect the relationship between the overall change made by families on each coping measure was correlated with the duration of support. The overall change was the score at the End Visit minus the score at the Initial Visit. Duration of support was calculated as the time in days from the first home visit to the End Visit. As in other parts of the analysis only those families with initial low levels of coping were used. Correlations were calculated using Spearman's Rho because the data was not normally distributed. The results are shown in Table 4.4.

Table 4.4 Spearman's Rho Correlation Coefficients between raw score coping measure changes and duration

	r_s	n
Managing Children's Behaviour	.134**	628
Children's Dev/Learning	.201**	392
Physical Health	.034	738
Mental Health	.140**	1289
Isolation	.126**	1412
Self-Esteem	.125**	1399
Child's Physical Health	.136*	215
Child's Mental Health	.184**	239
Household Budget	.136**	405
Running the Home	.194**	581
Conflict in Family	.081*	801
Multiple Children Under 5	.137**	390

The Spearman's Rho correlation coefficients are all positive suggesting that there is an association between longer durations of support and greater improvements in coping. However, the correlations are not large and they vary quite a bit across the coping measures. The relationship between duration and the amount of improvement made in the parent's physical health is very small, while the biggest effect size is identified in relation to being involved in the children's development and learning. The effect sizes for the three emotional well-being coping measures fall into the middle of this range.

If both Figure 4.10 and Table 4.4 are considered together, then it is apparent that there is a small amount of variation in the improvements made by families, but there is also much more variation in the time it takes for these variations to occur. This will need to be taken into account in considering an appropriate method of analysis. This issue is considered in more

detail in the discussion at the end of the chapter. However, before doing that, the next section will consider those families who do not improve.

4.5.3 Families who do not improve

This section has looked at changes in coping over time by looking at mean coping scores. These mean scores go up, highlighting overall improvements in families, particularly among those who have End Visit data. However, standard deviations highlight that there are variations in this pattern across families and it is misleading to think of all families improving. To get a fuller picture of this we will now consider those families who do not improve.

Table 4.5 shows the number and percentage of families with initial low levels of coping with a given coping measure, who complete support with an End Visit, and who do not make any improvements.

Table 4.5 Odds of Improving for families with initial low levels on different coping measures

Coping Measure	No Improvement f (%)	Improvements made f (%)	Odds of improving
Children's Behaviour	29 (4.6%)	599(95.4%)	20.7
Children's Dev/Learning	15 (3.8%)	378 (96.2%)	25.2
Physical Health	49 (6.6%)	689 (93.4%)	14.1
Mental Health	70 (5.4%)	1219 (94.6%)	17.4
Isolation	62 (4.4%)	1351 (95.6%)	21.8
Self-Esteem	86 (6.1%)	1314 (93.9%)	15.3
Child's Physical Health	11 (5.1%)	204 (94.9%)	18.5
Child's Mental Health	11 (4.6%)	228 (95.4%)	20.7
Household Budget	32 (7.9%)	374 (92.1%)	11.7
Running the home	30 (5.2%)	551 (94.8%)	18.4
Conflict in Family	64 (8.0%)	737 (92.0%)	11.5
Multiple children under 5	16 (4.1%)	374 (95.9%)	23.4

Over 90% of families with initial low levels of coping and End Visit data show improvements by the End Visit for all coping measures. There is some variation across coping measures with the odds of improvements being lowest in relation to conflict in the family and household budget. However, as described above, the End Visit form provides a space to indicate why the support is ending. Bivariate analysis was therefore carried out to find out how these different types of endings were related to the odds of not improving. Table 4.6 illustrates this by showing the odds of improving on the mental health coping measure, according to the type of ending. Equivalent figures for other coping measures are available in Table C4, Appendix C.

Table 4.6 Odds of Improving on Mental Health Coping Measure for families by reason for leaving support

	No Improvement f (%)	Improvements made f (%)	Odds of improving
Family becomes unobtainable	6(8.6%)	18(1.5%)	3.0
Family no longer requires Home-Start support	33(47.1%)	1000(82.0%)	30.3
Family prematurely ends support	2(2.9%)	25(2.1%)	12.5
Home-Start identifies family's needs better met via alternative service	14(20.0%)	49(4.0%)	3.5
Safety concern or statutory intervention results in withdrawal of service	4(5.7%)	6(.5%)	1.5
Other comment given	1(1.4%)	8(.7%)	8.0
Data missing, but form completed	10(14.3%)	113(9.3%)	11.3

The odds of improving are much higher among those families who leave support because the family no longer requires Home-Start support. For families who leave support for other reason the odds of improving are much lower. This applies particularly to families for whom support is withdrawn because of a safety concern or statutory intervention, but also because Home-Start has identified that the family's needs would be better met by an alternative service, or because the family has become unobtainable. Chapters 6 and 7 will look at how the way support is provided and the family's circumstances affect improvements in coping. When doing this it will be important to consider how these factors also relate to these families who do not improve, and bear in mind these reasons for their support ending.

This chapter has looked at several different aspects of the Home-Start family's changes in coping over the course of Home-Start support. This has resulted in findings that are both of substantive interest and also have important methodological implications. These will be discussed in the next section.

4.6 Discussion

This chapter set out to look at how self-rated parental feelings of coping with both emotional well-being and other issues change over the course of home visiting support. This was done using Home-Start's coping measures. First, exploratory factor analysis was carried out. This identified three latent factors that suggested patterns of coping need in parents. One of these appeared to be related to parents having issues with their emotional well-being, another concerned issues relating to their child or children in the family. The third factor was less coherent and suggested other types of needs. However, because the pattern was less coherent it is more useful to think of these as individual needs.

The rest of the chapter then explored changes in coping over the course of support. When the families' initial coping scores were considered, the families with the lowest initial coping scores made the most improvement. This effect seems to be apparent even when the effect of regression towards the mean is considered, but there is also a possibility that it might be influenced by ceiling effects: families who score more highly will have less 'room' for improvement and so the mean scores are necessarily lower. This finding ties in with the results from Asscher et al (2008b) that those with the most need make the most improvement. The implications of this effect are important in considering the measurement of outcomes in a multifaceted service. Not all families would be expected to make changes on all measures if some of those measures concern issues that parents do not have problems coping with. This would result in reduced effect sizes.

Analysis of the data also identified an inconsistency in the way Home-Start schemes record coping scores, with some schemes recording scores only for those with a particular coping need, whilst others record scores for all or most families. Because of this, and because of the need to consider change in those with the greatest initial coping problems, it was decided to only use those families with initial low coping scores for the rest of the analysis. This means that the analysis presented in this thesis focuses on improvements in coping among those who report initially coping the least well.

Changes in coping were then considered for families who have different numbers of review visits and durations of support. When only those with End Visit data were considered, then those with longer durations of support made slightly greater improvements, but the size of the effects was quite small. Looking at the mean scores for families with different numbers of review visits at different time points showed more variation across families in the time it took

to make these improvements. This ties in with Home-Start support being needs based and continuing as long as the families need it. Families may end support with reasonably similar levels of coping on average, but the time taken to reach this stage is not consistent. For those with no End Visit data, mean coping scores also improve, however not to the extent of those with End Visits. There is variation between coping measures and the number of review visits in the way these mean scores improve. In some cases improvements for those without End Visit data start off as fast as those with it, whereas in other cases they do not. Generally mean scores at the last review visit are lower for those without End Visit data.

The mean coping scores go up for all coping measures regardless of number of review visits. However, it is important to remember that this does not mean they go up for all individuals. Standard deviations indicate a lot of variation in within this. Improvements over the course of support do not appear to occur at a constant rate.   A minority of families do not improve at all. This occurs more frequently when support ends prematurely because of safety concerns, statutory interventions, or because the family's needs are better met by alternative services.

Overall, there was a degree of variation in the way coping improved over different coping measures. In spite of the factor analysis identifying patterns of coping problems, most of these differences in improvements in coping did not appear to be related to these factors i.e. there did not appear to be any commonalities in the way coping improved according to whether the parents' concerns focused on their own emotional well-being, their children or other issues.

This work was also used to reflect on how the analysis relating to research questions two, three and four, should take place. The analysis concerns how other factors affect changes in coping. One way to do this might be to consider how different factors affect a family's final coping score, or the difference between their initial score and final score. However, as discussed, there may be little variation across families in these final scores, but a lot of variation in how long it has taken the families to achieve them. If the differences in scores were used, then a family that moved from a score of one to a score of five in four months would appear the same as a family who made the equivalent change over two years. This is an important difference for a family with young children. We are concerned with poor parental emotional well-being because of the effect it has on the parent-child relationship. If this relationship is affected for two years rather than four months this might make a lot of difference to the life of an infant or toddler. There is clearly an imperative to identify ways of improving emotional well-being faster.

Another possibility is to look at the duration of support, and how different factors affect how long families need to stay in support. However, there are also drawbacks to this approach. While the mean scores for families with End Visits were very similar they were not identical. There was a very slight tendency for scores to increase with the number of visits. Additionally these are mean scores. It doesn't mean that all families improve, and improve to the same extent. So any analysis looking at the effects of other factors on duration would not really be able to comment on changes in coping.

Because of these issues an alternative approach was adopted for the analysis in this study. This used the overall coping score change and the duration of support to create variables indicating the rate at which coping changes for a given coping measure. This enabled both the overall change and the time taken to achieve it to be taken into account. However this approach does have some drawbacks. It only provides the overall average rate of change and is not therefore able to take into account any changing patterns of improvements over the course of support. Additionally because it is using the duration to the End Visits and the End Visit scores it is not possible to include those without End Visit data. Therefore differences between the families who have an End Visit and those who do not needed to be taken into consideration in other ways.

Rate of Change (ROC) variables were therefore created to explore how different factors affect changes in parental coping. In Chapters 6, 7 and 8 these will be used to explore how both the nature of support and the family's situation affect changes in coping. However before doing that the following chapter will provide more details about how the ROC, variables were created, and the data analysis methods used to explore how they are related to other factors.

CHAPTER 5

Data Analysis Methods

5.1 Introduction

The last chapter explored Home-Start's coping measures. This provided not only a substantive understanding on how parental coping improves during support, but also enabled methodological decisions to be made. These decisions focused on how to use the coping measures to investigate how both the nature of support and the family's situation affect parental improvements in coping. The challenge in developing a method to do this centres around the fact that there is relatively little variation, on average, in the overall improvements in coping for parents who complete support with an End Visit. However, there is considerable variation in the time that it takes for parents to reach this level of coping. Because of this it was decided to use variables describing the average rate at which parental coping changes.

This short methods chapter describes the creation of these Rate of Change (ROC) variables, and the data analysis methods used to explore how they are related to both the nature of support and the family's situation. The chapter is divided into a further three sections. The following section concerns the creation of the ROC variables. The method through which this was done is outlined and descriptive statistics relating to them are provided. Section 5.3 presents the data analysis methods used throughout the rest of this study. This includes a mixture of bivariate analysis and linear regression.   The final section then outlines the approach to reporting used in the thesis, including the approach to reporting significance and the way the results of regression models are presented.

5.2 Rate of change variables

The ROC variables, proposed in Chapter 4, combine the overall change in coping that a family makes with the time in which it takes for those improvements to be made. They were calculated using the differences in the parent's scores between the Initial Visit and the End Visit and dividing this by the duration of support. Duration is calculated as the time from the first home visit by the home visitor to the End Visit (See Equation 5.1).

Equation 5.1. Calculation of Rate of Change Variable

$$ROC\ Coping\ Measure\ X = \frac{(Score\ Tend - Score\ T1)}{(\text{Date Tend} - \text{Date T1})}$$

The ROC variables were calculated for each of the coping measures and give an average rate of change in a parent's coping measure score per day. Improvements over time do not necessarily occur in a linear fashion. Therefore it is important to stress that the ROC variables refer to an average rate of change over the course of support. Another limitation is that the variable was created using two pieces of information from the End Visit Form. Because of this it can only be used to examine improvements in coping among families who have a planned ending.

ROC variables were calculated for all 12 coping measures. Univariate statistics for all ROCs are shown in Table 5.1, and histograms showing the distribution of the ROC variables are provided in Appendix B (Figures B11 to B22). These graphs are all skewed to the right.

Table 5.1 ROC all 12 coping measures, Means, Medians and Standard Deviations

	$\overline{X}$	Med	sd	n
ROC Children's Behaviour	.0173	.0125	0.0178	628
ROC Children's Dev/Learning	.0177	.0138	0.0155	393
ROC Physical Health	.0163	.0114	0.0194	738
ROC Mental Health	.0161	.0120	0.0160	1289
ROC Isolation	.0178	.0129	0.0208	1413
ROC Self-Esteem	.0162	.0115	0.0175	1400
ROC Child's Physical Health	.0160	.0124	0.0137	215
ROC Child's Mental Health	.0160	.0122	0.0151	239
ROC Household Budget	.0153	.0115	0.0153	406
ROC Running the home	.0164	.0117	0.0166	581
ROC Conflict in Family	.0164	.0114	0.0193	801
ROC Multiple children under 5	.0163	.0117	0.0197	390

All ROCs are positive showing, on average, improvements in reported coping by the end of support. There is, however, variation across coping measures in the rates of this improvement, with it occurring fastest in relation to coping with isolation, followed by being involved in the child's development/learning and managing their behaviour. It is slowest for managing the household budget. Standard deviations also vary.

5.3 Analysis methods

The analysis methods used enabled the relationships between the ROC variables and both the nature of support variables and the variables describing adverse family situations to be explored. They included both investigations of bivariate relationships and more detailed multivariate analysis in the form of linear regression. For all pieces of analysis described here only the families with initial low levels of coping for a given coping measure were used. Table 5.2 provides a summary of the data analysis methods used to answer each of the research questions.

Bivariate relationships were used to provide a basic understanding of the relationships between variables. Numeric variables in the data, including the ROC variables and the majority of the nature of support variables, are not normally distributed. Therefore relationships between them were examined using Spearman's Rho coefficients. Where one variable was categorical the mean values of numerical variables were examined, and where both were categorical the percentages of cases in different categories were compared.

Bivariate analysis and linear regression models were used to look at the relationships between both the nature of support and the family circumstances and changes in coping. While the majority of families have End Visit data some do not. Bivariate analysis was used to look at how the nature of support and family situation were related to the likelihood of families not having End Visit data, either because they had had unplanned ending forms completed or no end data at all. As described in Section 4.5.3 the majority of parents who had End Visit data report improved scores on all the coping measures by the end of support. However there are a minority who do not. Linear regression models were used to consider how other factors affect those who improved. It was decided not to put those who do not improve in the same models as the rate of not improving is a different concept to the rate of improving. Those who had a score difference of zero would all have a rate of change of zero. The aspects of support that might be associated with not improving might be different to those that are related to someone making very slow improvements. If those who do not improve were present in the models then it would be difficult to differentiate between things associated with families not improving and things associated with families making slow improvements. Bivariate analysis was used to highlight the differences between those that improve and those who do not, with respect to both the way support was provided and their family situations.

Table 5.2 Methods used to answer each research question

Research Question	Methods
2. How does the nature of support relate to improvements in parental emotional well-being?	Descriptive statistics and bivariate relationships between nature of support variables. This enabled patterns of support to be considered, particularly differences in the support provided by paid workers and volunteers.
	Bivariate relationships between the nature of support variables and whether or not overall levels of emotional well-being improve by the end of support.
	Bivariate relationships between the nature of support and the type of End Data present. Analysis was limited because some nature of support variables, particularly duration and frequency are also calculated using data from the End Visit form.
	Linear regression models investigating the relationship between the nature of support variables and the logged ROC variables for the emotional well-being coping measures. Additional coping measures used for comparison.
3. How do adverse family situations affect improvements in parental emotional well-being?	Descriptive Statistics of family situation variables.
	Bivariate relationships between the family situation variables and whether or not overall levels of coping improve by the end of support.
	Bivariate relationships between the nature of support and the type of end data present.
	Linear regression models investigating the relationship between individual risk factors and the logged ROC variables.
	Linear regression models investigating the relationship between cumulative risk together with individual risks on the logged ROC variables.
	Linear regression models investigating the relationship between Hardiker Levels together with individual risks on the logged ROC variables.
	Linear regression models investigating the relationship between life events on the logged ROC variables while controlling for individual risk factors.
	Linear regression models investigating the relationship between life events that occur in the first six months of support on the logged ROC variables while controlling for individual risk factors, using only those families who had at least six months of support.
4. How does the nature of support affect improvements in parental emotional well-being for parents in different adverse situations?	Linear regression models checking the effects of the nature of support variables on the logged ROC when controlling for individual risk factors.
	Bivariate analysis comparing the nature of support for families in different circumstances.
	Linear regression models looking at the effects of the nature of support variables on the logged ROC variables, but limited to families in specific circumstances only.

Linear regression models were then developed with the families who did improve to look at the effects of the nature of support and the family situation on the rate of improvement. The initial linear regression models developed showed high levels of heteroscedasticity. Therefore

the model was redeveloped using a log of the ROC variables. Logging ROC resulted in a more normally distributed variable, as shown by Figures B23 to B32 in Appendix B. Details of all regression equations are available in Appendix D. Once the logged version of the ROC was used there were no problems with heteroscedasticity. Standardised residuals were found to be normally distributed. Problems with collinearity were assessed by ensuring that VIF values were not substantially greater than 1, as per the method suggested by Field (2009, p.242). This procedure did not identify any problems with multicollinearity in the models. Outliers were removed from models if the standardised residuals were greater than +3 or less than -3.

Chapter 6 sets out the results of the analysis investigating the relationship between the nature of support variables and changes in coping. That analysis focused on the ROCs of ten coping measures (the three emotional well-being coping measures and seven of the other coping measures). Providing a comparison with the other coping measures enabled the effects of the nature of support on emotional well-being to be compared with its effect on other issues a piece of analysis which also contributes towards answering the fourth research question. Two coping measures (Child Physical Health and Child Mental Health) were not used. This is because the numbers of families starting support with initial low levels of coping with these two measures are low and therefore the number of cases in the data was not sufficient to facilitate analysis.

Chapter 7 presents the results of the analysis focusing on the relationship between the family circumstance variables and changes in coping. This analysis was carried out using the ROCs of three emotional well-being coping measures only.

The same three coping measures were also used in Chapter 8. This chapter focuses on the relationship between the nature of support and the family situation, and how the nature of support affects improvements for families in different situations. Models were developed using families in certain situations only. This meant that separate models were run for families in which domestic abuse was suspected, , with a disabled parent, with a disabled child, in which there were mental health issues, more than three children and high risk families. Because these models included only subsets of the data, they contained fewer cases, so a smaller number of explanatory variables were used.

5.4 Approach to reporting

Significance tests are not reported in this thesis. There are two reasons why this approach has been taken. First significance tests are used to identify how likely a result identified in a sample of a given population is to apply to the whole population. They are not considered appropriate or necessary when data applies to an entire population (Cowger 1984). The dataset provided for this analysis included all the families referred to Home-Start between April 2013 and March 2015. This means it relates to an entire population of families supported by Home-Start referred during this period, and therefore significance tests are not appropriate.

In addition to this significance tests are not appropriate for the analysis carried out in this thesis because the subsets of data used for different parts of the analysis vary considerably in size. The size of a sample impacts on the likelihood of a significant result, with large datasets producing significant results even when the size of the effect is very small (Sullivan and Feinn 2012). Some parts of the analysis used all 10,639 families. For other parts of the analysis only families in certain situations were used, for example those who have both initial low levels of coping with their self-esteem and a disabled parent in the family, and results in a much smaller number of cases. There is therefore danger that significance tests would show significant relationships when the larger sample is used but not when smaller sets of families are used, regardless of the size of those relationships, nor of the importance of the implications of the findings.

Because of this, discussions about the relevance of findings will therefore be based on the size of effects. The numbers of cases used in each piece of analysis will also be reported so that the reader has an understanding of how many families findings are based on.

The effect sizes reported will depend on the methods used. For bivariate relationships the values of Spearman's Rho correlation coefficients, will be considered where both variables are numerical. Where one variable is categorical and the other numerical, Hedges g will be reported. Hedges g is a form of standardised mean difference is usually used to analyse the effect sizes in studies with group designs (Durlak 2009), however, it is a method for enabling the effect size for the means of two different groups to be compared. Hedge's g will be presented together with the means of the numerical variable falling into different categories of the categorical variable. When both variables are categorical, odds ratios will be provided (Field 2009, p 700), together with the numbers and percentages. In all pieces of analysis, sizes of subsets of data used will be given so it is clear how many cases the findings are based on.

For regression models the R^2 values will be reported, together with both standardised and unstandardized coefficients for each variable. In some cases only standardised or unstandardised coefficients will be presented in the text of the thesis, but both are available in the appendices of this document. Standardised coefficients are presented comparing the relative effects of the nature of support variables on models. The nature of support variables have different scales and so the standardized coefficients enable comparisons to be made between them. Unstandardised coefficients are provided, in the appendices, as they enable the full effects of the variables on the dependent variable to be calculated. Because the regression models used logged versions of the ROC variables, this had to be done by calculating the exponent of the regression equation. This was done in Microsoft Excel, however examples of families in different circumstances are provided in the text to illustrate the size of the effects. Unstandardised coefficients are preferred in the models looking at the effects of the family circumstances on changes in emotional well-being. The risk factor and life events variables are binary categorical variables and so unstandardized coefficients can be easily compared to illustrate the effects of these variables on support.

Finally, some consideration needs to be given to what sort of effect sizes might be important in this analysis. While Cohen (1988) had made suggestions about the effect sizes that might be considered small or large, Durlak (2009) discusses how these were only originally proffered as a rough guide to how effect sizes might be interpreted. He stresses the importance that effect sizes are interpreted in the context of what is being investigated, suggesting that it is not just its size but its practical significance. Such issues may be important for this research. Barrett (2007) highlighted how the effects that home visiting support, including that provide by Home-Start, are supranormal effects, thus large effect sizes may not be expected. Sweet and Appelbaum (2004) also criticised the stringent application of Cohen's (1988) guide to what could be classified as a big or small effect to home visiting programmes. While Cohen's (1988) suggestion was to classify any effect size lower than 0.2 as small, Sweet and Appelbaum (2004) point out that in their meta-analysis of home visiting programmes all effect sizes on parent outcomes were all smaller than .14. The authors make an important point, discussing the practical importance of the programmes, which were aimed at preventing child abuse, and they suggest that even a fractional effect might be important in such circumstances. Such issues may apply to some of the analysis carried out in this thesis. While we may not be looking at the overall efficacy of home visiting support per se, we are exploring how other factors affect changes in parental coping and small effects may be all that can be expected.

This chapter has outlined the data analysis methods used to investigate the effects of the nature of support and family circumstances on changes in parental coping. It has described how ROC variables have been created. It then outlined the data analysis methods that will be used to investigate how other factors impact on changes in coping. The next chapter presents the results from the first part of that analysis looking at the effects of the nature of support on changes in coping.

CHAPTER 6

The Nature of Support

6.1 Introduction

In Chapter 2 the evidence concerning the relationship between the way home visiting support is delivered and the outcomes of support was reviewed. Chapter 4, has already explored the relationship between changes in coping and one aspect of support: its duration. This identified a very small relationship between overall changes in coping and the duration of support, but a wide variation in the time it took for families to make those changes. The literature also suggests relationships between some other aspects of the way support is provided and improved outcomes of support. There is evidence that the frequency of home visiting support is related to better outcomes, see for example Nievar et al (2010). While qualitative evidence suggests Home-Start parents would favour more frequent support (Frost et al 2000, McAuley 2004) this has yet to be backed up by quantitative evidence. For other aspects of support the results of previous studies appear to be more ambiguous. For example, different findings have been reported with respect to the effects of the length of individual visits (Raikes et al 2006, Wen et al 2016), and there is much debate about the credentials of those providing home visiting support (Rapoport and O'Brien-Strain 2001). Previous studies of Home-Start have also highlighted concerns about families waiting for support to start (McAuley et al 2004, MacPherson et al 2010) but it is not clear what effect this has on changes in parental coping once support begins. Likewise, there is little evidence about the effects of a high proportion of visits being cancelled on changes in coping. Overall, this highlights a lack of information regarding how the nature of Home-Start home visiting support is related to changes in emotional well-being and coping with other issues. Because of this the second research question was framed to ask how the nature of support relates to improvements in parental emotional well-being.

We have subsequently explored Home-Start's administrative data and described how variables relating to the nature of support were derived from it. These were able to describe many of the aspects of support discussed in the literature, including the average length of visits, their frequency and who the support is provided by. In this chapter those nature of support

variables will be used to examine the relationship between the nature of support and changes in coping, and as such provide answers to the second research question.

The Chapter is divided into a further four sections. The next section explores the nature of support among the Home-Start families. Descriptive statistics are provided for the nature of support variables, and bivariate relationships between them examined. This enables differences in the way support is provided by paid workers and volunteers to be highlighted, and other patterns of support to be considered.

The majority of families who complete Home-Start support with an End Visit, report higher feelings of being able to cope at the end of support than at the beginning. However, there are a small number of families who do not. There are also some families who do not complete support with an End Visit. Section 6.3 considers these families and looks at what differences there are in the way support has been provided to them.

Chapter 5 described the creation of ROC variables which indicate the rate at which the parents' self-reported feelings of coping change. In Section 6.4 these are used in linear regression models to explore the impact that the nature of support has on improvements in parental coping. The primary concern of this study is in the improvements in parental emotional well-being over the course of support. Therefore the ROCs of the three coping measures concerned with parental emotional well-being are used. However, as highlighted previously, while Home-Start's theory of change suggests Home-Start works through improving parental well-being, not all families start support indicating low levels of coping with their emotional well-being. Some report problems coping with different issues, such as a problem related to one of their children or with running the home. It may be that the importance of different aspects of support varies according to whatever it was that the family has problems coping with initially. The changes in coping with emotional well-being are therefore contrasted with changes in coping with other issues. This in part helps to answer the fourth research question regarding how family circumstances affect the relative importance of different aspects of support, an issue that is explored in more detail in Chapter 8.

The chapter concludes with a discussion section which looks at all the different elements of support in turn. It pulls the findings from different sections of the chapter together considering what they might mean in the context of the literature.

6.2   Patterns of support

In this chapter, the nature of support variables, described in Chapter 3 will be used to explore how the way support is delivered affects changes in parental coping. Before proceeding with that analysis, this section will look at those nature of support variables in more detail, exploring the relationships between them to identify any patterns in the way support is provided. This will facilitate interpretation of the relationship between the nature of support and changes in parental coping.

One of the nature of support variables, Service Delivery, is a categorical variable and describes whether visits were provided by paid workers of volunteers. Of the entire dataset of 10,639 families, 8,932 (84%), received visits from volunteers only, while 927 (8.7%) received visits from only paid workers. The remaining 780 families (7.3%) received support from a mixture of paid workers and volunteers. This might be because support started with a paid worker and was changed to volunteer support, or families might have started support with a volunteer and changed to receive the support of a paid worker. For some families there were several changes with respect to whether support was provided by a volunteer or paid worker.

The remaining nature of support variables are numerical variables. Univariate statistics describing them are provided in Table 6.1, and charts showing their distribution are available in Appendix B (Figures B1 to B10). The figures in Table 6.1 apply to the whole dataset. As described previously different parts of the analysis will use different subsets of the data, for example analysis using ROC variables will only use those who have indicated initial low levels of coping with a specific issue. This will mean there are different numbers of families included in different sets of analysis, and the descriptive statistics relating to them may also vary.

These statistics suggest that a very average type of support would be for a family to wait about a month and a half for visits to start before being supported for about eight and half months. A family would be visited about once per fortnight for about 2 hours, and nearly a quarter of the visits that get planned would be cancelled or rearranged. When looking at the type of activities that occur during these visits it is most likely that they will have included an element of emotional support. Visits in which home visitors carry out activities with children are also very common. Practical support occurs less frequently, with support to use other services happening infrequently.

Table 6.1 Univariate Statistics for Numerical Nature of Support Variables

	$\bar{X}$	Med	sd	n
Number of Home Visits	19.0	13.0	18.3	10639
Duration (in days)	260.9	218.0	180.3	7432
Average Length (in hours)	2.0	2.0	0.6	10612
Wait (in days)	53.7	34.0	67.1	9708
Percentage cancelled	23.9	21.7	17.6	10639
Frequency (per week)	0.52	0.51	0.26	7421
Proportion of visits Practical	0.40	0.33	0.34	10639
Proportion of visits Children	0.66	0.79	0.34	10639
Proportion of visits Emotional	0.72	0.83	0.31	10639
Proportion of visits Services	0.16	0.05	0.23	10639

Before looking at how these aspects of support are related to changes in coping, bivariate relationships between the variables were investigated. This enabled patterns in the way support is provided to be explored. First, differences in the way support is provided by volunteers or paid workers were considered

6.2.1 Differences between volunteer and paid worker support

The differences in the way support is provided by volunteers and paid workers were explored by looking at the mean values of the other nature of support variables according to who the support was provided by. These are set out in Table 6.2, together with Hedges g values. Several differences are apparent in the way support is provided.

Families visited by volunteers tend to receive more visits than those visited by paid workers. Those visited by volunteers receive on average 18.9 visits compared to 11.9 visits for paid workers. There might be many reasons for this. The funding provided for the paid workers may restrict the number of visits that they can give. They might have more pressure on them to complete support and start visiting other families. They may be able to bring about change over a shorter period of time. It also may be because they may be visiting families in different circumstances, or perhaps volunteers who get on well with the families continue support for longer, or it may be due to something else entirely. We cannot tell from this data what the reasons are, however the standard deviation for volunteer support is also greater, highlighting a greater range in the number of visits for those receiving volunteer support.

Table 6.2. Differences in means of nature of support variables according to the Service Delivery variable

	Only volunteer visits occurred			Only Paid worker visits occurred			g (1*)	Mixture of volunteer and paid worker visits			g (2**)
	$\overline{X}$	s	n	$\overline{X}$	s	n		$\overline{X}$	s	n	
Number of Home Visits	18.9	17.5	8932	11.9	15.2	927	-0.40	28.4	25.1	780	0.54
Duration	260.9	176.8	6273	183.6	139.9	643	-0.45	357.1	216.9	516	0.54
Average Length	2.1	0.6	8923	1.5	0.6	912	-1.07	1.9	0.6	777	-0.30
Wait	54.0	66.5	8356	49.2	75.6	695	-0.07	54.0	65.1	657	0.00
Percentage cancelled	24.3	17.6	8932	20.9	18.5	927	-0.19	22.8	15.7	780	-0.09
Frequency	0.53	0.24	6265	0.51	0.33	642	-0.07	0.52	0.29	514	-0.02
Proportion of visits Practical	0.40	0.35	8932	0.44	0.36	927	0.13	0.43	0.30	780	0.11
Proportion of visits Children	0.70	0.32	8932	0.40	0.38	927	-0.91	0.58	0.32	780	-0.35
Proportion of visits Emotional	0.72	0.31	8932	0.75	0.29	927	0.12	0.74	0.26	780	0.08
Proportion of visits Services	0.15	0.22	8932	0.26	0.28	927	0.50	0.17	0.19	780	0.08

* Hedges g – 1 compares the means when support is given by paid workers to means when support is given by volunteers

** Hedges g 2 – compares the means when support is given by a mixture of volunteers and paid workers, with support given by volunteers only

Those with a mixture of support have an even higher mean number of visits though this may not be surprising. These are often families who have either started with a paid worker, and then continued support with a volunteer, or alternatively started with a volunteer and then continued with paid worker visits. Either way a longer duration of support and greater number of visits might be expected. Those visited by volunteers and those receiving mixed support also had longer durations of support compared to those visited only by paid workers.

There are also some differences in the type of activities carried out by volunteers and paid workers. Volunteers spend a much greater proportion of the visits, on average, carrying out activities with children. Seventy per cent of visits to families who had visits from volunteers only, included activities with children, compared to 40% of visits to families who only had paid worker support. Conversely those who had only paid worker support had a greater proportion of visits in which support to use other services was provided, 26% compared to 15% for families who only had volunteer support. Again the reasons for this are not apparent from this analysis. It might relate to their training or to the nature of the problems in the families that they are visiting. The differences between the proportions receiving emotional and practical support are much smaller.

A smaller percentage of visits to families receiving only paid worker visits are cancelled or reorganised, compared to those receiving volunteers. However, the standard deviation for those receiving support from paid workers is reasonably high suggesting a lot of variation in this. Visits might be reorganised for a number of reasons both due to the family and the home visitor. It would probably be expected that somebody visiting as part of their job would be less likely to cancel than a volunteer. It may be that the high standard deviation among paid workers may relate to issues among the families they are visiting.

Visits among those receiving only paid worker support are also shorter in length than those receiving volunteers or a mixture of volunteers and paid workers. For those who have only paid workers the average length of a visit is an hour and a half, whereas for those with only volunteers it is 2.1 hours. It is not clear what the reason for this might be. One possibility is that it relates to the time pressures there might be on paid workers because of their caseloads and other work.

6.2.2 Relationships between numerical nature of support variables

While there are clearly different patterns of support provided by paid workers and volunteers it is not yet apparent if there are any relationships between the other nature of support variables. Bivariate relationships between these variables were explored by looking at Spearman's Rho correlation coefficients. Table 6.3 presents the Spearman Rho correlation coefficients between these variables.

The majority of the correlations are very small with coefficients under 0.2. This suggests that there are a great many different patterns of support for families. However, there are some exceptions to this. The number of visits is strongly correlated with the duration of support (r_s=.742). This is not surprising those who have a longer duration of support are likely to have more visits. The number of visits is also correlated with the frequency of support (r_s=.472), suggesting that those who are visited more frequently also have more visits. Both the total number of visits and the frequency of visits are negatively correlated with the percentage of visits cancelled. So where a family has a higher proportion of visits cancelled, visits are less frequent (r_s=-.337) and they end up having fewer visits overall (r_s=-.204).

The variable indicating the average length in hours of each of the visits the home visitor makes to the home, also correlates with some of the other nature of support variables. Families who have longer visits are more likely to have more visits (r_s=.291). Both longer visits and a greater number of visits are related to having a volunteer rather than a paid worker so this may be acting as a confounding factor in this relationship. Families who have longer visits are also more likely to have a greater proportion of visits in which home visitors carry out activities with children (r_s=.307), and /or provide practical support (r_s=.231). This could potentially be an indication that these activities are time consuming.

This analysis highlights some patterns in the way that Home-Start support is provided to families. Most notable are the differences in the way support is provided by volunteers and paid workers. However, it is not clear why these differences occur, nor what the overall effect is on families. The relationship between the nature of support and the problems that the families have will be fully explored in Chapter 8. However, before doing that the impact of these differences on the outcomes of support for all families will be considered. The next section will look at how the nature of support relates to the way support ends.

Table 6.3 Spearman's Rho Correlation Coefficients between Nature of Support Continuous Variables

		Duration	Average Length	Wait	Percentage cancelled	Frequency	Proportion Practical	Proportion Children	Proportion Emotional	Proportion Services
Number of Home Visits	r_s	.742	.291	-.001	-.204	.472	.174	.142	-.035	.133
	(n)	(7432)	(10612)	(9708)	(10639)	(7421)	(10639)	(10639)	(10639)	(10639)
Duration	r_s		.171	.046	-.011	-.158	.107	.050	-.033	.109
	(n)		(7410)	(6878)	(7432)	(7421)	(7432)	(7432)	(7432)	(7432)
Average Length	r_s			-.012	-.140	.193	.231	.307	.078	.045
	(n)			(9683)	(10612)	(7399)	(10612)	(10612)	(10612)	(10612)
Wait	r_s				.024	-.093	-.054	.058	-.018	-.034
	(n)				(9708)	(6868)	(9708)	(9708)	(9708)	(9708)
Percentage cancelled	r_s					-.337	-.110	-.057	-.004	-.026
	(n)					(7421)	(10639)	(10639)	(10639)	(10639)
Frequency	r_s						.116	.145	.008	.046
	(n)						(7421)	(7421)	(7421)	(7421)
Proportion Practical	r_s							.007	.075	.170
	(n)							(10639)	(10639)	(10639)
Proportion Children	r_s								.143	-.124
	(n)								(10639)	(10639)
Proportion Emotional	r_s									.058
	(n)									(10639)

6.3   Nature of support and support outcomes

Previous chapters have highlighted how the outcomes of support vary for families.   The majority of families end support with an End Visit, and at this End Visit they report improved feelings of coping with the issues that have been of concern for them.   Section 6.4 below will look at how the nature of support affects the rate at which those improvements in coping occur.   However, before that, this section briefly considers the way support is provided to those families who do not end support in this way.

6.3.1   Families who have End Visits but do not improve

Table 6.4 shows the odds of improving for the three emotional well-being coping measures according to whether support is provided by a volunteer, paid worker, or a mixture between the two.   Equivalent figures for the other coping measures are available in Table E1 in Appendix E.   For all coping measures the odds of improving are higher for those families receiving only volunteer support, compared with paid worker support.

Table 6.4. Percentage of Families who improved and who did not improve who had support from volunteers, paid workers and mixed support, by coping measure (Initial low coping scores only)

Coping Measure	Whether improvement occurred		Volunteer visits	Paid worker visits	Mixture	Odds Ratios		
						* 1	* 2	*3
Mental Health	No	%	72.9%	14.3%	12.9%			
		n	51	10	9			
	Yes	%	81.2%	10.3%	8.5%			
		n	990	125	104			
Odds of improving with support			19	13	12	1.55	1.68	1.08
Isolation	No	%	71.0%	21.0%	8.1%			
		n	44	13	5			
	Yes	%	85.0%	7.3%	7.6%			
		n	1149	99	103			
Odds of improving with support			26	8	21	3.43	1.27	0.37
Self-Esteem	No	%	76.7%	12.8%	10.5%			
		n	66	11	9			
	Yes	%	82.6%	9.4%	8.0%			
		n	1085	124	105			
Odds of improving with support			16	11	12	1.46	1.41	0.97

* 1. Odds ratio, improving with volunteer support compared to paid worker
2.Odds ratio, improving with volunteers support compared to mixed
3.Odds ratio, improving with paid worker support compared to mixed

This may seem counter intuitive, as it suggests that families are less likely to improve when they have the support of a paid worker.   It may be related to the sorts of problems that the

families have with paid workers being placed with families with more complex needs. In Chapter 4 the reasons why support ends were discussed. The majority of families who leave support with End Visit data leave support because they have agreed that the Home-Start support is no longer needed (See Table 4.3). However, there are a small proportion who leave for other reasons, such as Home-Start determining that their needs could be better met elsewhere, or because of safety concerns. These types of endings are related to a greater likelihood of improvements not being made. It may be that paid workers are more likely to be supporting families who have to end support early for reasons like these, and that this may account for the greater likelihood of those with paid workers not improving.

Table 6.5 presents the mean figures for the numerical nature of support variables, for those who make improvements in their emotional well-being and those who do not. Figures for the remaining coping measures are available in Table E2, Appendix E.

Those who improve have longer durations of support. This effect is apparent for all coping measures although the effect size varies. For most of the coping measures those who improve also have a higher number of visits. There also seems to be a greater percentage of cancelled visits among those who do not improve for most coping measures. With respect to all the other nature of support variables the effects are less consistent.

Table 6.5 Differences in the nature of support according to whether or not families improve

			Number of Visits	Duration	Average Length	Wait	Percentage cancelled	Frequency	Proportion Practical	Proportion Children	Proportion Emotional	Proportion Services
Mental Health	No improvement	$\bar{X}$	17.5	256.9	2.0	34.6	32.6	0.46	0.37	0.59	0.81	0.17
		(s)	18.8	177.7	0.6	36.1	16.1	0.23	0.34	0.35	0.25	0.25
		n	70	70	69	59	70	70	70	70	70	70
	Improvements made	$\bar{X}$	19.1	268.6	2.0	48.5	23.8	0.52	0.40	0.62	0.78	0.16
		(s)	17.3	177.9	0.6	56.8	17.2	0.26	0.34	0.35	0.26	0.21
		n	1219	1219	1217	1151	1219	1219	1219	1219	1219	1219
		g	0.09	0.07	0.07	0.25	-0.51	0.24	0.09	0.08	-0.14	-0.05
Isolation	No improvement	$\bar{X}$	14.8	206.6	1.9	64.7	27.5	0.51	0.44	0.64	0.82	0.21
		(s)	14.7	150.2	0.5	122.0	17.9	0.25	0.39	0.37	0.26	0.27
		n	62	61	61	55	62	61	62	62	62	62
	Improvements made	$\bar{X}$	19.0	267.9	2.1	49.3	23.5	0.52	0.41	0.64	0.75	0.17
		(s)	17.0	177.7	0.6	59.7	16.9	0.26	0.34	0.34	0.29	0.22
		n	1351	1351	1350	1274	1351	1348	1351	1351	1351	1351
		g	0.25	0.35	0.23	-0.25	-0.23	0.05	-0.10	0.01	-0.23	-0.18
Self-Esteem	No improvement	$\bar{X}$	16.6	224.2	2.0	48.6	26.6	0.54	0.44	0.62	0.82	0.15
		(s)	18.2	174.3	0.6	79.7	17.2	0.28	0.36	0.35	0.27	0.23
		n	86	85	85	80	86	85	86	86	86	86
	Improvements made	$\bar{X}$	19.4	274.2	2.0	48.6	23.9	0.52	0.41	0.61	0.77	0.16
		(s)	17.7	187.6	0.6	55.0	17.0	0.26	0.33	0.35	0.27	0.22
		n	1314	1314	1312	1228	1314	1313	1314	1314	1314	1314
		g	0.15	0.27	0.03	0.00	-0.16	-0.08	-0.08	-0.04	-0.17	0.05

6.3.2. Families who do not have an End Visit

As highlighted in Chapter 4, the majority of families complete support with a planned ending. However, a sizable minority do not, and an Unplanned Ending form is completed. There are also a proportion of families with no end data, who may either still be receiving support, or whose end data is missing.

Table 6.6 shows the numbers and percentages of families who received support from volunteers, paid workers or a mixture of the two, according to how support ended. Unplanned ending forms are completed far more frequently when the support is being provided by a paid worker. This ties in with what was discussed above regarding families with paid workers being less likely to improve. It is possible that this effect is related in some way to the problems that the families have. Families who receive a mixture of support from paid workers and volunteers were most likely to have no end data. This would tie in with the idea that at least some of these families might have still been receiving support when the data was exported, given the relationship between families receiving a mixture of support and longer durations of support.

Table 6.6. Percentage of Families who had planned endings and who had support from volunteers, paid workers and mixed support

	Only volunteer f(%)	Only Paid worker f(%)	Mixture f(%)
End Visit form completed	6397(71.6)	650(70.1)	522(66.9)
Odds of having End Visit Form Completed	2.52	2.35	2.02
Unplanned ending form only	1801(20.2)	233(25.1)	121(15.5)
Odds of unplanned ending form completed	0.25	0.34	0.18
No end data	734(8.2)	44(4.7)	137(17.6)
Odds of having no data	0.09	0.05	0.21

Table 6.7 compares the mean figures of the numerical nature of support variables among those who have End Visit data and those who do not.

Table 6.7 Differences in the nature of support according to whether or not families have an End Visit

		Number of Visits	Average Length	Wait	% cancelled	Prop Practical	Prop Children	Prop Emotional	Prop Services
End Visit form completed	$\bar{X}$	18.6	2.1	49.0	23.1	0.41	0.67	0.73	0.15
	(s)	16.4	0.6	55.6	17.1	0.34	0.34	0.30	0.22
	n	7569	7547	6901	7569	7569	7569	7569	7569
Unplanned ending form only	$\bar{X}$	11.9	1.9	53.9	28.0	0.38	0.63	0.70	0.17
	(s)	12.6	0.6	65.4	19.5	0.35	0.35	0.32	0.25
	n	2155	2153	1975	2155	2155	2155	2155	2155
g (*1)		**0.43**	**0.22**	**-0.09**	**-0.27**	**0.09**	**0.11**	**0.09**	**-0.08**
No end data	$\bar{X}$	38.3	2.2	91.8	21.1	0.44	0.70	0.72	0.15
	(s)	28.5	0.6	123.1	14.8	0.33	0.31	0.30	0.21
	n	915	912	832	915	915	915	915	915
g (*2)		**-1.11**	**-0.15**	**-0.68**	**0.12**	**-0.11**	**-0.12**	**0.03**	**0.01**

* Hedges g - 1 End Visit form completed compared with unplanned ending form only completed, Hedges g - 2 End Visit form completed compared with no end data

Both the Duration variable and the Frequency variable are calculated using data from the End Visit Form and so it was therefore not possible to use them for this analysis. There was quite a lot of difference in the numbers of visits that families received, with those for whom no end data was available receiving the most, suggesting that they may still be in support. The families without end data were also considerably more likely to have waited a long time for support to start, they had slightly longer visits and fewer visits that were cancelled. Those who had unplanned endings tended to have fewer visits slightly shorter visits overall, with a greater percentage of them being cancelled. There was very little difference between families who ended support in different ways in terms of the proportion of time that home visitors spent carrying out different activities.

6.4   The nature of support and improvements in coping

The relationship between the nature of support variables and the rate at which coping improves was explored through a two stage process, using the ROC variables created in Chapter 5. Bivariate analysis was used to provide an initial indication of which nature of support variables were related to the ROC variables, so that a smaller number of variables could be selected to put in a linear regression model. Tables 6.8 and 6.9 present the bivariate analysis, of the ROC variables of the emotional well-being coping measures according to who support was provided by and the numerical nature of support variables respectively. Figures for the remaining coping measures are available in Tables E3 and E4 in Appendix E. The ROCs of Child's Physical Health, and Child's Mental Health were not used because the number of families reporting low initial coping with these issues was lower than it was for the other

coping measures, and the models would not therefore have been based on sufficient numbers of families. Since the bivariate analysis was being carried out to identify variables for entry into linear regression models, then only coping measures for which there were sufficient subsample sizes to develop those models were used.

Table 6.8. Mean ROC values according to whether support is provided by volunteers, paid workers or a mixture

ROC of Coping Measure		Volunteer	Paid Worker	Mixture	g (1*)	g (2*)
Mental Health	$\overline{X}$	.0156	.0246	.0107		
	sd	.0139	.0280	.0092		
	n	1041	135	113	0.58	-0.36
Isolation	$\overline{X}$	.0179	.0218	.0128		
	sd	.0212	.0207	.0147		
	n	1193	112	108	0.18	-0.25
Self-Esteem	$\overline{X}$	.0157	.0239	.0128		
	sd	.0163	.0262	.0136		
	n	1151	135	114	0.47	-0.18

*1 – Hedges g showing difference between volunteers and paid work support.
 2 – Hedges g showing the difference between volunteer and mixed support.

Coping appeared to improve more quickly when support was provided by a paid worker, rather than a volunteer, and was slowest when it was provided by a mixture of the two.

Table 6.9. Spearman's Rho Correlation Coefficients for relationships between ROCs and Nature of Support Variables

	Mental Health		Isolation		Self-Esteem	
	r_s	n	r_s	n	r_s	n
Number of Visits	-0.525	1289	-0.518	1413	-0.494	1400
Duration	-0.735	1289	-0.748	1412	-0.694	1399
Average Length	-0.123	1286	-0.147	1411	-0.169	1397
Wait	-0.036	1210	-0.028	1329	-0.033	1308
% cancelled	-0.04	1289	-0.013	1413	-0.014	1400
Frequency	0.123	1289	0.135	1409	0.114	1398
Proportion Practical	-0.1	1289	-0.113	1413	-0.087	1400
Proportion Children	-0.042	1289	-0.008	1413	-0.091	1400
Proportion Emotional	-0.04	1289	-0.051	1413	-0.056	1400
Proportion Services	-0.098	1289	-0.089	1413	-0.062	1400

ROC variables were highly negatively correlated with the duration of support. This is to be expected, since they were calculated using the duration variable. Those with the shortest durations improve the fastest. There is also a strong negative correlation with the number of visits the family have. This is also not unexpected because the number of visits is related to the

duration. For the other numerical nature of support variables effects sizes appeared to be quite low, but the effects were consistent. More frequent visits were associated with faster improvements in coping, whereas longer individual visits were associated with slower improvements in coping. These affects occurred across the ROCs for all coping measures. The patterns in relation to the variables describing the proportions of visits in which different activities occurred were less consistent across coping measures. While many of the individual Spearman's Rho values showed little relationship, each variable had value over .1 for at least one coping measure so it was decided to include these in the models.

For two variables, Wait and Percentage Cancelled there did not appear to be much of a relationship. Spearman's Rho values were less than 0.1 for the ROCs of all coping measures. Previous research had highlighted problems identified in waiting for support to start. This suggests that once support starts so long as parents remain in it, then the time they spent waiting will have no effect on the rate at which they improve. Likewise the proportion of visits they have cancelled has no effect on the rate at which they improve.

We have already seen that there are certain patterns in support, with for example, differences in the way support is provided by paid workers and volunteers. It was therefore necessary to consider how much of the effects of the bivariate analysis would still be present when other aspects of support are controlled for. This was done using linear regression models.

Since the bivariate analysis indicated that Wait and the Percentage of Visits Cancelled had very little relationship with the ROC variables they were not included in the models. Duration was also not included, since it has been used to calculate the ROC variable. Including it in the models would have picked up all the variation in the ROC variables created by the duration, and the models would have effectively been looking at the relationships between the other variables and the raw score change. It was also decided not to include the number of visits in the models. This is correlated with frequency and could have led to problems with multicollinearity. The linear regression model was therefore developed using one categorical variable, Service Delivery and six numerical variables: Average Length, Frequency, Proportion Practical, Proportion Children, Proportion Emotional and Proportion Services. Dummy variables were created for Service Delivery, and the volunteer dummy variable selected as the reference category. As described in Chapter 5, initial models showed high levels of heteroscedasticity and therefore logged versions of the ROC variables were used. The regression equation is available in Table D1, Appendix D.

The R^2, standardised coefficients and the numbers of cases entered into each model are presented in Table 6.10. Unstandardised coefficients and further key statistics about each model are available in Tables E5 to E14, Appendix E.

The R^2 values provided in these models highlight how strongly the nature of support variables can predict the rate at which coping improves. They vary between .176 for ROC Conflict in the Family to .092 for ROC Physical Health. This suggests that the nature of support variables in the model can account for 17.6% of the variance in how parents report they are coping with conflict in the family. While this may seem quite small it needs to be interpreted within the context that there are many aspects of a parent's life that might affect their coping. There are also elements of support which are not covered by the administrative data, such as home visitor training and supervision. Therefore such an amount of variance being related to these nature of support variables might be considered to be a reasonable amount.

The results highlight both similarities and differences in the ways different aspects of support affect changes in coping for different coping measures. First the majority of the coefficients for the Paid Worker Dummy variable are positive indicating coping improves faster when support is provided by a paid worker. This applies to all the emotional well-being coping measures and also to coping with stress caused by Conflict in the Family, suggesting that having a paid worker, as opposed to a volunteer, has a bigger impact on improving coping with these issues. However for other coping measures, such as Children's Behaviour and Children's Dev/Learning, coefficients are much smaller and, in the case of the latter, negative. This suggests that when the family has issues like these then the support of a volunteer can be just as effective at fostering improvements in coping than the support of a paid worker. Coefficients for the Mixed Support Dummy are all negative, suggesting that when support is provided by a mixture of volunteers and paid workers coping improves more slowly. This ties in with those in this mixed category having longer durations of support.

Table 6.10. Standardised Coefficients and key statistics, Linear Regression models Log ROC, ten coping measures

	Coping with Emotional Well-being			Coping with other issues						
	Mental Health	Isolation	Self-esteem	Children's Behaviour	Children's dev/ learning	Physical Health	Household Budget	Running the home	Conflict in family	Multiple Children Under 5
R^2	.111	.123	.124	.136	.096	.092	.142	.123	.176	.122
n	1215	1344	1307	591	376	687	367	547	732	371
Coefficients (β)										
Paid worker	.108	.042	.089	.032	-.005	.106	.117	.113	.134	.059
Mixed support	-.130	-.137	-.083	-.186	-.168	-.114	-.054	-.123	-.080	-.162
Average Length	-.123	-.192	-.159	-.148	-.196	-.108	-.067	-.106	-.196	-.228
Frequency	.189	.233	.241	.245	.191	.194	.264	.187	.282	.202
Proportion Practical	-.069	-.054	-.050	-.057	.057	-.009	-.044	-.081	-.035	-.010
Proportion Children	-.047	-.008	-.081	-.107	-.035	-.108	-.175	-.059	-.121	-.093
Proportion Emotional	-.060	-.061	-.070	-.059	-.004	-.013	.008	-.113	-.012	.049
Proportion Services	-.062	-.007	-.012	.004	.092	-.057	-.099	-.069	.083	-.046

The coefficients for the Frequency variable are generally relatively large compared to the other coefficients and are all positive. Greater frequency of visits is related to faster improvements in coping. For most of the coping measures this coefficient is larger than all the others, highlighting the importance of this relationship. There is some variation in the size of the coefficients across coping measures, with the largest effects being found for ROC Conflict in Family and ROC Household Budget. However, the effect appears to be important for all coping measures.

The coefficients for Average Length are negative for all coping measures. This suggests that longer home visits are associated with slower improvements in coping. This seems a little counterintuitive: that the longer the visits the less well a family improves. However, there is a particular challenge in interpreting these results because of the needs-based nature of the support. Not only can the way the support is provided affect the rate at which the family improves, but their current level of coping can affect the way the support is provided. Longer visits may therefore be an indication that the family are not coping well. There are differences in the size of the coefficient between coping measures, but these are relatively small.

For the variables examining the proportion of visits in which different activities have taken place then many of the coefficients are small and negative. This applies to all the emotional well-being coping measures. Again the negative coefficients could be an indication that these things occur more when families are not coping. While these coefficients tend to be small with respect to improvements in coping with emotional well-being, there are some slightly larger ones in some of the other coping measures, particularly in relation to activities with children being carried out. Relatively large negative coefficients suggest that home visitors may carry out more activities with children when parents are making slower improvements in coping with their children's behaviour, parental physical health, the household budget and conflict in the family. A larger amount of emotional support appears to be related to slower improvements in coping with the day to day business of running the family home.

These findings point to several differences in the relative importance of different aspects of family support for improvements in parental coping. These will be explored together with the other findings in this chapter, in the discussion section, and their relevance within the existing home visiting support literature will be discussed.

However, before doing that it is worth considering the size of some of these effects. The standardised coefficients presented in Table 6.10 enable comparisons of the effects of the

nature of support variables on changes in coping with different coping measures to be explored. To understand exactly how much difference these changes make to improvements in coping it is necessary to look at the unstandardised coefficients. The predicted ROCs under different circumstances can be calculated by inputting these into the regression equation and taking the exponential of both sides. When this is done the predicted improvement in coping for a family when different aspects of support are changed can be calculated. Changes in coping measures are not necessary linear, so the calculations will only give an average predicted change in coping over the course of support.

This can be illustrated by looking at what these effects mean using one coping measure: Self-Esteem. Unstandardised coefficients for Self Esteem are available in Table E11, Appendix E.

Like most of the coping measures, the largest coefficient is for Frequency suggesting a relationship between more frequent visits and faster improvements in coping with self-esteem. We can imagine a hypothetical family, Family X, who are supported by a volunteer, with visits occurring once a fortnight, for two hours and each different type of activity occurring at approximately average rates (as calculated using the mean values for families who make improvements in parental self-esteem, as given in Table 6.5). Under these circumstances the predicted rate of change would be 0.012442 points on the coping measure per day, on average over the course of support. This equates to a predicted improvement of 2.3 over a six month period. However, if the frequency was changed from once a fortnight to once a week this would increase to 3.3 over six months.

The length of the visits is also important. If Family X's visits remain at once a fortnight but the home visits last on average for three hours rather than two hours, then the predicted rate of change over six months drops from 2.3 to 1.8.

If Family X were visited by a paid worker, but everything else remained constant then the predicted improvement would change from 2.3 in six months to 2.9. The differences between the effects of a paid worker and volunteer support in the regression model are not so stark as those in the bivariate analysis. This suggests that some of the reasons why families with paid workers improve at a faster rate than those with volunteers are due to the other aspects of support contained in the model. The slower rates of change for the families who receive support from a mixture of volunteers and paid workers are still apparent from the coefficient. If Family X were to have a mixture of support then the predicted change over six months would drop to 1.9.

The proportions of visits in which certain types of activities occur also have an impact on the model, though the coefficients are not so big. If Family X needed emotional support on every visit rather than just 77% of them their expected change over six months would drop from 2.3 to 2.2. While if activities with children occurred in all visits their predicted rate of change over six months would decrease from 2.3 to 2.1.

The linear regression models discussed in this section show that certain aspects of support are related to improvements in parental coping when other aspects of support are held constant. The next section will discuss what these findings might mean and relate them to some of the literature reviewed in Chapter 2.

6.5 Discussion

In Chapter 2 the current research on how aspects of support affect the outcomes of home visiting was reviewed. This suggested that the frequency of visits might be related to improved outcomes, highlighted debates about the credentials of those providing support and showed largely inconsistent results with respect to other aspects of support. The analysis in this Chapter has now explored how these elements of support are related to improvements in coping among parents receiving Home-Start home visiting support.

Relationships between these variables were explored, and patterns in the way support is provided discussed. Of particular interest were noticeable differences in the way support is provided by paid workers and volunteers. The relationship between the way support is provided and outcomes of support was then explored. This included looking at differences in support for those who had End Visit data and those who did not, as well as differences for those who did and did not improve in relation to coping with different issues. Finally, the relationship between different aspects of support and improvements in coping were considered. This has produced some interesting findings, and this section will discuss the implications of these findings for each aspect of support.

6.5.1 Volunteer or paid worker support

The vast majority of Home-Start families receive support from volunteers but some receive the support of a paid worker, and other still receive visits from both volunteers and paid workers over the course of their support. There is a lot of debate in the literature about the

qualifications of those who provide home visiting support (Rapoport and O'Brien-Strain 2001) with some meta-analyses suggesting that one type of home visitor is more effective for improving some outcomes, while others are effective for different outcomes (Sweet and Appelbaum 2004, Filene et al 2013).

The analysis presented here suggests that the support of a paid worker can be distinctive from the support provided by a volunteer in several ways. Individual visits tend to be shorter. They are more likely to be focused on supporting the family to use other services, and less likely to be carrying out activities with the children in the family.

The majority of families with low levels of emotional well-being improve over the course of support, and those improvements appear to be faster when they are supported by a paid worker.   Having a paid worker did not appear to be as important with respect to improvements in coping with social isolation as it is for the other aspects of emotional well-being. It is easy to envisage why this might be. Families feeling isolated may feel less isolated because someone is coming to visit them, regardless of the home visitors' employment status.

Having a paid worker was not only associated with faster improvements in emotional well-being, but also improvements in coping with other issues as well, including stress because of conflict in the family, the parent's physical health, the household budget and the day to day running of the home. However, the volunteer support seemed to be just as effective for improving how parents felt they were coping with their child's behaviour and how involved they were in their child's development or learning. There was also little difference between paid worker and volunteer support for helping parents cope with multiple children under 5. It may be that where issues are associated with a child rather than the parent themselves then volunteers may be just as effective.

The inconsistency of the effects of having paid worker support, as opposed to volunteer support, in some ways reflects the inconsistent effects of the credentials of home visitors found in the literature. However, it does suggest that different types of home visitor might work better for different families depending on their needs. We can reflect on this in the context of the fourth research question, which concerns how improvements in coping are related to the nature of support for parents in different adverse situations. If different types of home visitor are more effective depending on the family's needs, then it may also be that they are effective for families in different situations. In Chapter 8 we will go on to look at how the nature of support affects improvements in coping for families in different situations.

While paid worker support is associated with faster improvements among those who improve, a different effect is found among those who do not improve, with the odds of not improving higher among those who had had paid worker support. Families with a paid worker were also more likely to end support with an unplanned ending form being completed. These findings need to be considered in relation to the reasons why the families did not improve. Families who did not improve were more likely to end support because Home-Start identified that their needs might be better met via an alternative service or because support was withdrawn because of a safety concern or statutory intervention. These findings might be due to the nature of the problems in the families that the paid workers were working with. Further work on this would be required to find out if this effect was still present when the reasons why families left support were taken into account.

In addition to the families who receive all their home visits from a volunteer or a paid worker, we have also considered a group of families who have received support from a mixture of the two. These are the families for whom support improves the most slowly, and perhaps this should not be surprising. In fact for these families it might be that their low levels of coping are affecting the nature of support. These families are either families who had particular problems at the start that warranted the support of a paid worker, and who were subsequently given a volunteer, or who conversely started with a volunteer but were felt to need the additional support of a paid worker. In either case it is not surprising that it took these families longer to feel that they were coping. Families might have initially, for example, been assigned a volunteer, but when they appeared to be coping less well than expected then perhaps they might have swapped to having paid worker support. Alternatively, there may be situations where paid workers are able to support families for a limited period of time. If the family improved in their ability to cope sufficiently over this period then no more support may be required and the family will have had paid worker support only. However, if the family had not improved sufficiently, perhaps a volunteer may have been placed with them resulting in a family in the mixed category. There may also be alternative reasons why those receiving mixed support have slower rates of improvements, including the possibility that there might be issues relating to the family that have led both to mixed support and a slower rate of improvement

6.5.2 Average Length

Families who had on average longer individual visits were more likely to have more visits overall. They were also more likely to have a greater proportion of visits in which activities with children occurred, and in which practical support is provided.

Having, on average, longer individual home visits appears to be associated with slower improvements in coping. With respect to the families that did not report improvements in coping, there did not appear to be any consistent affect across coping measures. Regarding how support ends, those who have End Visit data have on average very slightly longer visits than those with unplanned ending data.

The relationship between longer visits and slower improvements in coping may seem in some ways counter intuitive. However, it is worth considering the particular challenges in exploring how the nature of support relates to improvements in parental coping when that support is needs-based. The nature of support may both impact on improvements in parental coping and be affected by them. Therefore longer individual visits may be associated with slower improvements because home visitors find they need to spend longer with families where the parents are not improving. This seems more plausible than an alternative explanation that somehow it is the home visitors staying there longer that means that the parents are less able to cope.

This effect of the needs-based nature of support is important for interpreting the relationships between all the numerical nature of support variables and changes in coping. Because the level of coping affects support and the support affects the level of coping, interpretation of the regression coefficients needs to be made with caution. This needs to be done in the context of both theory and the findings of previous studies. Likewise, an indication of no relationship given by very small coefficients cannot be therefore considered to mean there is no relationship. There may be no relationship or it might be that the impacts have cancelled each other out.

Looking at this finding in light of the literature gives us more reason to believe that the effect may be because home visitors spend longer with families because they are not coping. Raikes et al's (2006) analysis of Early Head Start data, found the length of visits had no significant effect on child and family outcomes. However, Early Head Start support is designed to be 90 minutes long whereas with Home-Start the length of the visit can vary. In Raikes et al's (ibid)

analysis mean visit times are both shorter than Home-Start visits, and the standard deviation of this is also smaller. Perhaps it is the need-based nature of the Home-Start support that is causing the relationship between the length of visits and slower improvements in parental coping. Home visitors are staying longer as they feel it is needed, perhaps because families are coping less well, or because there are other things going on in the family's lives that the home visitors support the families with.

It is also possible that this effect may explain Asscher et al's (2007) finding that the parenting improved more when support was less intense. In their study intensity was a composite variable including the total number of visits, the number of visits per month and the length of those visits. This effect could have been caused if longer visits were occurring in families who were not improving much.

Barnes et al's (2006) study of Home-Start also provides evidence that it is the lack of coping that results in longer visits rather than the other way round. The study found a positive correlation between the average length of individual visits and parental dysfunctional child interaction described at two months (the first time point that this measurement was taken). This suggests home visitors were staying longer with families where there were problems with the parent child relationship.

Longer visits may also have occurred because of problems or crises arising for the family. A number of commentators have highlighted the unpredictable nature of home visiting support, and problems that home visitors can have finding families in a state of crisis and having to deal with emergency problems in families (Tandon 2008, Turnbull et al 2013). This issue was also highlighted by Hardy (1989) cited in Bennett et al (2007) when explaining how their programme did not function as expected. Many home visitors arriving at family homes reported being immediately confronted with crises in the families they were visiting. Many of these required immediate attention, including the threat of eviction and problems accessing heat, food, electricity, clothes and so on. It could be that if these or similar sorts of problems are arising in Home-Start families, then they might be both more likely to reduce parental feelings of coping and result in longer visits.

There may be many reasons why families have longer visits. Some of these may be connected to the family's situation. The following chapters will explore how the family's situation relates to the nature of support and parental improvements in coping. It may be that when this

process is carried out it may become clearer if there is an external factor that might explain why families have longer visits and slower improvements in coping.

6.5.3 Frequency

More frequent home visits were related to faster improvements in coping with emotional well-being and with faster improvements on the other coping measures. As discussed above in interpreting the effects of these needs-based nature of support variables there is a need to be mindful of the fact that coping could improve faster because the visits are more frequent, or the visits might be occurring more frequently because the parents are coping.

With respect to frequency there are reasons to believe that the more frequent the visits are the faster families will improve. First, this is in keeping with other home visiting studies (Powell and Grantham-McGregor 1989, Olds and Kitzman 1993, Nievar et al 2010, Flemington et al, 2015). Nievar et al's (2010) meta-analysis considered many programmes of a set frequency, and suggested that home visiting programmes with greater frequency were more successful. Since these were of a set frequency, this effect could not be occurring because the needs of the family were determining the frequency. Second the qualitative literature relating directly to Home-Start, suggests Home-Start families welcome more frequent visits (Frost et al 2000, McAuley et al 2004). McAuley et al (2004) also reported that the frequency of visits had no relationship to outcome measures. However, we have previously highlighted how, because the duration of Home-Start support is also needs-based, there tends to be much less variation in the final outcome measures, and more variation in the time it takes to reach those outcomes.

A final reason to suggest that more frequent visits help families to improve centres around the percentage that are cancelled for a given family. There is a correlation between the frequency of visits and the percentage cancelled (r_s=-.337). This is not surprising, the higher the number of visits that are cancelled the less frequent the visits are likely to be. However, in spite of this, there is not much of a relationship between the percentage of visits cancelled and rates of improvements in coping for any of the coping measures (See Table 6.9). All values of r_s <0.1. If the reason that more frequent visits were leading to improvements in coping was because families who were not coping were cancelling visits, then a stronger negative correlation would have been expected between the percentage of visits cancelled and the rate of improvements in coping.

Because the Frequency variable was calculated using data from the End Visit Form, there is no information about the relationship between the frequency of visits and the likelihood of having an End Visit. With respect to the relationship between there being improvements in coping or not, there was no consistent effect across coping measures.

6.5.4 Activities carried out with Families

Four variables, that report on the proportion of visits in which various different activities have occurred, were also used. These concern the proportion of visits in which families have been provided with practical support, emotional support, support to use other services and in which activities with a child or children in the family have occurred.

It has already been highlighted above how these different types of support tend to be associated with support being provided in different ways. Support to use other services is more common among families being supported by paid workers, whereas activities with children are more common among families receiving volunteer support. Both practical activities and activities with children are associated with longer visits, they are also weakly associated with more frequent visits. Families who have a higher proportion of visits in which practical activities occur are slightly less likely to have cancelled visits. There are also weak associations between these four types of support. More practical activities are associated with more support to use other services. More emotional support is associated with more activities with children, and there is a negative correlation between activities with children and being supported to use other services.

These activities are therefore related to different patterns of support, however, there does not appear to be any relationship between these variables and the likelihood of families not having end data. With respect to whether or not improvements in coping with emotional well-being occur, the effects the proportion of visits in which practical support, activities with children and support to use other services appear to fairly minimal. Families who do not improve do appear to have had slightly more emotional support. It may be that the fact that they are not improving has led the home visitors to provide more emotional support. Figures with respect to the effect of these activities on other coping measures vary. There is one quite large effect. Activities with children appear to greatly increase the likelihood of improvements in children's development learning (Hedges g=0.72).

None of these activity variables had a huge effect on the models looking at what effects improvements in coping with emotional well-being. All the coefficients were negative and relatively small. However the effects with respect to the emotional well-being coping measures are very small. With some of the other coping measure larger effects can be seen. This applies particularly to activities with children. Where home visitors are carrying out a lot of activities with children it appears to be related to slower improvements in children's behaviour, parent's physical health, the household budget and conflict in the family. A large proportion of visits in which emotional support occurs are related to slower improvements in running the home.

The fact that many of the coefficients were negative suggests where more of these activities were occurring then families were improving more slowly. The arguments discussed above regarding the difficulties of interpreting the relationships between these needs-based nature of support variables and improvements in coping need to be re-addressed here. Are these activities occurring more frequently because the parents are not coping, or is parental coping improving faster or slower because of these activities? Even where the coefficients are very small we cannot conclude that the activities are having no effect. It might be that activities might both be happening more because the family are not coping but also helping the family cope better, with these effects cancelling each other resulting in small coefficients. In this case there is very little in the existing literature to help us identify what is causing the effects and it is very difficult to make any conclusions with respect to the effects of these variables.

6.5.5 The Wait for support to start

In this study the time that the families had to wait for home visiting support to start did not appear to be related to the rate of improvement in coping once support started. Nor was there any relationship between this wait and the way support was provided once it started, nor the likelihood parents reporting an improvement by the end of support. There was also very little difference between the time parents spent waiting for support to start and for those with End Data and unplanned endings.

There was, however, a relationship between the time that parents spent waiting for support to start and the likelihood of not having any end data. The mean wait for support to start for those with an End Visit was 49 days, compared to 92 days for those with no end data (Hedges g=-0.68). It is not clear why this effect occurred. It may be that since the support started later, it is less likely to have had enough time to be completed by the time the data was exported. It

might also be that some of these families had specific types of problems that it took longer to find an appropriate home visitor for, and these problems also resulted in support continuing for longer.

6.5.6 Visits Cancelled

Cancelled visits were more common among those supported by volunteers and were associated with having fewer, less frequent, shorter visits with fewer practical activities. Remarkably among the families that improved there was very little relationship between the percentage of visits cancelled and the rate at which coping improved.

Families with unplanned ending data had a higher proportion of visits cancelled then other families. This could perhaps be an indication of lack of engagement in support, or other problems that might lead to the premature ending of support.

Over all the coping measures, the relationship between the percentage of visits cancelled and whether or not coping improved was inconsistent. However, there were a couple of coping measures where the relationship did appear to be quite so strong. The percentage of visits cancelled was related relatively strongly to the likelihood of parents not reporting improvements with their mental health (Hedges g=-0.51), or their physical health (Hedges g=-0.31). A plausible explanation for this might be that parents are cancelling visits because of their health issues.

This analysis of the nature of Home-Start home visiting support has highlighted a number of relationships between the way support is provided and changes in coping. However, both the way support is provided and improvements in coping are also affected by the situation that the family finds itself in. This study is particularly concerned with families in adverse situations. This includes problems both in terms of the risk factors the family has, the level of problems they have and the life events that occur during the course of support. The next chapter will, therefore, go on to consider how effective support is for families in different adverse situations.

CHAPTER 7

The Family Situation

7.1 Introduction

In the last chapter the relationship between the way that Home-Start support is provided and improvements in parental coping was explored. Several aspects of support were found to be related to the rate at which parental coping improves, including the frequency of home visits, the length of visits, and whether the support is provided by a volunteer or paid worker. However, it is not yet known how much a family's circumstances affects their rates of improvement, nor how these circumstances are related to the way support is provided and whether this affects the subsequent improvements. These are the issues that will be looked at in these final two empirical chapters. This Chapter will provide an exploration of how the family's situation relates to improvements in parental coping. Chapter 8 will then go on to explore the relationship between the family situation and the nature of support and how the nature of support relates to improvements for families in different situations.

Chapter 2 explored the literature relating to different types of family adversity. The impact of different risk factors on outcomes for children was considered. More permanent risk factors were contrasted with stressful events and the impact of single risk factors contrasted with multiple risks. Such adverse situations can create parental stress affecting the parent's emotional well-being. This study has already highlighted how for the majority of Home-Start parents, emotional well-being improves over the course of support. However, we do not know if these improvements differ for families in different situations.

Chapter 2 also considered the literature on home visiting support for families in different adverse situations. Within previous studies of Home-Start there are some details about how support is provided to families in different adverse situations, however, there is little comparing the relative efficacy of support for families in those different situations. Likewise in the wider home visiting literature, while some studies suggest that home visiting support is either effective or not effective for families in different situations, there is limited analysis which directly compares support for families in a range of different adverse situations. The

analysis set out in this chapter will look at the relative improvements in parental emotional well-being for families in a range of different situations.

This chapter looks at home visiting support and family adversity in three different ways. First, the impact of individual risk factors, which apply to the family at the start of support, is explored. The impact of complexity in families is then examined, before looking at the impact of stressful events that occur over the course of support. By looking at these different aspects of adverse family situations this chapter sets out to answer the third research question: "How do adverse family situations affect improvements in parental emotional well-being?"

In Chapter 3, different sets of variables were introduced relating to each of these family situations. These included a set of 11 individual risk factor variables, as well as variables relating to the complexity of the families problems and life event variables. The chapter is divided into a further four sections. The next three sections each use a different set of these family situation variables. They explore the relationships between these variables and changes in emotional well-being, using the three emotional well-being coping measures.

Section 7.2 concerns the relationship between individual risk factors, and changes in emotional well-being. First, bivariate analysis is used to identify if any risk factors are associated with either not having End Visits, or not improving. Linear regression models are then used to explore the impact of the risk factors on improvements in coping. In Section 7.3 similar methods are used to look at changes in coping for both high risk families and families reporting different Hardiker levels. The effects of these variables on improvements in coping will be explored while controlling for other risk factors.

Section 7.4 concerns stressful life events that occur during the course of support. The variables describing these events were derived through the content analysis of open ended comments in the diaries completed by home visitors. Chapter 3 described how this process resulted in a set of life event variables. However, the findings of that content analysis are also useful for building up a picture of the sorts of events that are happening in the lives of Home-Start families. The first part of the section therefore describes the sorts of events that are discussed in these comments. The variables are then analysed to look at their relationships with the outcomes of support, and linear regression models are developed to look at their impact on improvements in coping.

The final section of the chapter is a discussion section which pulls all the findings together and highlights what conclusions can be drawn about the impact of the family situation on improvements in parental coping.

7.2   Individual risk factors

The first stage of this investigation into how different types of adversity affect changes in emotional well-being looked at the effects of individual risk factors. Table 7.1 provides details of the frequencies of the 11 risk factors, both in the entire dataset of 10,639 families, and for those with initial low levels of coping with each of the emotional well-being coping measures. Risk factors vary considerably in their frequency, the most prevalent being large family size and mental health issues, however, some risk factors only apply to a small number of families particularly prison and asylum seeker/refugee.

Table 7.1. Frequencies of risk factors in different subsamples of data

	All Families	Families with Initial Low Scores		
		Mental Health	Isolation	Self-Esteem
	f(%)	f(%)	f(%)	f(%)
Asylum Seeker/Refugee	204(1.9)	51(2.6)	77(3.4)	44(1.9)
Child Protection Plan	402(3.8)	56(2.8)	73(3.2)	86(3.8)
Disabled Child	1173(11.0)	191(9.6)	218(9.6)	209(9.1)
Disabled Parent	780(7.3)	179(9.0)	195(8.5)	172(7.5)
Domestic abuse	1310(12.3)	261(13.1)	(13.8)	352(15.4)
Housing Issues	534(5.0)	116(5.8)	154(6.8)	141(6.2)
Large Family Size	3759(35.3)	669(33.6)	734(32.2)	749(32.7)
Mental Health Issues	3419(32.1)	988(49.6)	933(40.9)	1059(46.2)
Post Natal Depression	1784(16.8)	479(24.1)	473(20.7)	533(23.3)
Prison	94(0.9)	18(0.9)	14(0.6)	19(0.8)
Substance Misuse	417(3.9)	71(3.6)	74(3.2)	88(3.8)
n	10,639	1991	2281	2290

The procedure used to look at changes in coping was similar to that used in Chapter 6. Firstly the relationship between these risk factors and support outcomes was explored. This included the likelihood of families in these different situations of improving or not, and of having different types of end data. After this their relationship with the rate at which emotional well-being improves was explored.

Family Circumstances and Outcomes of Support

Bivariate analysis was carried out looking at the relationships between the risk factor variables and whether or not coping improves. Table 7.2 shows the odds of improving when different risk factors are present, while the full results of the analysis is available in Table F1, Appendix F. Because the overall numbers of those who do not improve are very low, it was difficult to know if consistent patterns were being identified. Some risk factors were sufficiently infrequent that they were not present in any families who did not improve. Two risk factors, Disabled Parent and Large Family, appeared to have lower odds of improving for each of the three coping measures, but numbers of families who did not improve with these risk factors were still relatively small, so a bigger dataset would have been needed to be confident of this effect.

Table 7.2. Odds of improving Emotional Well-being Coping Measures for different family circumstances variables

Risk Factor	Odds of ROC Mental Health improving	Odds of ROC Isolation improving	Odds of ROC Self Esteem improving
All families	17.41	21.79	15.28
Asylum Seeker or Refugee	-	19.5	23.00
Child on CPP	10.67	20	23.00
Disabled Child	19.33	18.57	10.45
Disabled Parent	7.50	15	12.63
Domestic Abuse	24.71	21	17.33
Housing	21.00	20	21
Large Family	16.65	18	11.51
Mental Health	14.75	25	15.42
Post Natal Depression	19.47	25	15.2
Prison	-	10	-
Substance Misuse	34.00	-	-
High Risk	13.25	9.90	11.20
Hardiker Level 1	15.19	18.88	14.93
Hardiker Level 2	19.97	25.63	16.46
Hardiker Level 3	16.50	13.90	10.00
Hardiker Level 4	27.00	-	-
Bereavement LE	15.00	12.60	65.00
Birth LE	80.00	23.67	12.33
Housing LE	21.67	35.50	22.33
Relationship Breakdown LE	75.00	39.00	32.33
Physical Health LE	15.13	38.33	18.67
Mental Health LE	9.00	6.50	12.50

Missing values indicate all families improved

Bivariate analysis was also carried out to look at how these families vary in terms of the type of endings of support they have. The odds of different types of endings are summarised in Table

7.3, and full figures are available in Table F2, Appendix F. Several of the risk factors appeared to be associated with the likelihood of Unplanned Ending forms being completed. The risk factor which had the strongest effect on this was Substance Use. Of all families, 20.3% had Unplanned Ending Forms completed, however, this figure rose to 30.9% among those families for whom the referrer had identified substance misuse as an issue for that family. It was also more frequent among asylum seeking and refugee families, with 25.0% having an unplanned ending, and among families with housing issues (24.2%) and domestic abuse (23.8%).

Table 7.3. Odds of different types of endings with different family situation variables present

	Odds End Visit form completed	Odds Unplanned Ending Form only completed	Odds No End Data
All families	2.47	0.25	0.09
Asylum Seeker/Refugee	1.83	0.33	0.11
Child on CPP	2.56	0.30	0.05
Disabled Child	3.00	0.19	0.10
Disabled Parent	2.17	0.24	0.14
Domestic Abuse	2.16	0.31	0.08
Housing Issues	2.07	0.32	0.09
Large Family	2.42	0.26	0.10
Mental Health	2.16	0.29	0.10
Post Natal Depression	2.32	0.27	0.09
Prison	2.62	0.27	0.07
Substance Misuse	1.51	0.45	0.10
High Risk	1.99	0.35	0.08
Hardiker Level 1	2.41	0.25	0.10
Hardiker Level 2	2.80	0.22	0.09
Hardiker Level 3	2.19	0.32	0.08
Hardiker Level 4	2.58	0.27	0.08
Bereavement LE	2.02	0.17	0.23
Birth LE 9	1.77	0.18	0.27
Housing LE	2.05	0.19	0.21
Relationship Breakdown LE	1.86	0.22	0.20
Physical Health LE	2.06	0.15	0.24
Mental Health LE	1.79	0.21	0.22

Among all types of families 8.6% had no end data of either type, and percentages of families with each risk factor who had no end data were similar to this. An exception was disabled parents, 12.2%, of which had no end data. This may be an indication that some of these parents were still receiving support when the data was exported from the system.

One risk factor, Disabled Child, was associated with having End Visit data. Families with disabled children were less likely than other families to have no end data or an unplanned ending.

Relationships between Individual Risks and Improvements in Coping

It has already been highlighted that the majority of parents with low emotional well-being improve over the course of support. However, it is not known if the rate at which they improve is similar for families in different circumstances. This was investigated using linear regression models. The models used the log ROC of the three emotional well-being coping measures: Mental Health, Isolation and Self-Esteem. Table 7.4 reports the regression results for the three models. Unstandardised coefficients are shown because all the risk variables are dichotomous, and therefore comparisons across them can be made easily.

The models are limited, not only to families who had initial low levels of coping with each coping measure, but who also complete support and make improvements during it. Therefore the frequencies vary from those given in Table 7.1. Because of this the frequencies of each variable in the model are also given. Further regression statistics relating to these models are provided in Tables F3 to F5, Appendix F.

Table 7.4. Key Linear Regression Statistics, Log ROC of three Emotional Well-being Coping Measures and Individual Risk Variables

	Log ROC Mental Health		Log ROC Isolation		Log ROC Self-Esteem	
R^2		0.021		0.033		0.020
n		1,214		1,343		1,306
	B	**f**	**B**	**f**	**B**	**f**
Constant	-4.283		-4.236		-4.342	
Asylum Seeker/Refugee	.129	25	-.010	39	.164	23
Child Protection Plan	-.122	32	-.006	40	.024	46
Disabled Child	.104	115	.027	129	.018	113
Disabled Parent	-.098	105	-.204	119	-.072	101
Domestic abuse	.044	171	.177	187	.181	207
Housing Issues	.125	62	.064	81	.089	84
Large Family Size	-.124	382	-.124	423	-.127	400
Mental Health Issues	-.117	588	-.134	539	-.096	582
Post Natal Depression	-.014	292	.079	271	.029	302
Prison	.401	12	.635	10	-.041	14
Substance Misuse	-.054	34	-.068	33	-.104	48

Some interesting observations can be made from the results presented in Table 7.2. First, the R^2 values for each of the models are low. These risk factors therefore account for a very small

proportion of the variance in the way improvements are made to parental emotional well-being: about 2.0% of the variance for coping with self-esteem. This can be compared to the figure of 12.4% of the variation that can be attributed to the nature of support variables (See Table 6.10, previous chapter). The relationship between the nature of support and the rate at which coping improves is much stronger, and this might suggest that the way support is provided has a greater effect on the rate at which coping improves than these risk factors do. In stating this there is a need to be mindful of the two-way relationship between the nature of support and improvements. The way support is provided can affect improvements in parental emotional well-being and parent's level of emotional well-being can affect those improvements. So not all the variation in the models in Table 6.10 is due to aspects of support affecting coping. Notwithstanding this the R^2 values of the models presented in Table 7.2 are considerably smaller. Therefore it does seem plausible that overall the way support is provided has a bigger impact than these risk factors on the rate at which emotional well-being improves.

There is, however, a small amount of variance that appears to be related to these risk factors, and this is worth exploring further. The variables entered into the models are all dichotomous. Negative coefficients indicate that the presence of the risk factor is associated with slower improvements in coping while positive coefficients show the presence of the risk is associated with faster improvements.

Several of the risk factors appear to be consistently related to slower improvements across different coping measures particularly Mental Health, Large Family Size and Disabled Parent. In many cases the coefficients are small. However, since negative coefficients occur across all coping measures they relate to slightly different subsets of parents. This suggests therefore, that these variables are overall related to slightly slower improvements in coping.

Some risk factors also appear to be consistently related to faster improvements, particularly Domestic Abuse, and Housing Issues which have positive coefficients for all of the coping measures. The prison variable also has very high coefficients for two of the coping measures, suggesting that parent's whose partner is in prison are also more likely to make faster improvements with their mental health and feelings of isolation, however, the numbers of families involved are very low. In Chapter 2 we highlighted how some previous research (Duggan et al 2004), had considered the malleability of risk factors and home visiting's ability to change them. The risk factors here that appear to be associated with faster improvements

in coping also appear to be more malleable. So the possibility that the emotional well-being of parents with these risks changes because they are more malleable need to be considered.

A better picture of the impact of these risk factors on improvements in coping can be found by, once again, imagining the hypothetical *Family X* as we did in Chapter 6. This can be done by solving the regression equation, taking the exponent of each side. Let's assume as we did in Chapter 6, that the parent in Family X is receiving support from Home-Start for coping with their self-esteem, having started support scoring only a 0 or a 1 on the self-esteem coping measure. We now know nothing about the type of support they are getting, but we can calculate that, if the family had no risk factors, the scores they report on the self-esteem coping measure would be expected to increase by on average 2.4 over six months. If domestic abuse was suspected at referral then the predicted improvement would increase to about 2.8 points on average over a six month period. Alternatively, if it was a family with more than three children, but with no other risk factors indicated, the predicted average improvement over six months would be 2.1 points. The differences are clearly not as big as they were when the nature of support was considered.

Looking at risk factors in isolation is only one way of exploring the effects of family adversity on improvements in coping. While such variables can describe some aspects of the family's situation, they cannot describe their levels of need, nor how complex the family's problems are. In the next section the relationships between these issues and changes in coping will be considered.

7.3   Complexity in families

In Chapter 2, different approaches to exploring how complex a family's problems are were discussed. One of these centres around the effects of cumulative risk (Rutter 1979, Sameroff et al 1987), while the other involves looking at the levels of need (Hardiker et al 1991). In this section the relationship between the complexity of the family's problems and improvements in coping will be explored in both these ways. First, the relationship between improvements in coping for families with a high number of risks will be compared with those who have fewer risks. Following this the relationship between the family's Hardiker level of need and improvements in coping will be explored.

7.31 Cumulative risk

Chapter 3 described how a Cumulative Risk index was developed using the 10 risk factors for child behaviour outcomes. Large family size was not used since it is not a risk factor for child behaviour problems. A High Risk variable was then created to indicate those families who had three or more risks. Table 7.5 shows the frequency of the High Risk variable in both the whole dataset and the subsets for those with low initial scores for each of the emotional well-being coping measures. The relationship between this High Risk variable and changes in coping was explored following the same procedure as was followed for the individual risks.

Table 7.5 Numbers of families in high risk category in different subsamples of data

	f(%)
All Families (n= 10639)	681(6.4)
Families with initial low mental health scores (n= 1991)	179(9.0)
Families with initial low isolation scores (n=2281)	184(8.1)
Families with initial low self-esteem scores (n= 2290)	202(8.8)

High risk and outcomes of support

Firstly bivariate analysis was carried out with the High Risk variable and the variables indicating whether or not coping had improved for each of the parental well-being coping measures. The odds of improving are summarised in Table 7.2 and full results are presented in Table F6. The odds of having improvements in coping were lower among the high risk families than among other families for each of the coping measures. However, the numbers who do not improve are quite small so a larger amount of data would be needed to be confident of a relationship. Bivariate analysis was also carried out to find out how high risk families differed from other families in relation to the likelihood of them having either an Unplanned Ending form completed or no end data at all (See Tables 7.3 and F7). High risk families seemed to be slightly more likely to have an unplanned ending than other families. Twenty-six per cent of high risk families had an Unplanned Ending Form completed, compared to 20.3% of all families. There was very little difference in the likelihood of the families not having any end data.

Relationship between high risk and improvements in coping

The linear regression models were then run including the individual risk factor variables and the High Risk variable. As in Section 7.1 above, three models were run, one for each of the emotional well-being coping measures. The results are summarised in Table 7.6, and further regression statistics relating to each model are available in Tables F8 to F10, Appendix F.

When the models shown in Table 7.6 are compared with those presented in Table 7.4, it is apparent that adding the High Risk variable has made very little difference to the R^2 values. In fact for the Log ROC Isolation and Log ROC Self-Esteem the R^2 values are identical, while the R^2 for the Log ROC Mental Health model has increased by .001. The coefficients for the High Risk variable are also small. This shows that among those parents that complete support, and improve over the course of support, there is hardly any difference, in terms of the rate at which the improvements happen, among families with many risk factors and those with fewer risks.

Table 7.6. Key Linear Regression Statistics, Log ROC of three Emotional Well-being Coping Measures and Individual Risk Variables

	Log ROC Mental Health		Log ROC Isolation		Log ROC Self-Esteem	
	.022		.033		0.020	
	1,214		1,343		1,306	
	B	**f**	**B**	**f**	**B**	**f**
Constant	-4.281		-4.245		-4.348	
Asylum Seeker/Refugee	.125	25	.012	39	.178	23
Child Protection Plan	-.128	32	.024	40	.035	46
Disabled Child	.102	115	.040	129	.027	113
Disabled Parent	-.102	105	-.186	119	-.061	101
Domestic abuse	.041	171	.195	187	.190	207
Housing Issues	.121	62	.085	81	.101	84
Large Family Size	-.124	382	-.124	423	-.127	400
Mental Health Issues	-.119	588	-.125	539	-.091	582
Post Natal Depression	-.016	292	.092	271	.036	302
Prison	.396	12	.656	10	-.030	14
Substance Misuse	-.058	34	-.035	33	-.089	48
High Risk	.015	104	-.091	99	-.046	112

7.32 Hardiker levels of need

Home-Start uses a system for classifying families' level of need based on the work of Hardiker et al (1991). This system classifies families into four levels. Level 1 relates to vulnerable populations or communities who need support provided at a community level or through universal services. Level 2 aims to help families in the early stages of difficulties or in temporary crisis. It relates to families with children who are unlikely to achieve a reasonable standard of health or development but who do not have the support of services by a local authority. Level 3 concerns heavy end risk groups. These families may have severe and well-

established difficulties for example facing abuse, cruelty or wilful neglect. Level 4 is used for families who have broken down temporarily or permanently. Information about the family's Hardiker Level of need is collected by Home-Start at the Initial Visit and is updated at Review Visits. This analysis will use the Hardiker Level set at the Initial Visit only.

Of the 10,639 families, Hardiker Levels were available for 10,225 families.   Their relative frequencies are shown in Table 7.7.

Table 7.7 Frequency of Hardiker Levels in different subsamples of data

	All Families	Families with Initial Low Scores		
		Mental Health	Isolation	Self-Esteem
	f(%)	f(%)	f(%)	f(%)
Hardiker Level	n (%)	n (%)	n (%)	n (%)
Level 1	3947 (38.6)	636(33.2)	804(36.6)	753(34.4)
Level 2	5007(49.0)	999(52.2)	1104(50.3)	1117(51.0)
Level 3	1085(10.6)	248(13.0)	255(11.6)	275(12.6)
Level 4	186(1.8)	32(1.7)	31(1.4)	45(2.1)

Since the Hardiker Levels refer to families in different situations, the variable will be treated as a categorical variable.

Hardiker level and outcomes of support

The odds of families at different Hardiker levels improving are summarised Table 7.2 and numbers and percentages are presented in Table F6. There does not appear to be a consistent pattern in terms of which families are least likely to improve. For the Mental Health coping measures families at Level 1 are the least likely to improve, whereas for the other two coping measures it is families at Level 2. As stated previously, the numbers who do not improve are relatively low so a larger amount of data would be needed to be sure of any pattern.

The relationships between the Hardiker Levels and the likelihood of families having different types of end data are shown in Tables 7.3 and F7. Families at Hardiker Level 3, i.e. those with more well-established difficulties, appear to be the most likely to have an unplanned ending form completed, with 24.0% of families falling into this category, compared to the level of 20.3% overall. Those at Level 2, i.e. those in the early stages of crisis are the most likely to complete support with an End Visit. Those at lower levels are more likely to have no end data.

Relationship between Hardiker level and improvements in coping

To explore whether the Hardiker levels of need would have an impact on rates of improvement over and above the risk factors, additional linear regression models were run containing both the risk factors and Hardiker level. The same method was used as described above for the High Risk variable. Dummy variables were created for each of the Hardiker Levels, with Level 1 being used as the reference category. Key regression statistics from this model are shown in Table 7.8. Further regression statistics are available in Tables F11 to F13

Compared to the Risk Factor only models, presented in Table 7.4, the R^2 values have now increased. This contrasts to the models in which the High Risk variable was added and shows that the Hardiker levels do help to explain a little more about factors affecting rates of improvement. However, the R^2 values do not increase by much and are still low overall. The coefficients for the Hardiker Level 4 Dummy are all positive, and a couple of them are relatively large. These are families that have broken down either temporarily or permanently and the large positive coefficients suggest the emotional well-being of these families improves faster than average. However, there are very few families at this level receiving Home-Start support, so these findings are based on a relatively small number of families. The coefficients for the Hardiker Level 3 Dummy Variable are all negative and for the Log ROC Mental Health the coefficient is reasonably large. This suggests these families with the most severe well established problems improve the most slowly. The coefficients for the Hardiker Level 2 Dummy are not so big, and suggest that there is not so much difference between those at Level 1 and 2 in their rates of improvement. Like the results of the individual risks, these results suggest that differences in the rates of improvement, may be related to how permanent or temporary the family's problems are.

Table 7.8 Key Linear Regression Statistics, Log ROC of three Emotional Well-being Coping Measures and Individual Risk Variables and Hardiker Levels

	Log ROC Mental Health		Log ROC Isolation		Log ROC Self-Esteem	
R^2	0.027		0.036		0.026	
n	1,188		1,317		1,272	
	B	**f**	**B**	**f**	**B**	**f**
(Constant)	-4.246		-4.215		-4.348	
Asylum Seeker/Refugee	.070	24	-.014	39	.156	23
Child Protection Plan	-.132	32	-.006	40	-.008	46
Disabled Child	.125	112	.052	124	.025	108
Disabled Parent	-.119	103	-.235	116	-.073	98
Domestic abuse	.053	168	.182	186	.193	202
Housing Issues	.097	61	.074	80	.092	81
Large Family Size	-.128	373	-.117	414	-.128	393
Mental Health Issues	-.113	574	-.134	532	-.114	570
Post Natal Depression	-.019	285	.074	267	-.005	292
Prison	.477	11	.631	10	-.014	13
Substance Misuse	-.086	33	-.049	33	-.094	47
Hardiker Level 2 Dummy	-.053	637	-.038	687	.043	670
Hardiker Level 3 Dummy	-.109	132	-.067	137	-.062	140
Hardiker Level 4 Dummy	.121	26	.054	22	.181	31

This section has explored the data to find out what the relationship is between the complexity of a family's problems and changes in coping. It suggests both those with the most severe and well-established difficulties and those with the highest numbers of risks are the more likely to leave support early. However, among those that do complete support with an End Visit, there does not appear to be any relationship between the numbers of risks a family has and their improvements in coping. With respect to how Home-Start schemes perceive the families difficulties, those with the most severe well-established difficulties improve the most slowly, while those in temporary states of crisis improve the most quickly.

Both the exploration of the risk factors and levels of risk have hinted at a possibility of improvements occurring at a faster rate when the problems the family face are more temporary. The next section will consider change in a different way. It will look at changes that happen during the course of support, particularly stressful events, and the effect that they have on improvements in coping.

7.4   Life events

The impact of stressful life events on both adults and children was discussed in Chapter 2, including evidence that negative life-events can lower parenting self-efficacy (Zayas et al 2005). Given this it seems likely that stressful life-events happening over the course of support might decrease the rate at which improvements in parental feelings of coping occur.

This section will look at the relationships between life-events and improvements in coping. It will use the series of life event variables introduced in Chapter 3. These were derived from information provided by home visitors in the diaries they complete, on a monthly basis, outlining the support given to families. The diaries contain open-ended comment boxes enabling the home visitor to describe if any of a series of life events have happened to a family. The life event variables were derived from content analysis carried out on these comments. However, in addition to enabling these variables to be created, the content analysis also enables a picture of the sorts of problems faced by parents to be developed. The first part of this section therefore describes the sorts of comments provided through the content analysis, so that this picture can be understood more thoroughly. Following this the life event variables will be used to explore changes in coping.

7.4.1 Description of the Life Events

Comments are provided by home visitors in relation to a range of different changes that may take place in a family's life. Six of these categories of life-event were used in the content analysis. The following section provides a description of the sorts of comments provided under each of these categories.

Bereavements

The Bereavement LE variable indicates if there were any bereavements or miscarriages in the family. A number of different types of bereavement were recorded. They included bereavements in the immediate family, including the deaths of children and parents, and deaths in the extended family including the children's grandparents, great grandparents, uncles and aunts, great uncles and great aunts. The deaths of close friends were also sometimes recorded. There were a number of deaths of unborn children at different stages of pregnancy and miscarriages. Sometimes there were indications of why the deaths had occurred. These included terminal illnesses, but also more sudden deaths including accidents,

suicides and a very small number of murders.   Where deaths of children were recorded, some of these related to conditions that children had been born with.

Births

The Birth LE variable indicates if there were any new births in a family over the course of support. Not many other details were given with respect to these births, though sometimes details of births or pregnancy complications were present, and many included the gender of the baby. There were also a number of sets of twins and triplets, and a very small number of families with long durations of support who had more than one birth as a result of separate pregnancies.

Changes in Housing

The Housing LE variable indicates if families either moved house or were planning to move. It was derived from comments added to the Change in Housing comment box. Comments in this box either discussed plans for moving or explained that families had moved. While many of the comments did not provide any details about the circumstances of the move there were also a number that did. Of these some indicated a move that was beneficial, such as for example, to a house with more bedrooms, or nearer to family.   However, there were a number of comments that indicated that a family had moved under more difficult circumstances. These included families being evicted, being made homeless, moving into refuges or moving because of damage to property including house fires. There were also instances of families moving because of family breakdown. Several families moved into temporary accommodation for a while, including B&Bs or with friends and relatives. There were also comments indicating that families were moving from one sector to another, for example from private housing to council housing, or housing association housing to private. There were also a number of families for whom moves were being planned but it is not clear if they occurred or not.

Relationship breakdown

The Relationship Breakdown LE variable was used to indicate any family which had comments indicating severe relationship breakdown/instability including divorce, separation, or other indications of serious relationship problems. It was derived from comments in the change in relationship comment box. A number of comments related to parent's relationships breaking up, either separating or divorcing or indicating that one or other partner had left. Some referred to particular incidents that had led to breakups including domestic abuse. There were also comments that suggested serious problems in the relationship but that they were still

together, including that they were seeking relationship counselling and other problems that one parent had confided in the home visitor. There were also comments referring to parents adopting separate living arrangements for reasons that may not have been animosity, such as one partner going to work abroad for an extended period of time, or going to prison. This field was also used to indicate more positive changes to relationships. There were a number of reconciliations between couples, or indications that a partner who had been absent was moving back to the family home. This included partners who had been absent because of relationship problems, but also those who had been in prison, and those who had been abroad. There were also indications of new relationships both for the main carer, or for partners who had moved out. Additionally, there were comments about contact with former partners. Sometimes this was specifically related to contact issues with children, but other times it was just an indication that they had been back in contact. There were also a number of cases where co-habiting couples became engaged or got married. Several families had a number of comments relating to different time periods. Some of these indicated a build-up of relationship problems over time, while others indicated a series of changes in relationships over time, such as partners separating for a while then moving back in together, others started new relationships that subsequently did not work out. Because of the complexity of some of these situations, if a family had comments indicating serious relationship problems at any time during the course of support they were classified as having relationship breakdown, even if at other points during the support these problems were not evident.

Health Problems

Two variables Physical Health LE and Mental Health LE, were both derived from comments added to the Serious Illness and A & E visits comment boxes. These two open-ended comment boxes were coded together because of an overlap in their content. The serious illness box contained comments indicating serious illnesses among children, parents and other family members. A range of conditions were mentioned, mostly physical illness, but also mental health problems. Many conditions required admission to hospital. More permanent and severe conditions appeared to be more common among the adults, including cancers, heart problems, and strokes. Parents were also admitted to hospital for more minor operations. Among the children many of the hospital admissions were for more temporary conditions such as bronchitis and pneumonia. Admissions to hospital for severe asthma attacks were also common. However, many comments did not make it clear who in the family had the illnesses, so coding was only able to indicate if an illness had occurred in the family and not who it applied to.

The A & E visit comment box was used to describe visits for conditions of different severity, and for different members of the family. Some of these, particularly those relating to the children, were minor injuries that did not result in any prolonged treatment. However, some conditions were more serious and resulted in hospital admissions and or operations for adults or children. For the parents this included being rushed to hospital because of new or existing conditions, and also overdoses and suicide attempts.

Comments were coded to indicate if they were serious physical health problems, mental/emotional health problems or both. Minor A & E visits and usual childhood diseases, such as chicken pox, were not coded, nor were hospital admissions relating to pregnancies/births. All conditions that resulted in hospital admissions were coded as serious health problems. Some families had multiple entries for the same health condition, while some families had more than one condition mentioned. For other families not much detail was given about conditions and therefore it was not possible to tell if the same condition was being discussed again or if different conditions were being discussed. Because of this families were coded as having a physical health problem if at least one serious health problem had occurred to any family member during the course of support.

7.4.2 Life Events and Changes in Coping

Table 7.9 shows the frequencies of the Life-Event variables in both the whole dataset and in the subsets of those with low initial coping with specific issues. The relationship between the six life event variables and changes in coping was examined using a similar method to the other family situation variables.

Table 7.9 Frequencies of life events variables in different subsamples of data

		Families with Initial Low Scores		
	All families	**Mental Health**	**Isolation**	**Self-Esteem**
	f(%)	**f(%)**	**f(%)**	**f(%)**
Bereavement LE	492(4.6)	115(5.8)	127(5.6)	124(5.4)
Birth LE	735(6.9)	132(6.6)	136(6.0)	150(6.6)
Housing LE	1047(9.8)	216(10.8)	241(10.6)	235(10.3)
Relationship Breakdown LE	586(5.5)	123(6.2)	140(6.1)	164(7.2)
Physical Health LE	871(8.2)	191(9.6)	205(9.0)	199(8.7)
Mental Health LE	120(1.1)	37(1.9)	26(1.1)	49(2.1)
Total	10639	1991	2281	2290

Life events and outcomes of support

The odds of improving among families for whom life events occurred are also summarised in Table 7.2 and full results are presented F14. The numbers of families who do not improve is too small to be confident of any pattern in relation to the occurrence of life events. The relationship between the occurrence of life events and the type of end data available is shown in Table 7.3 and F15. Families for whom any type of life event has occurred are much less likely than other families to have an unplanned ending. They are also more likely to have no end data.

Both of these findings may have arisen because both the occurrence of life events and the likelihood of different types of ending are related to the duration of support. Families who have longer durations of support have more time in which life events may happen. A family who has two years of support is more likely to, for example, move house, or have another baby than a family who had only four months of support, simply because there would be more time for those things to happen. Since a proportion of those with no end data may still have been in support when the end data was exported, those with no end data would also have long durations (although there is no end date through which this could be measured). This would mean that they had had long durations of support and therefore more time for life events to occur. Although it is also possible that the long durations of support may have arisen because of the stressful events which meant they needed support for longer. Those with Unplanned Ending data may also be more likely to have shorter durations of support, explaining why life events are less common in these families. These families may also be less engaged with Home-Start and their home visitor, and less likely to confide in them about such problems.

Relationships between life events and improvements in coping

The relationship between the duration of support and the likelihood of life events also creates an additional challenge in exploring the relationship between life events and improvements in emotional well-being. The ROC variables, used to explore the rate at which coping changes, are calculated using the duration of support and are closely related to it. Those who have longer durations of support tend to improve at a slower rate (see Table 6.9). Any relationship identified showing that a life event is related to slower improvements in coping, could therefore be because the family were improving more slowly, and therefore had a longer duration of support which provided them with more time for life events to occur. Alternatively it could be because the life event happened, the parent found the stress of the life event

added to the emotional well-being problems they already had, and they improved more slowly.

Initial linear regression models were developed to look at the relationship between life events and improvements in emotional well-being. Individual risk factors were also included in the model so that the effects of the life events over and above the individual risks could be determined. The results are shown in Table 7.10 and Tables F16 to F18, Appendix F. As expected those models all had increased R^2 compared to the risk factor only models, and reasonably high negative coefficients for each of the life event variables.

Table 7.10 Key Linear Regression Statistics, Log ROC of three Emotional Well-being Coping Measures and Life Events and Individual Risk Variables

	Log ROC Mental Health		Log ROC Isolation		Log ROC Self-Esteem	
R^2	0.090		0.085		0.077	
n	1,214		1,341		1,305	
	B	**f**	**B**	**f**	**B**	**f**
(Constant)	-4.202		-4.153		-4.255	
Asylum Seeker or Refugee	.086	25	-.024	39	.146	23
Child on CPP	-.113	32	-.004	40	.017	46
Disabled Child	.122	115	.001	129	-.001	113
Disabled Parent or Carer	-.094	105	-.195	119	-.088	101
Domestic abuse	.090	171	.214	187	.220**	207
Housing Issues	.149	62	.077	81	.107	84
Large Family Size	-.102*	382	-.120	423	-.109*	400
Mental Health Issues	-.108**	588	-.140	539	-.090*	582
Post Natal Depression	-.005	292	.076	271	.019	302
Prison	.398	12	.683	10	-.058	14
Substance Misuse	-.007	34	-.039	33	-.067	48
Bereavement LE	-.350	60	-.259	62	-.296	64
Birth LE	-.153	79	-.153	71	-.248	74
Housing LE	-.228	129	-.210	141	-.240	132
Relationship Breakdown LE	-.233	75	-.204	76	-.230	96
Physical Health LE	-.355	121	-.358	114	-.246	110
Mental Health LE	-.231	18	-.220	13	-.313	25

In order to differentiate between the life events resulting in a longer duration of support, and a longer duration of support resulting in more life events, a second set of models was developed. Dates added to the Volunteer/Paid Worker Diaries were used to determine whether or not the life events occurred during the first six months of support, calculated as six

months after the initial visit. A new set of life event variables were coded to indicate life events that happened within these first six months. These variables have the same names as the other life event variables, but with the suffix '6 Months.' The frequencies of these variable is shown in Table 7.11.

Table 7.11 Frequencies of Life Event Six Month Variables

| | | Families with Initial Low Scores | | |
| | All families | Mental Health | Isolation | Self-Esteem |
	f(%)	f(%)	f(%)	f(%)
Bereavement 6 Months	283(2.7)	67(3.4)	64(2.8)	69(3.0)
Birth 6 Months	492(4.6)	85(4.3)	86(3.8)	97(4.2)
Housing 6 Months	556(5.2)	123(6.2)	141(6.2)	134(5.9)
Relationship Breakdown 6 Months	317(3.0)	68(3.4)	72(3.2)	84(3.7)
Physical Health 6 Months	483(4.5)	116(5.8)	114(5.0)	107(4.7)
Mental Health6 Months	61(0.6)	16(0.8)	15(0.7)	21(0.9)
Total	10626	1989	2276	2287

The linear regression models were then rerun using only those families in the data who had at least six months of support. This meant that all the families had stayed in support beyond the time at which the life events had occurred. This removed the problem of more life events occurring because the duration of support was longer. It did, however, mean that the numbers of cases used in the models were smaller, as was the frequency of the life events. A summary of the results is presented in Table 7.12, with fuller results available in Tables F19 to F21.

The coefficients for two life events variables are still relatively large and negative. One of these is the variable indicating that the family suffered from a bereavement in the first six months. This suggests that among parents who are already suffering with poor emotional well-being, if they then experience a bereavement, then the rate at which their mental well-being improves is likely to be slower compared to a parent who has not suffered from a bereavement.

The other life event variable with relatively large negative coefficients is the variable indicating that someone in the family experienced serious mental health problems. It is quite easy to see that there is likely to be a link between slower improvements in parental emotional well-being and someone in the family having a serious mental health issue. In some cases it may be the parent themselves who has the mental health issue. Those who are being admitted to hospitals because of poor mental health are clearly not improving at the same rate as others.

However the cell counts for this variable are now very low, so we cannot be confident that this result would be repeated if a larger number of families in this situation were available.

Table 7.12. Key Linear Regression Statistics, Log ROC of three Emotional Well-being Coping Measures and Life Events in First Six Months, and Individual Risk Variables, families with over six months of support only

	Log ROC Mental Health		Log ROC Isolation		Log ROC Self-Esteem	
R^2	0.035		0.038		0.029	
n	884		973		938	
	B	f	B	f	B	f
Constant	-4.533		-4.516		-4.649	
Asylum Seeker/Refugee	-.009	16	-.159	25	-.169	12
Child Protection Plan	.074	29	.238	31	.270	37
Disabled Child	.029	79	.069	100	.058	80
Disabled Parent	-.174	74	-.152	97	-.108	75
Domestic abuse	.015	126	.109	126	.093	143
Housing Issues	.069	42	.187	56	.167	59
Large Family Size	-.158	287	-.108	317	-.077	301
Mental Health Issues	-.048	447	-.055	414	-.054	432
Post Natal Depression	-.028	212	.002	185	.013	215
Prison	.171	7	.047	5	-.074	11
Substance Misuse	-.160	25	-.127	24	-.131	37
Bereavement 6 Months	-.209	29	-.215	25	-.152	29
Birth 6 Months	.088	46	.078	41	.036	49
Housing 6 Months	.026	60	-.095	61	.052	59
Relationship Breakdown 6 Months	-.010	39	-.006	42	-.037	47
Physical Health 6 Months	-.070	58	-.024	59	.074	53
Mental Health 6 Months	-.306	6	-.141	4	-.090	6

Some of the coefficients for the life event six months variables are not negative. For the Birth 6 Months variable none of the coefficients are negative. This suggests that in the time scales we are looking at, a new birth in the family does not decrease the rate at which parental coping can improve overall. This does not rule out the possibility that there may be a shorter term effect, but these effects are not apparent by the end of support. Likewise the coefficient for the Housing 6 Months variable is positive for two of the coping measures. Again we cannot be sure that there is no effect in the short term, and as discussed above much of the stressful issues relating to moving house occur before the house move happens, and in the longer term this may be a positive event. There is also no obvious relationship with overall rates of improvements and either Relationship Breakdown 6 Months or Physical Health 6 Months. Again, this does not mean that these may not have been very stressful in the short term, and that for a proportion of families they may still be stressful, but an overall effect is not found.

As well as looking at the effects of the life events on families who have over six months of support, Table 7.12 has highlighted some interesting changes in the impact of some of the risk variables on improvements in coping. The number of families in the models has been greatly reduced. Those families who had less than six months support have been removed, and this includes many of those who would have had relatively fast rates of improvement because of their short durations. Those variables that appeared to be related to slower improvements in coping, Large Family Size and Disabled Parent are still related to slower improvements. The coefficient for Mental Health is now small, but this may be because of the mental health life event variable, which would be picking up the effects of some of the families experiencing particularly bad mental health problems.

However, differences seem to appear in the variables that are also related to faster improvements. The coefficients for Domestic abuse are all smaller than they are in Table 7.10, suggesting that perhaps a number of the families where domestic abuse occurred and who made rapid improvements had less than six months support. Those that remain do not appear to be making such rapid improvements compared to some of the other risk factor categories. This is backed up by the percentage of families in the data for whom domestic abuse was indicated, which decreases. For other variables, particularly Child Protection Plan, the coefficients are higher. This may be an indication that families where there is at least one child with a child protection plan are not likely to make very rapid initial improvements, but make faster improvements relative to other families thereafter. This shows that there must be different patterns of change according to the risk factors and highlights the limitations of looking at the average rate of change.

7.5 Discussion

This Chapter has explored the relationship between a family's situation and changes in emotional well-being during Home-Start support. It has done this by looking at the family's circumstances in different ways. First, the relationship between changes in coping and individual risks was investigated. The effects of how complex the family's problems were, were then looked at. This was done by considering both their level of need and whether or not they were classified as high risk. Finally, the effects of stressful life events that happen during the course of support were considered. The analysis investigated if there was any relationship between these family situations and the data available regarding the ending of support. It then looked at whether or not emotional well-being improved and finally where it had

improved the effects of these family situations on the rate of those improvements. This analysis has highlighted some interesting findings, which both relate to and build on findings from previous studies.

The group most likely to have unplanned endings were those with substance misuse problems. Levels were also high among families with multiple risks, asylum seeker/refugees, those with housing problems and domestic abuse. The least likely to drop out were those with a disabled child. These groups of families are remarkably similar to the groups of families highlighted in the literature review as being likely to drop out of other home visiting programmes. High levels of drop out among families where someone has a substance misuse problem were highlighted by Turnbull and Osborn (2012). Roggman et al (2008) identified those with multiple risks and more changes in residence as more likely to drop out from the American Early Head Start programme. While Flemington and Fraser (2016) found that mothers experiencing domestic violence were more likely to leave an Australian nurse home visiting programme early compared to other mothers. Roggman et al (2008) also identified lower rates of dropout in families with a disabled child. Only the association between early dropout and being an asylum seeker/refugee has not been identified through these early studies, but this was not one of the groups that any of them looked at.

The literature review highlighted how, although previous studies had identified home visiting support as being effective for families in certain situations, very little literature had compared changes in outcomes for families in different adverse situations. This meant there was a gap in the literature, which the analysis set out in this chapter, has been seeking to address.

Overall, the analysis has shown that the relationship between the family situation and the rate at which emotional well-being improves is very weak. It is much weaker than the relationship between the nature of support variables and the rate of improvement considered in Chapter 6. We have previously discussed how the way support is provided may both affect the rate of improvement and be affected by it. However, Chapter 6 did conclude that certain aspects of support do appear to increase the rate at which families improve. Comparing the findings of this chapter with those in Chapter 6, it gives us good reason to consider that the way support is provided may have more effect on the rate at which parental emotional well-being improves, than the family situations investigated in this chapter. This does not mean that there are no other family situations that might have an effect, or that these family situations might not have a big effect on some individual families. However, there is no clear indication of a substantial effect overall.

There are, of course, a number of limitations with the way the risk factor variables were collected through the Home-Start administrative data. These were discussed in Chapter 3 and it is possible that they may have contributed to reduced effect sizes. However, we have already highlighted above how these same risk factors have produced very similar results to those found in previous studies with respect to the family characteristics associated with dropping out of support early. It seems likely therefore that the overall effects of these family situations on changes in emotional well-being are very small. This would be consistent with the effects identified by Asscher et al (2007) who found very little relationship between demographic factors in Home-Start parents and the outcomes of support.

That said, there are some small effects, with some risk factors consistently associated with faster improvements and others with slower improvements. Domestic abuse, for example, was found to be consistently related to faster improvements in coping, as were housing problems, whereas slower improvements were consistently identified in families with mental health problems, parental disabilities and large numbers of children. The idea that these findings may relate to the malleability of risks has already been discussed. Some family situations can be changed, and home visiting may be able to support families to change them. Other family situations cannot be changed, and home visiting support needs to work to help families cope in the situations they have. Domestic abuse can be considered as a malleable risk. The situation can be changed by moving away from the perpetrator. Duggan et al's (2004) study considered home visiting's capacity to remove malleable risks and identified its effect at reducing rates of domestic abuse. Overcrowded and temporary housing are also malleable risks. Families can move to suitable accommodation.

However, it is important to remember that this study is not able to demonstrate that it is the Home-Start support that has been responsible for families in certain situations improving more rapidly. We have no way of knowing that the faster improvements are made because of the home visiting support. It may be that these family situations are changing anyway. Additionally although emotional well-being improves at a faster rate among some families in these more malleable situations, it does not improve for all families. When looking only at the families who had at least six months of support, there was a slightly different pattern with respect to the risk factors that were associated with faster improvements. Though families where domestic abuse was a risk factor were still improving quicker than other families, the size of the effect was reduced. This suggests that some of those families with domestic abuse who improved very rapidly had already left support. When only families with more than six

months of support were considered, then those families that remained, improved much more slowly. At this stage those families where there is a child on the child protection register were improving at a faster rate than other families. This means that these families are not so likely to make very rapid improvements but make relatively fast improvements in the medium term. Those with housing problems were also making relatively fast improvements at this stage, perhaps reflecting the timescales it might take to find alternative housing.

This contrasts with the groups of families who appear to improve more slowly. They tend to have problems that may be more permanent, including parental disabilities, large family sizes and mental health problems. These problems will probably still exist at the end of support. Large families and those with a disabled parent improve the most slowly when both the whole timeframe is considered and when only those families who have more than six months of support are considered. Parental disability and large family size were also more likely to not have shown any improvement by the end of support. The number of families who do not improve are very small overall, so this would need to be confirmed in a larger number of families to be confident of an effect. Additionally, parental disability was associated with the increased likelihood of not having any end data, a situation which suggests some of these parents might have still been in support when the data was exported. Overall, this paints a picture of families in these situations struggling with their emotional well-being, and a need for more evidence about what can be effective for these families. With respect to parents with disabilities this is particularly pertinent given the dearth of evidence highlighted by Kilkey and Clarke (2010).

Families with substance misuse problems are also consistently related to slower improvements in emotional well-being. The coefficients are relatively small when all the families are considered, however when only the families who have at least six months support are considered then they become larger. This suggests some families leave support relatively quickly, while others stay in support for a long time making much slower improvements. We cannot tell why this is. It could be related to the type of substance misuse problem that they have. Duggan et al (2004), for example, found that home visiting support could reduce maternal problem alcohol, but not other forms of illicit drug use. However, we do not have enough information to know if such an effect could be happening here.

Multiple risks also appeared to be related to the likelihood of families not improving. However, as stated above there are very few families that do not improve so we would need data on a larger number of families to be confident of this effect. These families were also more likely to

have unplanned endings. It is worth considering this in light of the discussion at the end of Chapter 6, regarding the reasons why families leave support. Some families have end data but leave support because their needs are better met by another agency or there are safety concerns. These families are more likely to not have improved (See Table 4.6). If these families also have a high number of risks then this could account for this effect. This would need to be checked with further research.

Notwithstanding this, the fast majority of families with multiple risks do improve, and interestingly having multiple risk factors does not appear to be related to the rate at which families improve. This is an important finding and is in line with previous research by both Ferguson et al (2005) and Raikes et al (2006). It suggests that so long as families remain in support, then the emotional well-being of parents in those families with multiple risks is just as likely to improve as the emotional well-being of parents in other families. Many studies (Rutter 1979, Felitti et al 1998, Bellis et al 2015) have highlighted the effects of multiple adverse risks on children. However, among parents receiving home visiting support then it appears that the type of risk that the family has may make more difference to changes in emotional well-being than the number of risks they have, so long as the parents do not drop out of support early.

Investigating the effects of the family's level of need on the rate at which emotional well-being improves also suggests that where situations are more changeable improvements may be faster. The investigation of the Hardiker levels on improvements in coping found that those who were considered to be in temporary crisis improved the most quickly. Slowest improvements were made by those with the most entrenched problems.

The investigation into life events also reflects on change. It was carried out given the evidence of the effects of life events on children (Flouri et al 2010) and their association with depressive symptoms in mothers on a home visiting programme (Price and Masho 2014). While it was evident that families who had experienced life events were more likely to indicate a need for home visiting (Asscher et al 2006), it was not clear how life events that occurred during support effected changes in emotional well-being. This study has provided evidence that bereavements during support are associated with slower improvements in coping. However there was no evidence of other life events having an effect that was still apparent by the end of support. The numbers of families with incidents of mental health illnesses which occurred during support were too small to be confident of effects.

This chapter has focused on how the family's situation relates to improvements in coping over the course of support. While very small differences in the improvements in emotional well-being are apparent for families in different situations, it is not clear if these differences are because of the home visiting support, nor if there are any particular aspects of the home visiting support that contribute to them. Chapter 6 established that certain aspects of the nature of support were related to faster improvements in parental coping, including the frequency of support and having a paid worker. It is possible that the small differences in improvements in families discussed above, could be because they are being supported in different ways. It is also not clear whether the different aspects of the way support is provided are as important for all families or if they are more important for some families in some situations. These issues will be addressed in the next chapter.

CHAPTER 8

The Nature of Support for Families in Different Situations

8.1. Introduction

So far this study has examined factors that impact on improvements in parental emotional well-being over the course of Home-Start support in two different ways. Chapter 6 found evidence that certain aspects of the way support is provided were related to improvements in parental coping. In particular the high frequency of support and support being provided by a paid worker, were both related to faster improvements in emotional well-being. Whereas visits with a longer average duration, and support provided by a mixture of volunteers and paid workers, were associated with slower improvements. Chapter 7 investigated how different types of family situation impact on changes in emotional well-being. Overall the family's situation appeared to have much less impact on the rate of improvement compared to the nature of support. However there was evidence that some risk factors, such as domestic abuse, were consistently related to faster improvements in coping whereas others, including mental health problems, disabled parents, larger family sizes and the occurrence of bereavements were consistently related to slower improvements.

What has not yet been explored is how much the nature of support is affected by the family's situation, and the extent to which any improvements in emotional well-being for certain groups may be due to the way they are supported. For example, does a family where domestic abuse is indicated improve more quickly compared to a family with mental health problems because they are being supported in a different way? Also, is the impact of the way families are supported the same for families in different situations? For example, is the impact of having a paid worker on improvements in emotional well-being the same for a family where domestic abuse has been indicated as it is in one where there are mental health problems or a disabled parent? This chapter will explore these issues and, by doing so, provide answers to the fourth research question: "How does the nature of support affect improvements in parental emotional well-being for parents in different adverse situations"

The analysis will focus specifically on some of the family situations considered in Chapter 7. It will consider not only how support is provided to these families, but also if the impact of those aspects of support is the same for families in different situations. In order to do this linear regression models will be developed using subsets of the data containing only families in certain situations. Because of this it is only possible to focus on risk factors that are more prevalent in the data so that those subsets are of sufficient size to enable models to be developed. The analysis therefore focuses on six family situations: domestic abuse, mental health, disabled parent, disabled child, large family size and those that fall into the high risk category. Large family size is clearly not an adverse situation. However, given the challenges in providing support to parents who feel overburdened, and the evidence provided in Chapter 7 that this risk factor is related to slower improvements in families, then understanding the support that can help these families appears to be of value.

The chapter is divided into a further three sections. The next section examines the extent to which the differences in improvements in emotional well-being found when families are supported in different ways can be explained by a family's circumstances. Linear regression models are developed looking at the impact of the nature of support variables on improvements in emotional well-being while controlling for the risk factor variables. These are then contrasted with models including only risk factors, or only 'nature of support' variables.

The Section 8.3 concerns how support is provided to families in the six specific sets of circumstances we are considering. Bivariate analysis is carried out between the risk factors and the nature of support variables and this is used to explore how support for families in these circumstances differs from that provided to other families.

The effects of the nature of support on improvements in emotional well-being for these families are explored in Section 8.4. As described above this is carried out by developing linear regression models using only families in these specific circumstances. The resulting models enable the impact of who the support is provided by, how frequent visits are and their average length for families in different circumstances to be compared.

The final section of the chapter then pulls all these findings together to look at how the fourth research question has been answered.

8.2   The nature of support for all families

Chapters 6 and 7 have identified aspects of Home-Start support and family situations relating to faster or slower improvements in parental emotional well-being, but we do not know if some of these effects are in part because families in a certain situation are treated differently.

In order to investigate this linear regression models were used. The 11 risk factors used in Chapter 7 were entered first, followed by the nature of support variables examined in Chapter 6. This enabled the effects of the nature of support to be explored while controlling for risk factors. This model (Model 3) can then be compared to models containing only nature of support variables (Model 1) and models containing only risk factors (Model 2). We have already discovered that the overall effects of the nature of support on improvements in coping are much greater than the effects of the family situation. It is therefore unlikely that the risk factors will have a huge impact on the overall effect of the nature of support variables, however it might be that coefficients for certain nature of support variables are changed when the risk factors are controlled for.

The log ROC variables of the three parental emotional well-being coping measures were used. Table 8.1 presents the three models for the log ROC Self-Esteem variable. Equivalent tables for the log ROC Isolation (Table G1) and log ROC Mental Health (Table G3) variables are available in Appendix G, together with additional statistics relating to each model (Tables G2, G4 and G5).

The numbers of cases in each Model 1 vary slightly from those presented in Chapter 6, since cases which were outliers for models in Chapter 7 have now also been removed.

The R^2 values presented in Table 8.1 are higher for the combined models, but not as high as the total of the two separate models, and the same pattern is apparent with the other coping measures. This suggests that a very small amount of the variance in Models 1 and 2 is because of joint factors, i.e. a small part of the reason why families in certain situations improve at different rates is related to the way families in those situations are supported. This is only a small part of the variance. The combined R^2 are higher, so both the nature of support and risk factors make additional contributions to the variance. Coefficients for the nature of support variables in Model 3 are slightly lower, though very similar to those found in Model 1. This means the conclusions that were drawn at the end of Chapter 6, regarding the effects of frequency, the average length of visit and who support is provided by, on improvements in

coping, are still valid when the risk factors are controlled for. They do not occur simply because families in certain situations are treated differently.

Table 8.1 Comparisons of Regression Models, Nature of Support variables only, Risk factors only and both Risk factors and Nature of Support Variables, Log ROC Self Esteem

Log ROC Self-Esteem	Model 1. Nature of Support only		Model 2. Risk factors only		Model 3. Risk factors and Nature of Support	
R²		0.112		0.020		0.129
n		1,303		1,306		1,303
Sig of ANOVA		.000		0.006		.000
	B	**β**	**B**	**β**	**B**	**β**
(Constant)	-4.006		-4.342		-3.958	
Asylum Seeker/Refugee			.164	.028	.107	.018
Child Protection Plan			.024	.006	-.022	-.005
Disabled Child			.018	.007	.048	.017
Disabled Parent			-.072	-.025	-.066	-.023
Domestic abuse			.181	.085	.139	.065
Housing Issues			.089	.028	.105	.033
Large Family Size			-.127	-.075	-.126	-.075
Mental Health Issues			-.09	-.061	-.086	-.055
Post Natal Depression			.029	.015	.021	.011
Prison			-.041	-.005	-.144	-.019
Substance Misuse			-.104	-.025	-.118	-.029
Paid worker Dummy	.236	.088			.229	.085
Mixed support Dummy	-.234	-.082			-.230	-.081
Average Length	-.204	-.154			-.201	-.152
Frequency	.672	.220			.675	.221
Proportion Practical	-.103	-.044			-.099	-.043
Proportion Children	-.190	-.085			-.188	-.084
Proportion Emotional	-.193	-.067			-.194	-.068
Proportion Services	-.036	-.010			-.094	-.027

There are some changes in the coefficients for risk factors, but there is no consistency to these changes. Some go up and some go down. This suggests the way support is provided affects families in different situations differently. However, what cannot be deduced from this is to what extent different aspects of the nature of support are affecting the coefficients relating to different family situations. Because of this, the next two sections will explore the nature of support and its relative impacts on families in different situations, in more detail.

8.3   The nature of support for parents in different situations

Chapter 2 considered the literature regarding the way support is provided to families in different situations. While qualitative evidence highlights how different types of support are of value to families in different situations, the quantitative evidence regarding how families in such situations are supported is limited.

This section will add to the knowledge of how support is provided to families with different situations by looking at families in six different situations. These are families with mental health issues, a disabled parent, a disabled child, large families, families with an indication of domestic abuse, and families with multiple risks. These risk factors will also be used in the next section to explore the relative importance of different aspects of support for families in different situations. They have been selected because they are sufficiently prevalent in the data, that models using only families in these situations can be developed. By exploring the way support is provided to these families we will be able to identify if families are receiving the types of support that might help them to improve faster.

Bivariate analysis was carried out between these risk factors and the nature of support variables. Table 8.2 presents the numbers and percentages of families with and without each risk factor who are supported by volunteers, paid workers or a mixture between the two. Table 8.3 shows the mean scores for the numerical nature of support variables for those with and without risk factors.

Both of these tables present data on the bivariate relationships for all the families in the data who have End Visit data, 7,569 families. They do not, therefore, include the families that did not have End Visit data. This is because the frequency variable was calculated using data from the End Visit form, and given the importance of the frequency of support for influencing how fast emotional well-being improves then it was felt that it was important that this variable was included in the analysis. The analysis included all those with End Visits rather than only those who have expressed a problem with coping with different aspects of their emotional well-being. This meant there was a large number of families in the data, which was able to provide a good indication of how the family's situation affects the nature of support. This analysis highlights that there is a relationship between the way support is provided and these different sets of circumstances. These are considered below.

Table 8.2 Bivariate analysis Risk Factors and who support was provided by

		Only volunteer visits	Only Paid worker visits	Mixture of volunteer and paid worker visits
		f(%)	f(%)	f(%)
All families		6397 (84.5)	650 (8.6)	522 (6.9)
Domestic Abuse	Yes	693 (77.3)	121(13.5)	82(9.2)
	No	5704 (85.5)	529 (7.9)	440 (6.6)
odds of risk being present		0.12	0.23	0.19
Disabled Parent	Yes	446 (83.5)	42 (7.9)	46 (8.6)
	No	5951 (84.6)	608 (8.6)	476 (6.8)
odds of risk being present		0.07	0.07	0.10
Disabled Child	Yes	749 (85.1)	73 (8.3)	58 (6.6)
	No	5648 (84.4)	577 (8.6)	464 (6.9)
odds of risk being present		0.13	0.13	0.13
Mental Health	Yes	1951 (83.4)	195 (8.3)	192 (8.2)
	No	4446 (85.0)	455 (8.7)	330 (6.3)
odds of risk being present		0.44	0.43	0.58
Large Family	Yes	2212 (83.2)	246 (9.2)	202 (7.6)
	No	4185 (85.3)	404 (8.2)	320 (6.5)
odds of risk being present		0.53	0.61	0.63
High Risk	Yes	363 (80.1)	48 (10.6)	42 (9.3)
	No	6034 (84.8)	602 (8.5)	480 (6.7)
odds of risk being present		0.06	0.08	0.09

8.3.1 Domestic abuse

Those families for whom domestic abuse was indicated at referral were more likely to receive support from a paid worker than other families. Among the families where domestic abuse was indicated, 13.5% received paid worker support compared to 7.9% where domestic abuse was not indicated. They are also more likely to have mixed support (9.2% compared to 6.6%). Visits for these families are typified by being slightly shorter, having a smaller proportion of visits where activities with children are carried out and having a greater proportion of visits in which support to use services occurs. Chapter 6 highlighted how shorter visits, fewer visits in which activities with children occur, and more support to use services are all associated with having paid worker support. So it may be that these associations are related to the fact that these families are having more paid worker support. Alternatively it might be that the effect identified in Chapter 6 occurs because paid workers are supporting families with problems like domestic abuse and this results in support being provided in this way by paid workers. This would be backed up by previous studies highlighting the value of support to access other services for families with domestic abuse, e.g. Tandon et al (2005). Families with domestic abuse are also more likely to have cancelled visits than other families.

Table 8.3 Bivariate analysis Risk Factors and Nature of Support Variables

		Domestic abuse		Disabled Parent		Disabled Child		Mental Health		Large Family Size		High Risk	
		$\bar{X}$ (s)	g	$\bar{X}$ (s)	g	$\bar{X}$ (s)	g	$\bar{X}$ (s)	g	$\bar{X}$ (s)	g	$\bar{X}$ (s)	g
Duration	Risk	254 (176)	-0.04	287 (182)	0.16	279 (187)	0.11	269 (185)	0.07	274(185)	0.11	269 (185)	0.05
	None	261 (180)		258 (180)		258 (179)		257 (177)		253 (177)		260 (180)	
Number of Visits	Risk	18.1 (17.4)	-0.04	20 (15.8)	0.09	19.7 (17.4)	0.08	18.7(17.1)	0.00	20.1 (17.5)	0.14	19.1 (19.0)	0.03
	None	18.7 (16.2)		18.5 (16.4)		18.5 (16.2)		18.6 (16.0)		17.8 (15.7)		18.6 (16.2)	
Wait	Risk	49.6 (56.6)	0.01	48.9 (53.6)	0.00	51.7(61.5)	0.06	50.9 (53.9)	0.05	51.1 (59.9)	0.06	56.0 (66.5)	0.13
	None	48.9 (55.5)		49 (55.8)		48.6 (54.8)		48.1 (56.4)		47.9 (53.2)		48.5 (54.8)	
% cancelled	Risk	24.6 (17.2)	0.10	23.4 (16.8)	0.02	23.9 (18.0)	0.06	24.6 (17.3)	0.13	23.3 (16.9)	0.02	26.4 (17.4)	0.21
	None	22.9 (17.1)		23.1 (17.1)		23.0 (17.0)		22.4 (17.0)		23.0 (17.2)		22.9 (17.1)	
Average Length	Risk	1.97 (0.66)	-0.18	2.13 (0.64)	0.12	2.07 (0.62)	0.02	2.03 (0.59)	-0.08	2.08(0.62)	0.03	2.03 (0.69)	-0.07
	None	2.08 (0.60)		2.06 (0.60)		2.06 (0.60)		2.08 (0.61)		2.06(0.60)		2.07 (0.60)	
Frequency	Risk	0.51 (0.26)	-0.04	0.51 (0.25)	-0.04	0.50 (0.25)	-0.12	0.50 (0.25)	-0.12	0.53 (0.25)	0.04	0.50(0.26)	-0.08
	None	0.52 (0.26)		0.52 (0.26)		0.53 (0.26)		0.53(0.26)		0.52 (0.26)		0.52 (0.26)	
Proportion Practical	Risk	0.41 (0.33)	0	0.44 (0.33)	0.12	0.39 (0.35)	-0.06	0.41(0.34)	0.00	0.40 (0.35)	-0.03	0.43(0.34)	0.09
	None	0.41 (0.34)		0.40 (0.34)		0.41 (0.34)		0.41(0.34)		0.41(0.34)		0.40(0.34)	
Proportion Child	Risk	0.55 (0.36)	-0.39	0.63 (0.34)	-0.12	0.69 (0.33)	0.09	0.63 (0.35)	-0.15	0.68(0.34)	0.06	0.59(0.35)	-0.23
	None	0.68 (0.33)		0.67 (0.34)		0.66 (0.34)		0.68(0.33)		0.66(0.34)		0.67(0.34)	
Proportion Emotional	Risk	0.76 (0.27)	0.13	0.73 (0.30)	0	0.72 (0.31)	-0.03	0.77(0.27)	0.20	0.71(0.31)	-0.10	0.76(0.28)	0.1
	None	0.72 (0.31)		0.73 (0.30)		0.73 (0.30)		0.71(0.31)		0.74(0.30)		0.73(0.31)	
Proportion Services	Risk	0.20 (0.24)	0.22	0.16 (0.22)	0.05	0.16 (0.22)	0.05	0.16(0.22)	0.04	0.14(0.21)	-0.09	0.20 (0.24)	0.23
	None	0.15 (0.22)		0.15 (0.22)		0.15 (0.22)		0.15(0.23)		0.16(0.23)		0.15 (0.22)	

8.3.2 Disabled parent

Families in which one of the parents considers themselves disabled do not appear to be any more likely to have a paid worker than other families. There is a very slight increase in the numbers who have mixed support but it is only a small effect. These families appear to have longer visits on average than any of the other groups looked at and a slightly higher proportion of visits in which practical activities occur. They have a slightly lower proportion of visits in which activities with children are carried out.

8.3.3 Disabled Child

The support provided to families with a disabled child varies very little from the way it is provided to other families. Visits to these families are less frequent than the average and the overall duration of support tends to be longer. However, there are no differences in the likelihood of having a paid worker, or volunteer, or a mixture of the two. Nor are there any differences in terms of the lengths of visits or proportion of time spent on different activities. Previous studies had indicated that particular activities might be useful for families with a disabled child, for example emotional support (Shinman 1994) or access to other services (Love et al 2002). However, there is very little difference in the proportion of visits in which these activities take place. This may, of course, also be an indication of how important these activities are for other families as well.

8.3.4 Mental health

Having a mental health problem made very little difference to the percentage of families who have a paid worker placed with them. However, mixed support was more common among this group, (8.2% of those with mental health problems compared to 6.3% without). Chapter 6 discussed how mixed support may be an indication that things are not improving sufficiently well in a family. It may occur in instances where initial support has not been as effective as hoped, i.e. if volunteers were initially placed but things were not improving sufficiently and it was determined the support of a paid worker was needed. Alternatively, it can occur if a paid worker was originally provided, but when the period with the paid worker was over things were not sufficiently improved that visits with a volunteer were then required. This could be an explanation of what is happening here. Those with mental health problems also seem to have slightly shorter visits, a smaller proportion of visits in which activities with children occur and slightly more visits involving emotional support. They also have a slightly higher percentage of cancelled visits than those without mental health problems.

8.3.5 Large family size

Those in large families are slightly more likely than other families to be receiving either the support of a paid worker, or a mixture of paid worker and volunteer support, though the effect is not large. Large families tended to have longer overall durations of support, in keeping with Barnes et al (2006) finding. They also have more visits overall than families with fewer children. However, unlike the families in Barnes et al's (ibid) study there was very little difference in the average length of visits for larger families. There was also no evidence that home visitors were carrying out activities with children more frequently than in other families. This might be unexpected given the suggestion in Kenkre and Young (2013) that families who are having problems coping with multiple young children are more likely to be offered support in which activities with children are carried out. These families were slightly less likely to have visits in which emotional support is provided.

8.3.6 High Risk

Families with multiple risks are more likely to be provided with the support of a paid worker, or to receive mixed support. They are also the most likely of the family types considered here to have to wait longer for support to start and to have a greater number of visits cancelled once support starts. It has already been highlighted that these families are more likely to end support with an unplanned ending. There may be issues relating to their situation that make it difficult to continue with support, or there is a lack of engagement in support, that could lead both to cancelled visits or unplanned endings. Families with multiple risks are more likely to receive support to use other services, and to receive emotional support compared to other families. They are also less likely to have a high proportion of visits in which activities with children occur.

This analysis has shown that there are differences in the way support is provided to families in different situations. What is less clear is why these differences occur and whether or not different aspects of support are just as important for families in different circumstances. Because of this the next section will consider the relative importance of the nature of support for improving emotional well-being for families in different situations.

8.4 Effective aspects of support for families in different situations

This section concerns how the nature of support given to families in specific situations impacts on their rates of improvement. The analysis in Chapter 6 established that the frequency of support and having the support of a paid worker were associated with faster improvements in emotional well-being. However, it is not clear if these effects apply to families in different situations equally. For example, does the support of a paid worker have the same impact on the rate of improvements for families where domestic abuse is reported as it does for those with mental health issues?

In Chapter 6 a linear regression model was used to look at how the nature of support was related to the rate at which parents' reported ability to cope with their emotional well-being and other issues improved. The effects of the nature of support for families in different situations was investigated by running similar regression models each limited to include only those families in certain situations. The family situations investigated were the same ones that were considered in Section 8.3 above. As has already been stated, these risk factors were all sufficiently prevalent in the data so that regression analyses limited to only these families had a sufficient number of cases. The models in Chapter 6 identified three nature of support variables as being related to the rate at which emotional well-being improves; the frequency of support, the average length of visits and whether support was delivered by a volunteer, a paid worker or a mixture between the two. Because of their impact on the earlier models it is these variables which were used in the new models presented here.

As in previous models the analysis was limited to only those who had indicated initial low levels in coping with the various aspects of the emotional well-being. For comparison a seventh model, the All Families Model, was run using all the families with low coping for a specific coping measure regardless of risk factors. The All Families Model is very similar, though not identical, to those models produced in Chapter 6. These models do not contain the proportion of visits in which various activities have taken place and this has resulted in lower R^2 values than the earlier models. There is also a very slight reduction in the number of cases used because of the removal of cases that were outliers in the risk factor models. The results of all models, with both standardised and unstandardised coefficients, are available in Table 8.4. Descriptive statistics regarding the nature of support variables in the subsamples of

families entered into the different models are available in Table G6, Appendix G and additional statistics relating to the regression models are available in Appendix G, Tables G7 to G 27.

This analysis highlights a number of differences in the impacts of the nature of support variables for families in different circumstances. The R^2 values show the amount of variance in improvements that the three nature of support variables can account for. This changes depending on the family circumstances and the coping measure being looked at, though there is no obvious pattern to this change. The coefficients vary considerably in size across models. For the most part the signs of the coefficients do not change, so the direction of the relationship remains constant although the effect sizes vary. A number of findings can be deduced from each of the models and these are explored in more detail below.

8.4.1 Domestic Abuse

R^2 values for the models containing only families where domestic abuse is reported are higher than those for the All Families Model for all coping measures. This suggests that the way support is provided, at least in terms of the three aspects of support being investigated here, is more strongly related to the rates of improvement among these families than others.

Comparing the model for families with Domestic Abuse to the All Families Model we can see that the effect of having a paid worker on improvements in coping is much higher for families where domestic abuse was suspected. To get an idea of how big this impact is, we can look once again at the impact of changing various aspects of support on some hypothetical families. Let's imagine that we have two families, Family A, who had domestic abuse reported at referral, and Family X whose family situation we know nothing about. Parents in both families have indicated initial low levels of coping with their self-esteem and both are receiving visits on average once a fortnight for two hours long. We can use the All Families Model to estimate a predicted average rate of improvement for Family X. The figures are very similar to those reported in Chapter 6. If the family had a volunteer we would expect on average the family's score to improve by about 2.3 points in six months whereas with a paid worker they would improve by 2.9 points.

Table 8.4. Comparisons of Regression Models for Nature of Support variables, Families in Different Circumstances

	All Families		Domestic Abuse		Disabled Parent		Disabled Child		Mental Health		Large Family Size		High Risk	
Log ROC Mental Health	B	β	B	β	B	β	B	β	B	β	B	β	B	β
(Constant)	-4.186		-4.140		-4.655		-3.908		-4.278		-4.094		-4.416	
Paid worker Dummy	.197	.080	.422	.200	.417	.150	.086	.045	.182	.068	-.024	-.010	.380	.177
Mixed support Dummy	-.365	-.139	-.340	-.149	-.296	-.125	-.221	-.070	-.343	-.135	-.393	-.144	-.162	-.070
Average Length	-.208	-.170	-.187	-.189	-.073	-.069	-.232	-.180	-.234	-.181	-.208	-.156	-.116	-.124
Frequency	.493	.175	.300	.120	.688	.225	.157	.059	.677	.236	.215	.068	.476	.211
R²		0.086		0.135		0.106		0.048		0.104		0.044		.105
n		1,212		170		105		115		587		382		104
Log ROC Isolation	B	β	B	β	B	β	B	β	B	β	B	β	B	β
(Constant)	-4.058		-3.958		-4.616		-3.861		-4.179		-3.854		-4.180	
Paid worker Dummy	.102	.035	.463	.186	.561	.150	-.280	-.075	.141	.048	-.144	-.057	.465	.178
Mixed support Dummy	-.390	-.138	-.315	-.133	-.346	-.128	-.404	-.149	-.402	-.149	-.398	-.156	-.063	-.023
Average Length	-.268	-.212	-.207	-.179	-.137	-.121	-.299	-.236	-.223	-.165	-.356	-.299	-.171	-.177
Frequency	.640	.222	.379	.133	.858	.294	.493	.170	.549	.188	.493	.168	.335	.141
R²		0.108		0.116		0.169		.102		0.082		0.118		.092
n		1,340		185		119		129		538		423		99
Log ROC Self-Esteem	B	β	B	β	B	β	B	β	B	β	B	β	B	β
(Constant)	-4.186		-3.992		-4.898		-4.053		-4.377		-4.109		-4.524	
Paid worker Dummy	.239	.089	.449	.187	.256	.091	.063	.023	.320	.116	.050	.018	.592	.275
Mixed support Dummy	-.240	-.084	-.363	-.134	-.087	-.034	.032	.012	-.230	-.082	-.246	-.090	.057	.021
Average Length	-.263	-.198	-.265	-.217	-.013	-.012	-.306	-.240	-.195	-.139	-.286	-.211	-.044	-.044
Frequency	.644	.211	.467	.155	.856	.300	.608	.222	.639	.212	.453	.147	.322	.137
R²		0.099		0.136		0.098		.104		0.085		0.066		.106
n		1,303		205		101		113		580		400		112

This can be compared to Family A. With volunteer support Family A would be expected to improve on average by 2.5 points in six months, whereas with a paid worker this would rise to 3.9 points. We know from the bivariate analysis in 8.2 that these families were also more likely to have paid worker support. This suggests that the value of paid worker support for these families is something that is already recognised by Home-Start schemes. However the majority of families with the domestic abuse risk factor do not have paid worker support.

The coefficients for the mixed support dummy variable are not very different to those for the overall model, particularly for improvements in mental health and isolation. This means the relationship between having mixed support and the rate of improvement, is similar for families where domestic abuse has been identified, to the relationship for the average Home-Start family.

The effect of the Average Length variable was not specifically different from families where domestic abuse was reported compared to average families. Longer visits remain an indication of slower improvements in coping.

The effects of frequency are slightly reduced compared to the All Family Models. Frequency is still important, and more frequent visits are associated with faster improvements in coping, but the effect is not as large as it is for other families. This can be illustrated by looking at the changes in coping with self-esteem for our hypothetical families again. Let's assume now that both Family X and Family A are having volunteer visits. For Family X, if visits occur once a fortnight we would predict a change of 2.3 points over six months whereas if they were once a week this would rise to 3.1. However, for Family A the family for whom domestic abuse was identified at referral, the impact of changing the frequency would not be so great. If the family received visits once a fortnight the predicted improvement would be 2.5 and for weekly visits 3.2.

8.4.2 Disabled parent

The models containing only the families who have a disabled parent also contrast with the average families described by the All Families Models. For both the Mental Health and Isolation coping measures the R^2 values were higher suggesting a stronger relationship between the way support is provided to these families and improvements in coping.

The effects of having a paid worker on the rate at which both mental health and isolation improve, are much greater for families with a disabled parent than they are for the average family. However, unlike families where domestic abuse is reported, the bivariate analysis showed families with a disabled parent or carer were no more likely to receive a paid worker than other families.

There is a striking increase in the coefficients for the frequency variable for all coping measures. A higher frequency of visits is related to improvements in coping for all families but for these families the coefficients are even higher suggesting an even bigger effect. We can illustrate this by introducing a new hypothetical family, Family B, for whom one or other parent has indicated that they consider themselves to be disabled. Like families X and A, Family B has indicated initial low levels of coping with their self-esteem, and they are receiving visits from a volunteer once a fortnight for on average 2 hours long. For the average family, Family X, increasing the frequency from once a fortnight to once a week, would change the predicted improvement over six months from 2.3 points to 3.1 points. Looking at our family with a disabled parent, Family B, those families visited fortnightly would be expected to improve by an average of 2.0 points, much less than the average family. However, if this was increased to once a week, the predicted average improvement over six months would be 3.1 points, as much as the average family receiving weekly visits.

Another feature of the models for families with a disabled parent/carer is the very low coefficients associated with the average length of visits. Previously it had been speculated that the effect of longer visits being associated with slower improvements in coping might be related to problems arising in families and home visitors helping with unexpected issues when they arose. However, with respect to these families maybe something else is going on too. The bivariate analysis shows that families with a disabled parent had longer visits on average than other families, as well as a higher proportion of visits including practical support. Perhaps the reduced coefficients here are indicative of the longer visits also helping these parents. Both effects might be happening and cancelling each other out.

8.4.3 Disabled Child

The R^2 value for the ROC Mental Health Coping Measure model is particularly low when only families with a disabled child are considered. This suggests overall these nature of support variables do not have a very strong relationship with the rate at which the mental health of parents with a disabled child improves.

Having the support of a paid worker does not seem to be important for improving emotional well-being for parents of disabled children. The coefficients for the paid worker dummy variable are now small, and for isolation it is now negative. Why it is negative we cannot tell. One possibility is that paid workers may have been placed with these families because of additional problems they face, and it is these additional problems that are causing them to improve more slowly. However we cannot tell if this is the cause of this effect.

The minimal effect of paid worker support on improvements in parental emotional well-being among these families contrasts with the findings with respect to the average family and with those who face domestic abuse or have a disabled parent. In the literature review we highlighted inconsistent findings with respect to the credentials of home visitors, with some studies suggesting that some types of home visitors work best with respect to some outcomes and others for other outcomes (Sweet and Appelbaum 2004, Filene et al 2013). In discussing these inconsistent effects it was considered that some types of home visitor might work best for families in some situations, while other types of home visitors worked better for others. This finding fits with that viewpoint, and suggests situations in which volunteer support may be just as effective as that of a paid worker, and situations where paid worker support is more effective.

The frequency of visits is still related to the rate at which improvements occur, however improvements in the parents' mental health is now very small. It is not clear why the coefficients should be so much lower for this coping measure. The relationship between longer visits and improvements in emotional well-being is very similar to that experienced by the average family.

8.4.4 Mental health

The models looking at families for whom mental health was indicated at referral do not seem so different to the All Families Models. The R^2 values for the ROC Isolation and ROC Self-Esteem models are among the lowest, suggesting the nature of support at least in terms of these three variables is less strongly related to improvements in these aspects of well-being for families with mental health issues than they are other families. These are, of course, coping measures relating to emotional well-being, and so it may be that the state of these parent's underlying mental health problems may have more of an impact on improvements than they do for other families in the model. Interestingly this is not the case for the mental health

coping measure as the R^2 value goes up as does the coefficient for the frequency value. There are also differences in other coefficients but many of these are quite small and there is no reason to believe that these parents are particularly different from the All Family Models.

8.4.5 Large family size

In the models concerning only families with a large family size the coefficients for having a paid worker are reduced and for two of the coping measures, ROC Mental Health and ROC Isolation, become negative. There does not appear to be any reason to believe that having a paid worker increases parental emotional well-being any more quickly than volunteer support for these families. This ties in with the results identified in relation to families with disabled children, and contrasts considerably with the impact of having a paid worker on families in other situations, such as domestic abuse and disabled parents.

While paid worker support does not appear to have any greater effect on improvements in coping than volunteer support for these families, mixed support does appear to have an effect. For each of the coping measures, those families who received a mixture of support from both paid workers and volunteers improve more slowly than other families. This is in keeping with families in other situations and, as discussed previously, may be a reflection on these families not improving as quickly as expected.

The relationship between longer visits and the rate at which emotional well-being improves is similar for large families as it is when all families are considered: Longer visits are associated with slower improvements in coping. The effect of frequency is also still apparent but slightly reduced compared to the average family. In spite of this reduction the effect is still there. Families with a large family size will still improve more quickly if their visits are more frequent.

8.4.6 High Risk

For families with multiple risks the support of a paid worker is important for improving parental emotional well-being. Coefficients for each of the coping measures show that the paid worker has a larger effect on these families than they would on the average family. For self-esteem the coefficient is particularly large. If we introduce a new hypothetical family, Family C who have at least three risk factors, then with the support of a volunteer once a fortnight for two hours we would expect them to increase by 2.1 over a period of six months. If they were supported by a paid worker then this would increase to 3.8. This is a considerable

difference, particularly when compared to the figures for our average family, Family X who were expected to improve by 2.3 with volunteer support and 2.9 with a paid worker.

Like other families in the data greater frequency also increases the rate of improvement. Longer visits are also related to slower improvements, however like families with disabled parents the effect of the relationship between longer visits and slower improvements in coping is now reduced.

8.5 Discussion

This chapter has explored the interrelationship between family circumstances, the nature of home visiting support and improvements in parental emotional well-being. Chapter 6 identified aspects of the way support is provided as related to the rate at which emotional well-being improved. This chapter started by investigating the extent to which any relationship between the families' situation and the way support is provided might be responsible for this effect. Linear regression models were used to look at the impact of the nature of support on improvements in emotional well-being when risk factors were controlled for. This found that the effects of those aspects of support associated with different rates of improvement, the frequency of support, the average length of visits and who the support was provided by were still present.

The Chapter then went on to consider how support is provided to families in different circumstances in more detail. This was done using six different types of family situation: families with domestic abuse issues, mental health problems, a disabled parent, a disabled child, three or more children, and multiple risks. Bivariate analysis was used to explore differences in the way support is provided to these families. Linear regression models were then built using only families in these situations to look at how the nature of support provided affected the rate of improvement for families in different situations.

This analysis highlighted both differences in the way support is provided and in the relative importance of different aspects of support for families in different situations. The support of a paid worker, rather than a volunteer, was particularly important for families where domestic abuse was suspected, where one of the parents considered themselves disabled and in families with multiple risks. However, it seemed to have very little impact on the rate of improvement in families with a large number of children or a disabled child. This is an important finding. As already stated the credentials of those providing home visiting support

has been described as one of the most controversial debates in the home visiting field (Rapoport and O'Brien-Strain 2001) and previous studies have highlighted inconsistent findings. The findings identified here help to explain why inconsistent findings might be found. Paid worker support is more important for families in certain situations. For families in other situations volunteers can be just as effective. Home-Start schemes are already more likely to place paid workers with families where there is domestic abuse or multiple risks. However, families with a disabled parent are less likely to receive the support of a paid worker. This suggests the value of paid workers to these families may not be recognised.

More frequent visits were associated with faster improvements for all families. The fact that this effect was consistent across coping measures ties in with the consistent effects of frequency on the effectiveness of support identified in the literature as shown, for example, by Nievar et al (2010). If the effects of frequency are consistent regardless of the family situation, they are easier to identify in samples that may contain families in different proportions and in different situations. There are some differences, however, in the extent to which frequency appeared to affect the rate at which emotional well-being improved. However it is important for all families.

The association between longer visits and slower improvements in emotional well-being was evident across all the different types of families. However, the size of the effect varied. It was less strong for families with a disabled parent and for families with multiple risks, although it is not clear why. We have previously discussed how longer visits may be associated with families who improve more slowly because home visitors may need to spend more time with them because of their problems. However it may also be that longer visits can be helpful for parents, and therefore these two effects cancel each other out. It might be that in the case of disabled parents and parents with multiple risks, longer visits are particularly valuable. However more research would be needed to be confident of this effect.

These findings, together with the findings highlighted in Chapters 4, 6 and 7, have provided answers to our four research questions and provide a picture about what aspects of home visiting support are important for families in adverse situations. The final chapter will pull all the findings together, look at their strengths and weaknesses, and discuss how they fit with previous research on the nature of home visiting support and support for families in adverse situations. Several areas for further research will be identified and a number of conclusions drawn. The implications of findings for both Home-Start and the wider home visiting policy agenda will be discussed.

CHAPTER 9

Conclusion

9.1 Introduction

Home visiting support has clear advantages over other forms of family support for parents with young children in adverse situations. Such services are more accessible for those who may struggle to access services outside the home and who may benefit from the longer-term more trusting relationships that home visiting can provide (Azzi-Lessing 2011, Finello et al 2016). Home visiting services are widespread across a number of countries (Finello et al 2016), and a body of evidence relating to their efficacy has developed including a number of meta-analyses and reviews (Sweet and Appelbaum 2004, Olds et al 2007, Nievar et al 2010, Filene et al 2013). While not all individual trials of home visiting programmes have shown significant effects, overall these suggest that home visiting can have an impact on outcomes for parents and children, though effect sizes are often small.

This study has focused on one third sector organisation, Home-Start, that provides home visiting support to families with young children in the UK. In previous research on Home-Start there is a mismatch between the findings of qualitative and quantitative studies. Qualitative studies (Shinman et al 1994, Bagilhole 1996, Oakley et al 1998, Frost et al 2000, McAuley et al 2004, MacPherson et al 2010) have shown how a number of parents value Home-Start's support. However these findings are not backed up by some of the quantitative studies. Three trials of Home-Start have been carried out, all with relatively small sample sizes. Two UK studies (McAuley et al 2004, Barnes et al 2006) concluded that there was no overall effect, while a study in the Netherlands (Hermanns et al 2013) identified effects on both parental competence and in the longer term child behaviour.

One possible explanation is that home visiting may be effective for some families but not for others. The small effect sizes identified in some trials could occur because the programmes are having a small effect on all families, alternatively they could be an indication that programmes have a large effect on some families and no effect on others. Where small effect sizes occur then trials cannot pick up significant effects unless the sample sizes are sufficiently large. This could also explain findings from qualitative studies, if positive comments are being made by parents who had benefited the most from support. This provides an imperative for developing

a better understanding of the situations in which home visiting can be effective. It may be that differences in the efficacy of home visiting support occur because of the way support is provided, with Hermanns et al (2013) emphasising the need to understand the "effective ingredients" of home visiting programmes. Efficacy may also be related to the family's situation with calls for more understanding about what works for families in a range of different circumstances (Sama-Miller et al 2017). This study was developed to add to the body of understanding about what works for whom and in what circumstances, in terms of home visiting support. It was carried out by looking at both the way support is provided and the family's situations.

An understanding of the effectiveness of home visiting support for families in different situations is also important for developing services to mitigate against the effects of adversity in childhood. Such adversity can be conceptualised in different ways including individual risks, multiple risks, levels of needs and life events. In earlier chapters the evidence of associations between these different types of adversity and negative outcomes was considered. This included evidence showing that such adversity can affect outcomes for children even when experienced in early childhood, for example Flouri et al (2010) or McKelvey et al (2017), and the potential mediating effect of parenting on this was discussed. Stress in the family has been shown to disrupt the parent child relationship, an effect mediated by the parent's psychological functioning (Webster-Stratton 1990). This highlights the importance of programmes that work to improve the emotional well-being of parents in adverse situations, and it is because of this that the emphasis of this study has been on changes in parental emotional well-being over the course of support for families in such situations.

The review of evidence in Chapter 2 considered the nature of home visiting support. While there is some evidence that the frequency of support might be related to improved outcomes for families (e.g. Nievar et al 2010), evidence relating to other aspects of support including the relative effectiveness of support provided by volunteers or paid workers was less clear. It also considered the way support is provided to families in different adverse situations and its relative efficacy. While there is evidence that support could be effective for families in different adverse situations, there was very little evidence directly comparing changes in outcomes made by parents in these different adverse situations. There is also limited quantitative evidence looking at how these adverse situations are related to the way support is provided. Most importantly none of the studies looked at the relative impact of different aspects of support on changes in outcomes for families in different adverse situations.

However evidence about this could be crucial for enabling home visitors to provide support to families in a way that meets their specific needs.

Identifying these gaps in the literature enabled a set of research questions to be framed:

1. How do self-rated parental feelings of coping with emotional well-being and other aspects of parenting and family life change over the course of home visiting support?
2. How does the nature of support relate to improvements in parental emotional well-being?
3. How do adverse family situations affect improvements in parental emotional well-being?
4. How does the nature of support affect improvements in parental emotional well-being for parents in different adverse situations?

In order to answer these questions the study undertook the longitudinal analysis of Home-Start's administrative data. It utilised a within-service design, meaning that there was no control group. There were four advantages for opting for such a design in these circumstances. Firstly the study wanted to look at differences in the way support was provided to families, therefore all families needed to be having support in order for this information to be available. Secondly some of the analysis involved looking at subgroups of families in different adverse situations and to do this a large number of families in each situation was required. The administrative data was able to provide this. Not all families starting support had low emotional well-being, some families were receiving support because they found it difficult to cope with other issues. The large number of families provided by the administrative data enabled subgroups of families who started support with low emotional well-being only to be used. Finally the use of administrative data enabled support 'as it is' to be observed. Because there is no control group it is important to remember that it cannot be concluded that the differences in emotional well-being observed in the families are attributable to Home-Start. This is not what the study set out to do. However it has enabled relative changes in emotional well-being among families receiving support in different ways, and in different situations, to be explored in much more detail than previous studies have allowed. This has enabled some new and important findings with implications for policy, practice and further research which are explored in more detail in this final chapter.

This conclusion is set out in a further four sections. The next section will provide a summary of the empirical findings from the study, highlighting how the four research questions have been

answered. Section 9.3 will discuss the key findings in more detail relating them to the literature and making recommendations with respect to practice, policy and further research. The fourth section will reflect on the research design utilising administrative data. It will highlight what can be concluded about its advantages and limitations as well as some implications for methods used to evaluate support services which are needs-based and multifaceted. Finally the chapter will conclude by summing up the unique contribution that this study has made to the existing body of knowledge regarding home visiting support.

9.2 Summary of findings

The first research question asked how self-rated parental feelings of coping with emotional well-being and other aspects of parenting and family life change over the course of home visiting support. Parents starting Home-Start support indicated problems coping with a variety of different issues, and by using factor analysis it was possible to identify patterns in the sorts of things parents reported problems with. Some parents indicated problems with their emotional well-being, others indicated problems with issues relating to their children, and others with a range of other issues. The majority of parents who had indicated that they were not coping well with a particular issue at the start of support made improvements over the course of support, with those who were coping the least well most likely to make the biggest improvements. However there were those that did not improve. There were also those who dropped out of support early for a variety of different reasons. Among those who did improve then there was a lot of variation in the time it took for those improvements to be made. Because of this it was decided to look at how the nature of support and the family's situation, affected changes in coping by looking both at their relationship with the outcomes of support, and at how they affect the rate at which improvements were made.

The second research question concerned the way the nature of support relates to improvements in parental emotional well-being. Certain aspects of the way support was provided were associated with dropping out of support early, including being supported by a paid worker as opposed to a volunteer, and having more visits cancelled. There was also an association between waiting a long time for support to start and having no end data, an indication that these families might still have been receiving support when the data was exported. Being supported by a paid worker and having a lot of emotional support were both more frequent in families that did not show overall improvements in coping with their emotional well-being.

Among the majority of families that do show improvements, certain aspects of support were identified as related to the rate at which parental emotional well-being improves. More frequent support and the support of a paid worker, were associated with faster improvements while longer individual visits were associated with slower improvements. Frequency of support had the biggest effect. For example if support was provided in an otherwise average way by a volunteer, increasing the visits from fortnightly to weekly would results in the rate of improvement of parent's self-esteem to increase by a factor 1.43. Changing the support from a volunteer to a paid worker would increase the rate of improvement by a factor of 1.26. Different patterns were found when coping with different issues were considered. In particular the support of a volunteer seemed just as effective as that of a paid worker, with respect to helping parents with being involved in their children's development and learning.

The third research question concerned how adverse family situations affected improvements in parental emotional well-being. Family situations were considered in terms of individual risks, multiple risks, levels of need and life events. In addition to the quantitative analysis, content analysis of life events was carried out and this enabled a better understanding of changes in the families' situations to be developed. Some family situations were associated with dropping out of support early, particularly substance misuse, but also multiple risks, being an asylum seeker or refugee, and to a lesser extent housing problems and domestic violence. Families with a disabled child were less likely to drop out early. Having a large family, a disabled parent or multiple risks were more common in families who stay in support but do not make any improvements. However, only a few families fall into this category so data for a larger number of families would be needed to be sure of this effect.

When looking only at the families whose emotional well-being improved over the course of support, these family situations were related only very weakly to the rate at which those improvements occurred. The rate of improvement was associated much more weakly with the family's situation than it was with the way support is provided. However some small effects were found, and where these occurred they showed that families who had risk factors that could be considered as more malleable, such as domestic violence and housing problems, tended improve at a faster rate. Those with more permanent risks such as a disabled parent, mental health issues or a large family tended to improve more slowly. The family's Hardiker level of need (Hardiker et al 1991) was also considered. This similarly, suggested that it is the changeability of the family's situation that is likely to affect the rate of improvement, with those having the most entrenched problems improving the slowest. Among those families that improve, the number of risks that the family had did not appear to be related to that rate of

improvement. Studying life events that happen during support also highlighted how change in the family's life can effect improvements in coping. Families who suffered bereavements during the course of support were more likely to improve more slowly. Other types of life changing events, particularly those that were only stressful in the short term, such as an additional birth or moving house, did not appear to have a big effect on changes in coping in the long term. Looking only at the families who had at least six months of support highlighted an additional phenomenon. Those that appear to improve faster than others on average when the whole time frame is considered, such as domestic violence, no longer improve faster than others, while other groups of families, particularly those with a child with a child protection plan improve more quickly. This highlights different patterns of improvements for families in different situations.

The final empirical chapter concerned the fourth research question. This asked how the nature of support affects improvements in parental emotional well-being for parents in different adverse situations. This was able to confirm that the effect of different aspects of support on the rate of improvement was still present even when the family's situation was controlled for. Six types of family situation were then studied in more detail: families with domestic abuse issues, mental health problems, a disabled parent, a disabled child, three or more children, and multiple risks. By studying these families in detail it enabled the way support was provided and the relative importance of different aspects of it to be investigated among families in different situations.

Differences were apparent in the way support was provided to families in these different situations. For example, paid worker support was more common in families with domestic abuse issues and those with multiple risks. These families, together with those with mental health issues and those with a disabled parent, were also more likely to have received support from a mixture of paid workers and volunteers. Those with a disabled parent received individual visits that were on average longer than other families, while families with domestic abuse concerns received visits that were shorter on average. Those with disabled children and those with mental health problems received visits that were less frequent. Differences were also evident in the proportion of time that home visitors spent carrying out different activities with families, as well as in the length of time they spent waiting for support to start, and in the percentages of visits that were cancelled.

The final part of the analysis looked at the relative relationships between these different aspects of support and improvements in emotional well-being for families in these different

situations. This highlighted how more frequent visits were related to improvements for families in all the situations, however differing patterns were identified with respect to the length of visits and who the support was provided by. The length of visits was related to slower improvements for families, but the effect was greatly reduced for families with a disabled parent or multiple risks. Paid worker support was related to faster improvements in families with domestic abuse concerns, a disabled parent or multiple risks, but it did not appear to be important for large families and families with a disabled child. For example among families where domestic abuse was an issue paid worker support enabled the rate of improvement in parental mental health to increase by a factor of 1.56 compared to volunteer support, whereas for families with a disabled child or a large number of children the differences in the rate of improvement were negligible.

These findings build on and add to the findings of previous home visiting studies, and have implications for practice, policy and future research. The next section will discuss these findings in more detail, highlighting how they relate to previous research and their implications.

9.3 Implications of the study

The findings of this study have made a contribution to the current understanding of changes in parental emotional well-being during home visiting support in several ways. Some of the findings have implications for home visiting practice and some are relevant for policy makers developing home visiting support policy. There are also a number of implications for further research. This section will discuss these issues. In order for findings to be considered in detail this discussion is set out under five themes. The first of these concerns the differences between volunteer and paid worker support. This will be followed by a consideration of the implications regarding the effects of the frequency of support, before the findings relating to the length of visits are explored. The fourth section considers the families for whom support ends, either because they drop out of support early or because they do not improve. The family situation and the malleability of risks factors will then be discussed, and the section will end by providing a summary of the implications for policy and practice.

9.3.1 The volunteer paid worker debate

Among the key findings of this thesis are those relating to the differences in the effectiveness of support between volunteers and paid workers. The literature review highlighted how the

debates over the credentials of those providing home visiting support have been described as one of the most controversial in the home visiting field (Rapoport and O'Brien-Strain 2001). While qualitative evidence suggests volunteer home visiting might be of value to families (Frost et al 2000, McLeish et al 2016), these studies did not compare volunteer support directly with that of a paid worker. Several meta-analyses, while not considering volunteer support, had looked at the differences in support being provided by professionals and non-professional paid workers. These had either found no difference (Nievar et al 2010, Casillas et al 2016) or inconsistent findings (Sweet and Appelbaum 2004, Filene et al 2013). The results presented in this thesis suggest a reason for inconsistent findings: That some types of home visitors work best for some families in some situations, whereas for other types of families in other situations those differences may not be so important.

Overall, for families, who start support with low emotional well-being and improve over the course of support, the rate of improvement is slightly faster with a paid worker. However, this masks the differential effects that having a paid worker has on families in different situations. While the support of a paid worker, as opposed to a volunteer, has a big impact on the rate at which emotional well-being improves for families with domestic abuse, a disabled parent or multiple risks, it has very little effect on parents in families with a large number of children or a disabled child. These families improve at the same rate whether they are visited by a paid worker or a volunteer. As well as its association with faster improvements in emotional well-being, the support of a paid worker, as opposed to a volunteer, was also associated with faster improvements in coping with other issues. These included coping with conflict in the family, running the home and the household budget. However, it appeared to be relatively unimportant with respect to the rate of improvements for parents experiencing problems coping with their child's behaviour, and was not associated at all with parents becoming involved in their child's development or learning. These findings suggest that where problems relate to a parent, paid worker support is more effective, but that when issues relate to a child or children in the family, then the support of a volunteer is as effective as a paid worker.

These findings have clear implications for practice, and there is a need to disseminate them to Home-Start schemes. There is some evidence that Home-Start schemes may already be aware of the value of paid workers for families with domestic abuse and multiple risks: families in these situations are already more likely to have paid workers placed with them. However families with a disabled parent were no more likely to receive paid worker support than any other family. Raising awareness of this may enable more paid workers to be placed with these families.

Not all Home-Start schemes have paid workers providing home visiting support, and where paid workers are available they may have limited working hours, so Home-Start schemes may not be in a position to place them with additional families. However these findings can also be used by Home-Start schemes in making funding applications to pay for workers to work with families with a disabled parent, multiple risks or for whom there are domestic abuse concerns.

The findings that volunteer support is just as effective as that of a paid worker in some circumstances are also important. The support of a volunteer can be just as effective as that of a paid worker for large families or families with disabled children and for helping parents who need support to be involved in their children's development and learning. These findings also need to be disseminated to Home-Start schemes. They may be of use in determining the type of support required by a family and could be highlighted in applications for funding to support volunteer programmes.

These findings are also of relevance to policy makers. We highlighted in Chapter 1 how governments in all the nations of the UK were supporting programmes to help parents in adverse situations. The relative value of volunteer and paid workers in different situations is important for those developing such programmes. Volunteer support tends to be cheaper than that of paid workers, and therefore if there are situations where volunteers can be just as effective, governments should support programmes of volunteer support in those circumstances. When paid workers are more effective, then policy needs to support programmes that employ paid workers.

While these results provide some key evidence regarding why inconsistent findings have so far been seen with respect to the credentials of the home visitor, there are still a lot of gaps in the research that need to be filled. The analysis in Chapter 8, only focused on families in six different types of situation. The dataset contained families in other situations including those with substance misuse issues, asylum seekers and refugees, families with housing issues, and families with an incarcerated family member. The prevalence of these risks in the data was not large enough to develop separate models for these families. However Home-Start has continued to collect data from families referred since the data was exported for this study. If data from these extra families was added to the dataset, then the subsamples of data containing only families with these risks may now be sufficient for this analysis.

To fully understand the relative advantages and disadvantages of volunteer and paid worker support further qualitative research would also be required. This could take the form of interviews among families in different situations who have received either volunteer or paid worker support. This would enable a greater understanding of why the support of paid workers is beneficial in some situations and not others and may enable effective elements of practice for families in certain situations to be identified. Understanding effective elements of paid worker practice may also provide the potential for developing volunteer practice.

9.3.2 Frequency of Support

The frequency of support was one of the aspects of support that the literature review had suggested was likely to be related to better outcomes. Previous qualitative research from Home-Start had highlighted how parents appeared to be more likely to report improvements in their emotional well-being if support was regular (Frost et al 2000), and there were also indications that Home-Start mothers would have liked support to be more frequent (McAuley et al 2004). Evidence from the wider home visiting literature also indicated that more regular visits were associated with improved outcomes (Powell and Grantham-McGregor 1989, Olds and Kitzman 1993, Nievar et al 2010, Flemington et al 2015).

This evidence suggested a greater likelihood of support being effective if it was more frequent, a finding that this study has backed up. The frequency of support was consistently related to increased rates of improvement in all the models developed. It was related to faster improvements in coping with both emotional well-being and other aspects of parenting and family life. The effects of frequency were found to be related to faster rates of improvement in emotional well-being for families in all types of situation. There were some differences in the size of the effect that it had across families. It seemed to be particularly important, for example, for families with a disabled parent, but the effect was present for all families.

Previous chapters discussed the problem of attributing cause and effect in relation to these findings, because of the needs-based nature of the support. Do the parents improve more quickly because they are having regular visits? Or do they have regular visits because they are improving? It may be that both things are happening to some extent. However there are three reasons to believe that the frequency of support is helping parents to improve more quickly.

Firstly it backs up the findings of previous studies. Many of these studies concerned programmes that were less needs-based, and so in those programmes the frequency would

not have been caused by the parents not coping well. Secondly the qualitative evidence from previous Home-Start studies (Frost et al 2000, McAuley et al 2004) suggests the value of more frequent visits for parents. Thirdly this study also identified a relationship between the frequency of support and the proportion of visits cancelled. Those who have a greater proportion of visits cancelled have less frequent visits. However, remarkably there is no relationship between the percentage of visits cancelled and improvements in coping. If the relationship, between the frequency of support and improvements in coping, was due to the fact that those who were not improving so quickly were finding it difficult to have frequent visits, then it might be expected that these visits were less frequent because some of them had been cancelled. In that situation there would have been a relationship between having more visits cancelled and slower improvements in coping, but no such relationship was found.

The fact that the relationship between frequency and faster improvements was found consistently across each of the models developed in this thesis may also explain why this effect was consistent in the literature. It is consistent because more frequent visits are always beneficial for families regardless of their situations. This enables this effect to be identified in meta-analysis such as that carried out by Nievar et al (2010). This was not the case with other aspects of the nature of support, such as the credentials of the home visitor, where different types of support work better for families in different situations, and therefore those meta-analyses will show either little effect or inconsistent effects.

The frequency finding also has practical implications. First, Home-Start schemes and volunteers need to be made aware of how beneficial more frequent visits are, so that the frequency of home visits can be maximised as much as is feasible. The value of the frequency of visits should be raised in the training that Home-Start volunteers receive from Home-Start, so that all new volunteers can appreciate that their families will be more likely to improve more quickly if they receive more frequent visits. This finding may also be useful for Home-Start schemes in applying for funding either for paid workers or for volunteer expenses and support. Such funding applications could highlight the value of more frequent visits and the need for sufficient funding either to pay workers or support volunteers to do this. Likewise policy makers planning or funding home visiting programmes should be aware of the importance of frequency of visits, so that programmes are developed that enable sufficiently frequent support.

9.3.3 Long visits

The other aspect of support which was related to the rate at which emotional well-being improves was the length of visits. Longer visits were associated with families improving more slowly. This effect was found consistently across all coping measures and was apparent for families in all situations, although the effect was reduced for families with a disabled parent and those with multiple risks.

The challenges in interpreting results because of the needs-based nature of support have already been discussed. The way support is provided may both affect the parent's level of emotional well-being and be affected by it. Earlier chapters discussed the idea that the relationship between longer visits and slower changes might occur, because home visitors stay longer with these families because they need more support. Home visitors might be staying longer with families because when they visit them they find the parents are not coping. This ties in with Barnes et al's (2006) finding that the length of visits is associated with parental dysfunctional child interaction in Home-Start families.

The analysis tells us more about the circumstances in which longer visits take place. They are more frequent among families visited by volunteers, are more likely to include activities with children and more practical support. They are more common among families with a disabled parent and less common among those with domestic abuse. It is clearly possible that families in certain types of situation, such as a disabled parent need support that takes longer to provide and also improve more slowly. This ties in with the finding that longer visits are not related to slower improvements for families with a disabled parent.

Wen et al (2016) found longer visits were associated with greater engagement in a home visiting programme delivered to young American mothers in later pregnancy and after birth. Engagement has not been assessed in this study and we do not know how engagement may relate to the rate of improvements in parental coping. The length of visits could also be an indication of engagement in support among the Home-Start families. Families who had longer visits were also more likely to have more frequent visits, not as many cancelled visits and were less likely to have an unplanned ending then other families. However if this greater engagement exists, it cannot be said to translate into faster improvements.

Another possibility, that was discussed at the end of Chapter 6, is that longer visits may be related to crises or problems arising in families. Several studies (Hardy 1989 cited in Bennet

2007, Tandon 2008, Turnbull et al 2013) have highlighted how home visitors may arrive for home visits and find the family in a state of crisis. These additional problems may both cause the home visitors to stay for longer and slow down the rate at which emotional well-being improves. However there could be other reasons still. For example, volunteers and parents may get on well, and develop the relationship such that volunteers are happy to continue support for a long period of time, continuing their visits to the families and carrying out activities with the children when they are there.

It is possible that different factors may be responsible for the relationship between longer visits and slower improvements in different families. Further research is needed to identify why this effect is happening. This could take the form of qualitative work carried out with home visitors to identify the situations that lead them to stay with families for longer periods of time.

9.3.4 Families that drop out or do not improve

Certain risks were associated with a greater likelihood of families dropping out of support early, and where these identifications were made the results were remarkably similar to those found in earlier studies. The group most likely to drop out of support early were those with substance misuse problems, an effect previously identified by Turnbull and Osborn (2012). Higher rates of drop out were also identified in those with multiple risks, asylum seekers and refugees, those with housing problems and those where domestic abuse was a concern. This ties in with Roggman et al's (2008) findings which identified higher rates of drop out in families with multiple risks and more changes of residence, and Flemington and Fraser's (2016) finding of increased rates of early drop out among mothers experiencing domestic violence. The high rates of drop out in asylum-seeking and refugee families had not been identified in previous studies; however asylum seekers/refugees were not among the groups that those studies had been looking at.

The analysis carried out to check which family situations were associated with dropping out of support early was very basic bivariate analysis, as this was not the main focus of the study. A better understanding of the situations in which all these families drop out early could be obtained by developing more sophisticated models. These could identify, for example, how strong the likelihood of those with multiple risks dropping out of support early is when individual risk factors are controlled for. This study has not looked at the interrelationship between the nature of support, family situations and likelihood of dropping out early. Building

such models would enable a picture of the situations in which families are likely to drop out early to be built up. It might then be necessary to develop qualitative research to provide a better understanding of practice that can enable families at risk of dropping out early to remain in support.

As well as the families who drop out early there are a minority of families who have End Visits but who do not improve. Because the numbers are small it is hard to be confident about these affects. Not improving was more likely among those families with a disabled parent, large families and multiple risks. Paid worker support is also more common among families that do not improve. This seems at odds with the findings that paid worker support is associated with faster improvements in families. However, a plausible explanation could be that families with complex problems are referred to Home-Start. Home-Start tries to support them, perhaps with a paid worker. When it emerges that the family's problems are more complex than originally envisaged then the family ends up being referred to a service more appropriate for their needs. This thesis has already highlighted the association between not improving and ending support early for a number of specific reasons, including that Home-Start had identified that the family's needs were better met elsewhere, or that there had been a statutory intervention or safety concern. Using the families that have been added to the administrative data since it was exported for this study may now provide sufficient data to check if families leaving for these reasons account for the association between paid worker support and not improving.

Where families leave support because of statutory interventions Home-Start may still have played an important role in supporting the families. The home visiting support may have had a surveillance effect akin to that described by Barlow et al (2006). In this way the support may have been instrumental in enabling the families to end up being involved in the services they need. If so then perhaps Home-Start can still be described as being 'successful' in its work with this family, in spite of there being no improvements in the measures of emotional well-being.

Additionally, it also needs to be considered whether families who end up needing statutory interventions were referred appropriately to Home-Start in the first place. Bagilhole (1996) asserted that pressures on social services were resulting in families who should have been supported elsewhere being referred to Home-Start. If this is still happening then it means that those families may not be getting the support they need at the time they need it. It may also mean that Home-Start home visitors' time is being spent with families that they are not best placed to help, when they could be visiting other families who would be able to benefit more from their support. Bagilhole's (ibid) study took place over 20 years ago, however given the austerity agenda and cuts to local authorities that have happened in the intervening years,

then it is possible that such an effect may still be occurring. More contemporary research looking at some of the issues that Bagilhole (ibid) addressed is clearly needed to identify if such inappropriate referrals are common in Home-Start schemes today.

9.3.5 The family's situation and improvements in coping

For the majority of families emotional well-being does improve, and among these families, the families' situations were only very weakly related to the rate at which those improvements occurred. In fact the rate of improvement was more strongly related to the way support is provided than the family's situation. This is an important finding in itself. It suggests that improvements in emotional well-being may be made by parents in all situations at similar rates and that no situation was very strongly associated with the likelihood of improvements occurring slowly.

However, though effect sizes were small, there were family situations that were consistently related to slower improvements. These included having a disabled parent, a large number of children and mental health problems. There were also situations consistently associated with faster improvements, particularly domestic abuse. When only those families who had longer durations of support were considered the risk factors associated with slower improvements were still associated with slower improvements, but there were some changes in those that were associated with faster improvements. While domestic abuse was still associated with faster improvements the effect was not so strong. Faster improvements were now identified among those with housing problems and in families with a child with a child protection plan.

The idea that these results might be associated with the malleability of risk factors was discussed in Chapter 7. Risk factors that that are capable of being changed or removed are considered to be more malleable. A possible explanation of these results could therefore be that more malleable risk factors change during the course of support. For example, in some families where domestic abuse is an issue, the victim of that abuse might have left the abusive situation during support. Where there are housing problems more permanent or more suitable housing may have been found. Such changes result in those risk factors no longer being present and may results in rapid improvements in parental emotional well-being. If this is happening it is still not clear what might be causing risk factors to change. It may be that risk factors are changed as a result of the support, or alternatively they may change anyway regardless of the support. It may also be that both things happen: in some families, malleable risks change anyway while in others the support contributes to them changing. These are

theoretical ideas that are being put forward as a result of this analysis. In considering the epistemological basis for this research in Chapter 3, the idea that inductive logic could be used to generate theories from big data was discussed and this is what is happening here. Further work would need to be done to be confident of this effect.

However there are already a couple of other findings from this analysis which add weight to the theory that parental emotional well-being is more likely to improve quickly because of malleable risk factors changing. Firstly it appears to be backed up by the results relating to the Hardiker levels of need. These showed that those families categorised at level three, as having severe and well-established difficulties improved the most slowly, while those at level four who had completely broken down either permanently or temporarily improved the most quickly. We do not have any more details about the sorts of problems that the families classified at these different levels might have had. It seems plausible that those families who were placed at level four and improved more rapidly, improved more rapidly because they were in situations that had broken down temporarily. Those at level three are described as having severe and well-established difficulties. These situations may have been less able to change.

The idea of changes in the family's lives influencing the improvements in emotional well-being for those with more malleable risks is also backed up by comments reviewed as part of the life event content analysis. For example among the comments relating to relationship changes there were comments indicating that parents had left abusive partners. Among the comments relating to moving house, there were comments that indicated that families had now been able to move into more suitable accommodation.

It is also important to remember that faster improvements are only found in some of the families with more malleable risk factors. This was highlighted in the models looking only at those families who had more than six months of support. The percentage of families with domestic abuse as a risk factor has reduced at this stage, suggesting some had already left support. Among those that remained, improvements occurred much more slowly. This suggests that in the models looking at changes over the entire duration of support, families with the domestic abuse risk factor appear to improve more rapidly than others because there are some that make very rapid improvements, while others do not.

More evidence is needed about the differential effect of home visiting on more malleable and more permanent risks in order to be sure of these effects. Firstly more evidence is needed to

confirm that this effect is found in other sets of data. This could include Home-Start's administrative data for families referred to Home-Start after the period looked at in this study, but also additional datasets from other home visiting programmes. Even if this can confirm a relationship between malleable risks and faster improvements in emotional well-being, it will still not be clear whether those malleable risk factors are changed as a result of the home visiting support. Several further questions need to be asked. Are the differential impacts on parental emotional well-being of home visiting support among families with a malleable risk a result of those risks being removed in some families and not others? How does emotional well-being change among those families with the malleable risks for whom the risk was not removed? And to what extent is the removal of those risks attributable to the home visiting support? There is also a need for qualitative research that clarifies how different aspects of support work to either remove risks or mitigate against their effects. This study has already touched on some of these possibilities. In the literature review we discussed a number of studies that highlighted the key role home visiting plays in referring families to specialist services. Evidence that it is this that enables the malleable risks to change would prove that home visiting can be effective in reducing malleable risks.

Equally important is the need to gain more evidence about support for families in situations that are not malleable. Large families consistently improved more slowly than other families. Unlike the other risk factor variables, having a large number of children was not investigated because it was considered to be an adverse family situation, nor was there evidence that it is related to child behaviour problems. However, previous studies of Home-Start had highlighted how parents might feel overburdened, and the consequences this can have for children in relation to other outcomes. This study highlights how these families in this situation improve more slowly overall than families in more adverse situations, and more evidence would be needed to understand why.

Another group of families that consistently stands out as both less likely to improve quickly, and less likely to improve at all, are those families that have a disabled parent. A dearth of evidence with respect to home visiting for disabled parents has previously been highlighted (Kilkey and Clarke 2010), and while this study has started to address this issue, there is still a lot more work that needs to be done. This study considered families where either parent considers themselves to be disabled. This provided a risk factor sufficiently prevalent to use this group in the analysis. However, the additional families that have been supported since the data was originally exported could be used to create a larger subsample of families with a disabled parent. The different impacts of both being a disabled parent, and having a disabled

partner, on the emotional well-being of the parents could be considered. Qualitative work would also be of great benefit among these parents. Parents may be disabled in different ways and this may affect the type of support that is valuable to them. The results with respect to the value of paid workers and the frequency of visits discussed above, both highlight how families with disabled parents can benefit from support, but they do not tell us much about the content of that support. Carefully framed qualitative work would be able to help fill this gap.

This study also found evidence that some stressful events slow down the rate at which emotional well-being improves. Emotional well-being improved more slowly in families who had had a bereavement. This emphasises the need to look at changes in parental emotional well-being within the context of everything else that is happening in their lives. It may be that some of the other life events can also have an impact on some families but do not impact on all, and this may have prevented findings being seen in the overall dataset. For example breakdowns in the relationship between the parents were looked at. It is quite possible that these breakdowns will have had a detrimental impact on the emotional well-being of some parents, while for others the end of a difficult relationship may have had a positive effect on a parent's emotional well-being. As discussed above, there were indications among the life event comments suggesting that the end of a relationship might be positive for some parents, for example in cases where domestic violence had been a problem. These results cannot therefore be taken to mean that the other life events may not impact on the emotional well-being of any parents, but an overall effect is not apparent for all families in this situation. The effect of bereavements may have been more clear cut because the effect is constantly negative for all parents.

There is a striking contrast when these results are compared to those with multiple risks. Although multiple risks were associated with higher rates of drop out and not improving, the majority of families with multiple risks do improve over the course of support, and there was no evidence that multiple risk was associated with the rate at which coping improves. This shows the findings of Ferguson et al (2005) and Raikes et al (2006) also apply to indexes of multiple risk relating to adversity. It shows that the type of risk factors that a family has, is more related to the rate at which parents improve, than the number of risks they have.

9.3.6 Summary of the Implications for Policy and Practice

This section has discussed a number of the implications that arise from this research. The findings of this research have been discussed in detail and a number of directions for future research highlighted. The findings also have some direct implications for practice and policy, which have been highlighted. These include:

- The findings in relation to the different circumstances in which volunteer and paid worker support are affective have implications for practice. They are important for those working in Home-Start schemes allocating home visitors to families as they highlight families who may particularly benefit from the support of paid workers (e.g. families where domestic violence is an issue, families with multiple risks and families with disabled parents). They also highlight family situations where a volunteer may be just as effective.

- The findings with respect to volunteer and paid worker support are also important for policy makers and those responsible for funding home visiting support for families, as they indicate the circumstances in which it is beneficial to invest in the support of a paid worker, as well as the circumstances in which volunteer support can be just as effective.

- The findings that families improve more quickly when visited more frequently are important for both policy and practice. With respect to practice, Home-Start schemes need to make this finding clear to home visitors, and home visitor training programmes should be adjusted to include this.

- Policy makers also need to be aware of the value of more frequent home visiting support to ensure that programmes they support provide for more frequent support.

The findings have all been derived through the analysis of Home-Start's administrative data. This method had both strengths and limitations. These will be discussed in the next section.

9.4 The use of administrative data

This study has been carried out through the analysis of Home-Start's administrative data. This is a relatively unique approach in the home visiting research field, where the majority of previous studies have either been quantitative studies with experimental designs, or qualitative studies. Now that the analysis is complete this section will briefly reflect on the

strengths and limitations of this approach, and what it can contribute to the understanding of what works for whom in terms of home visiting support.

The uniqueness of this study, analysing a large administrative dataset has arguably been able to contribute new understanding about what works and for whom in the home visiting field. Two previous studies (Raikes et al 2006, Asscher et al 2007) had considered the interrelationship between family characteristics and the way home visiting support is provided and outcomes. However, they had both looked at demographic characteristics rather than adverse situations, and were carried out with smaller samples. Looking at adverse situations required a dataset in which adverse situations were sufficiently prevalent and this meant data from a large number of families was needed. The large size of Home-Start's administrative dataset provided such data. Once cleaned it provided data on over 10,000 families, with different adverse situations and who were having problems coping with a range of different issues. Such a large dataset was important as it enabled subsamples of data to be used to look at families in different situations, both in terms of the risk factors that they had, but also in terms of the issues that they felt they were struggling with.

Such an approach has been important for enabling those aspects of support which were important for families in different situations to be explored. It has also been important for identifying changes in families receiving support from a service which is multifaceted. Multifaceted support can be difficult to evaluate (Azzi-Lessing 2011). Where support is multifaceted families may receive support in different ways to cope with different issues. One of the challenges with its evaluation is that because families have different needs with respect to that support, they may start the support struggling to cope with different issues. Detecting how well a programme promotes changes in, for example, parental emotional well-being is easier if all parents starting support indicate low levels of emotional well-being. This is not the case with Home-Start. The analysis in Chapter 4 highlighted how those with the lowest initial levels of coping with a given issue make the greatest changes. Where support is multifaceted, if changes in outcome measures are observed in all families regardless of initial levels, then changes in those with the lowest initial levels, may be masked by relatively small changes in those who did not have low initial scores. Using subsamples of the data including only those with low initial scores has enabled changes in parental emotional well-being to be explored, among those families who most need support with their emotional well-being.

This study utilised a within-service design looking only at families who had support. Because of this it is important to be clear that changes in emotional well-being are not necessarily

happening as a result of support. This was particularly pertinent when considering the impact of family situations on the rate of improvement. As discussed in Section 9.3.5 we cannot know that different rates of improvement in emotional well-being among the families in different situations occurred because of the Home-Start support. These changes may have been due to changes happening anyway.

The lack of control group means that overall, conclusions with respect to how much the Home-Start support is responsible for changes in emotional well-being cannot be made. However, the analysis was able to show how different aspects of support appear to affect changes in emotional well-being. This inadvertently shows that, in some situations, the Home-Start support is contributing to changes in emotional well-being over and above those that might occur anyway. For example, among the families with a risk factor for domestic abuse, those with paid worker support improve more quickly than those without. This shows the support of a paid worker for those families is more effective than that of a volunteer, and therefore indicates that the support of the Home-Start paid worker, at least, is being effective in contributing to changes in parental emotional well-being.

Section 9.3 also highlighted the challenges in interpreting the relationship between the nature of support and improvements in emotional well-being, because of the needs-based nature of support. This is a two way relationship. Support can affect emotional well-being. Emotional well-being can affect support. This limitation was not due to the method selected, but rather is a facet of needs-based programmes, and one that has not always been sufficiently taken into consideration in the interpretation of the results in some other studies.

One aspect of the needs-based nature of support, that added an additional challenge to the analysis, was the varying durations of support. Home-Start support continues as long as a parent needs it. While there was only a small variation in the final outcome measures, there was a great deal of difference in the time it took parents to reach these outcomes. It was because of this that the study focused on the rate at which emotional well-being improves. This is a novel approach and by using it changes in coping were able to be looked at in a different way. It was limited in that it only looked at an average rate of change over the course of support and not at changes that occur at different points during support. However it enabled the relationships between the way support is provided and the rate of improvement to be identified. Any evaluations of services, in which the duration of support varies according to need, should also take this into account, rather than concentrate solely on final outcome measures. These issues are also important for substantive reasons. The rationale for

supporting parents with their emotional well-being centres on the importance of the parent-child relationship in the first months and years of a child's life, and the importance of the parent's emotional well-being for this relationship. Because of this it is important to understand, not just if emotional well-being improves but also how quickly. There will be a clear advantage for an infant if their parent feels able to cope in a few months rather than a couple of years.

Chapter 5 explained how significance tests have not been presented in this study because the data refers to the population of parents receiving support from Home-Start over a given time period. Judgements about the strength of findings have therefore been based on effect sizes, including odds ratios, Hedges g and with respect to regression models, correlation coefficients and R^2 values. This approach has been useful for understanding the size of effects, however it is important to note that interpretations of the relevance of findings have been made by the author in relation to the relevance of the implications of these findings and not according to established rules regarding the importance of effects, such as those suggested by Cohen (1988). For example, in Chapter 7, the R^2 values for all the regression models suggested that various different types of family situations combined to explain less than 4% of the variance in the rates at which different aspects of emotional well-being improve. This relationship was interpreted as "very weak" because the author considered that this is a small percentage, and when looking for issues that have in impact on the rate at which Home-Start parents improve these issues only account for a small amount of variation.

The data, made available for this analysis, came from families who were being supported by 262 different Home-Start schemes. The analysis looked only at relationships across the data as a whole, and did not consider if these relationships varied across different Home-Start schemes. However, multi-level modelling could have been used to identify if there were differences in changes in coping across different schemes, as well as how consistent the relationships between the nature of support and family situations and changes in coping are across schemes. For this analysis it was decided not to use multilevel modelling as this was not required to answer the research questions. By not using multilevel modelling it enabled the differences between volunteer and paid worker support to be fully explored. Some schemes do not have paid worker support available, and so may have had to be excluded from the analysis and this would have reduced the sample size. The decision not to use multilevel modelling, also meant that when subgroups of data were used the sample sizes were sufficient to facilitate analysis. Further studies, however, using larger samples could look at scheme level

effects, and this would be able to show if certain aspects of support, or families in certain situations were able to benefit more from support in some schemes than others.

Using the administrative data also presented challenges. It required a significant amount of data cleaning before any analysis was able to take place, a feature that is common with administrative data (Connelly et al 2016). In Chapter 3 a lot of potential weaknesses in the variables were discussed. There were many reasons for this. This is administrative data collected by a range of different people, and they may have different standards of data collection and different interpretations of the questions asked. Many of the questions on the Home-Start forms were ambiguous, and it was unclear who in the family particular situations related to. These issues raised concerns about the reliability of some of the risk factor variables. However what has been striking across the empirical chapters of this thesis is that where tests have been done that repeat analysis carried out in earlier studies, then they have been found to echo the results of those earlier studies. This happened with respect to those studies looking at who drops out of support early, and with respect to the relationship between multiple risks and outcomes. All this somewhat alleviates concerns about the validity of those variables. In spite of this, because of the way the data was collected, by such a variety of different individuals it might be that some risks may not have been reported, and this may have affected the effect sizes.

Overall, in spite of the challenges of using administrative data, the research design employed by this study has provided a new and unique understanding of some of the issues relating to home visiting support. This is, in part, because of the unique qualities of the method, using a large dataset of families to look at relative differences between them. This has enabled it to provide a new understanding about what works in terms of home visiting support for families in different situations. The findings from this study build on and complement the findings from previous studies, which have used experimental designs or qualitative methods. This highlights the value of within-service designs using large administrative datasets, and shows how they can complement other research designs. In a world with increasing computerised administrative records such approaches may provide a useful additional tool in research evaluating programmes in many areas of social care. The unique contribution made by this study will be summed up in the final section below.

9.5   Concluding remarks

This study has used Home-Start's administrative data to look at the relationship between the way home visiting support is provided and changes in parental emotional well-being for parents in different adverse situations. This is a novel approach in the home visiting evaluation field, and by adopting such an approach it has been able to provide an original contribution to knowledge.

The study has highlighted how, the way that support is provided is more important in determining the rate at which parental emotional well-being improves than the family's situation. It has also shown that different aspects of support are more important for families in particular situations. One of the most valuable contributions is the new understanding it has provided of the situations in which paid worker support, as opposed to volunteer support, is important. Likewise it has also highlighted the situations where volunteer support is as effective as that of a paid worker. It has also confirmed the importance of the frequency of visits in Home-Start home visiting support. These findings have immediate practical significance for Home-Start practice and need to be disseminated to Home-Start schemes.

In addition to the novel approach of using administrative data, this study has also enabled the development of two methodological innovations for evaluating home visiting programmes because of their multifaceted and needs-based nature. First, the challenges of the multifaceted nature of support were mitigated against by only concentrating on families with initial low levels of coping with a given issue. This study was able to do this because of the large numbers of families in the dataset. Second, because the duration of support is needs-based, a method was required to factor this in when considering the overall effect of different aspects of support on outcomes. This study provided an innovative solution for this by looking at the rate at which emotional well-being improved.

Overall by employing a novel research design this study has not only demonstrated the contribution that the analysis of administrative data can make to social care research, but has also made an important contribution to the existing body of knowledge about what works in terms of home visiting support. These findings can now help improve home visiting practice for families in adverse situations.

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Home-Start Referral and Support Forms

This appendix provides a complete set of the forms through which the parts of the MESH data used in this thesis are collected. It includes:

Referral Form

Referral form   Date referral received (scheme use) _____

o   Please note that all referrals must be made with the consent of the
    family. Have you discussed this referral with the family prior to
    completing this form? YES / NO

Home Start
Support and friendship
for families

Name of family.. **Family Number** (scheme use).........................

Address..

....Postcode ....

Tel. No ....Mobile No ....E mail ....

Please provide some details about the adults caring for the child[ren]:

	Name	Main carer √	Resident in household √	Relationship to child/ren if applicable
Mother/partner				
Father/partner				
Other main carer[s]				
Other main carer[s]				

Referred by: Date of referral:

Name	Family Doctor
Role	Tel
Agency	Health Visitor
Address	Tel
E mail	E mail _____
Postcode	Other agencies involved
Tel	

Please √ all that apply to this family: *See guidance for definitions

Lone parent *	substance misuse	domestic abuse	mental health issues	learning disabilities	post natal depression	Interpreter required	teenage pregnancy 19yrs or younger *	other please specify

Are there any Health and Safety issues that we need to consider when placing a volunteer
with this family:

....

....

Please add any background information that you think we would find useful (if necessary
attach an extra sheet)..

....

1 of 4

Family needs - So that we can offer the family the most appropriate support, and match the most suitable volunteer, please complete the following table. Please note that there is not a 'points' system. Families will not be prioritised on the basis of how many categories are ticked. This information, together with information provided by the family, will be used to monitor how our support meets the family's needs.

I hope that Home-Start will help meet needs the family has in the following areas:

Family needs	√	If you have ticked, please tell us why this is a need
Managing child's behaviour		
Being involved in the child(ren)'s development		
Coping with own physical health		
Coping with own mental health		
Coping with feeling isolated		
Parent's self-esteem		
Coping with child's physical health		
Coping with child's mental health		
Managing the household budget		
The day-to-day running of the house		
Stress caused by conflict in the family		
Coping with multiple birth/multiple children under 5		
Use of services		
Other (please describe)		

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Details of other members of the household with responsibilities for caring for the children (Please ensure all details are completed)

	Gender		Date of birth	Immigration status			Consider themselves to be disabled	Asian or Asian British				Black or Black British			Chinese or Other Ethnic Group		Mixed	White		
	Male	Female		Asylum seeker	Refugee	Pending	YES?	Indian	Pakistani	Bangladeshi	Other Asian	Caribbean	African	Other	Chinese	Other Ethnic	Any mixed	British	Irish	Other White
Main Carer																				
Partner living in household																				

Referrer's signature .... Date ....

Parent's signature .... Date .... (optional)

Thank you for taking time to provide this information which will help us to process the referral.

We are unable to process your referral until we have received this form

We will try to respond to you within two weeks to tell you about progress with this referral.

We will remain in touch while supporting this family and will contact you when the support ends

If you have any issues or concerns about the referral process or the support for the family please contact _____

(Scheme to insert scheme contacts)

Details of Children

Please record all dependent* children in the household (*see guidance for definition)

Child's name Eldest first	Gender		Date of birth	Immigration status			Considered to be disabled by main carer? ✓ YES/NO?	Asian or Asian British				Black or Black British			Chinese or Other Ethnic Group		Mixed	White			Subject to assessment of needs e.g. CAF / UNOCINI (✓)	Who is the professional lead?	Child in need ✓	Child care/ protection plan (✓)
	Male	Female		Asylum seeker	Refugee	Pending		Indian	Pakistani	Bangladeshi	Other Asian	Caribbean	African	Other	Chinese	Other Ethnic	Any mixed	British	Irish	Other White				
C1.																								
C2.																								
C3.																								
C4.																								
C5.																								
C6.																								
C7.																								
C8.																								
C9.																								
C10.																								

Please complete those boxes which apply to any of the children. Note the terms above are nation-specific – not all will be relevant in your area.

Initial Visit Form

'Initial Visit Form   Home–Start Family No:_____   Scheme Code:_____   Organiser/Co-ordinator name:

For a family that has self-referred, please use the form Referral/Initial Visit Form for Self Referrals   Date of visit:_____

Interpreter used: YES/NO   Who is answering the questions: Mother/Father/Other (please identify) Please read guidance before completing this section

Needs identified	needs identified ✓	Please complete the 4 Section headings for A, B, C & D. Level of coping today 0 = not coping very well 5 = coping very well							Outcome: What would it be like if it was better?	Please record below & code for the online system. How Home–Start can help me achieve this? Please code: 1. Practical support 2. Activities with children 3. Emotional support) 4. Support to use other service 5. Other (specify).
		0	1	2	3	4	5	NG		
A. PARENTING SKILLS										
1. Managing children's behaviour										
2. Being involved in the children's development/learning										
B. PARENTING WELL–BEING										
3. Coping with physical health										
4. Coping with mental health										
5. Coping with feeling isolated										
6. Parent's self–esteem										
C. CHILDREN'S WELL–BEING										
7. Coping with child's physical health										
8. Coping with child's mental health										
D. FAMILY MANAGEMENT										
9. Managing the household budget										
10. The day–to–day running of the home										
11. Stress caused by conflict in the family										
12. Coping with extra work caused by multiple birth/children under 5										
13. Use of services										
14. Other (specify)....................										

MESH Initial Visit Form   ©Home–Start   last reviewed & edited 12/03/2013   Page 1 of 4

Use of Services

	Which services are the family currently using? Please ✓	Service availability Please code: service needed but:- 1 = does not exist 2 = recently closed 3 = too far away	How can Home-Start help the family to make better use of available services?					
			Signposted – provided address and contact details	Transported to service	Accompany family to appointment	Discussed the service prior to or after use	Looked after children while family attended appointment	Other: please specify
1. Family GP								
2. Health Visitor								
3. Social worker								
4. Mother & Baby Clinic								
5. Children's centre								
6. CAMHS								
7. CPN/Mental health								
8. CAB								
9. Debt counselling								
10. Turn2Us online and/or helpline services								
11. Housing advice/support								
12. Benefits department								
13. Legal support								
14. Job Centre Plus								
15. Adult education								
16. Parent & Tots group/ Nursery/Schools								
17. Parenting programme								
18. Dentist								
19. Other statutory services (specify)								
20. Other voluntary services (specify)								
21. Other (specify)								
22. Speech & Language								

Housing (✓ tick all appropriate)

Private owned	Private rented	Household in social housing [owned by local authority or housing association]	Family in temporary accommodation (B and B, hostel)	Overcrowded housing [defined as more than 2 people per bedroom]	Other Please specify:

Transport (✓ tick all appropriate)

House with available car	Household with no available car	On public transport route	Not on public transport route	Public transport too expensive/difficult to access with children under 5	Other Please specify:

Please tick if Yes to the following questions:

Employment is anyone in the household in paid employment ☐   If 'Yes', which family member? ....

Is any household member employed by the armed forces ☐   Is any main family carer in prison ☐

Has the family received Home-Start support previously? ☐   If yes, when did Home-Start support end?   Date: ....

The following written information was given to the family (please tick box):

☐ Scheme information   ☐ Information on confidentiality   ☐ Information sharing   ☐ Complaints procedure

☐ Family group information   ☐ Safeguarding information   ☐ Other information (please specify): ....

The family has also been informed that Home-Start retains essential information about their support which is used by the scheme and Home-Start UK for monitoring and evaluation purposes. These records are kept securely and are subject to the provisions of the Data Protection Act and the Home-Start confidentiality policy.

Organiser's / Co-ordinator's signature: .... Parent's signature: .... Date: ....

Is support offered? YES / NO   Date:
If no, or family declines, what is the reason? (please √ one):

☐ Family declines support   ☐ Support postponed   ☐ Other
☐ HS not appropriate for family   ☐ Inappropriate referral

If yes, what support will be offered? (please select any appropriate)   Home-Visiting   Group   Paid Worker   Social Activities

If **Group** is a preferred option please continue: Is transport needed

Hardiker level of need: please <u>circle</u> the appropriate level for this family: Level 1   Level 2   Level 3   Level 4

Yes/No

Comments:

Please complete those boxes which apply to any of the children who have been subject to a change of assessment since referral. – not all terms will be relevant in your area

Child's name: eldest first NB Refer to guidance when allocating nos. for new babies/children.	Date of birth	Subject to assessment of needs e.g. CAF/UNOCINI (√)	Child in need (√)	Child care/ protection plan (√)
C1.				
C2.				
C3.				
C4.				
C5.				
C6.				
C7.				
C8.				
C9.				
C10.				

MESH Initial Visit Form   ©Home-Start   last reviewed & edited 12/03/2013   Page 4 of 4

Initial Visit Form for Self-Referrals

Referral/Initial Visit Form for Self Referrals
(for all other referrals please use Referral and Initial Visit Forms)

Section A

Home-Start Family No.: _____   Scheme code:_____

Organiser/Co-ordinator name: _____

Who is answering the questions: Mother/Father/Other (please identify)

Name of family:	Date:	Tel No:	Mobile No:
Address:		Post Code:	E-mail:

Please give details of adults caring for the children:

	Name	Main carer please tick	Resident in household please tick	Relationship to child/ren if applicable.
Mother/partner				
Father/partner				
Other main carer[s]				
Other main carer[s]				

How did you hear about Home-Start?

1= Friends/family/neighbour   2= Health visitor   3= Social worker   4= other

	Name	Phone number
Family GP		
Health Visitor		

Please √ all that apply to this family's circumstances: See Guidance for definitions *

Lone parent *	substance abuse	domestic abuse	mental health issues	learning disabilities	post natal depression	interpreter required	teenage pregnancy 19yrs or younger *	Other please specify

Are there any Health and Safety issues that we need to consider when placing a volunteer with your family:

....

....

Please add any background information that you think we would find useful (if necessary attach an extra sheet)

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Details of other members of the household with responsibilities for caring for the children (Please ensure all details are completed)

	Gender		Date of birth	Immigration status			Consider themselves to be disabled YES?	Asian or Asian British				Black or Black British			Chinese or Other Ethnic Group		Mixed	White		
	Male	Female		Asylum seeker	Refugee	Pending		Indian	Pakistani	Bangladeshi	Other Asian	Caribbean	African	Other	Chinese	Other Ethnic	Any mixed	British	Irish	Other White
Main Carer																				
Partner living in household																				

Details of children   (please include details of all *dependent children)   See Guidance for *definition

Child's name Eldest first NB Refer to guidance when allocating nos. for new babies/children	Gender		Date of birth	Immigration status			Considered to be disabled by main carer? ✓ YES?	Asian or Asian British				Black or Black British			Chinese or Other Ethnic Group		Mixed	White			Subject to assessment of needs e.g. CAF/ UNOCINI (✓)	Child in need ✓	Child care/ protection plan (✓)
	Male	Female		Asylum seeker	Refugee	Pending		Indian	Pakistani	Bangladeshi	Other Asian	Caribbean	African	Other	Chinese	Other Ethnic	Any mixed	British	Irish	Other White			
C1.																							
C2.																							
C3.																							
C4.																							
C5.																							
C6.																							
C7.																							
C8																							
C9																							
C10.																							

Please complete those boxes which apply to any of the children
<u>Note</u>: the terms above are nation-specific - not all will be relevant in your area

Section B   Date of Visit _____   Interpreter used Yes/No   Who is answering the questions: Mother/Father/Other (please specify)

Needs identified	needs ✓ identified	Please complete the 4 Section headings for A, B, C & D. Level of coping today 0 = not coping very well 5 = coping very well							Outcome: What would it be like if it was better?	Please record below & code for the online system. How Home-Start can help me achieve this? Please code: 1. Practical support 2. Activities with children 3. Emotional support) 4. Support to use other service 5. Other (specify).
		0	1	2	3	4	5	NG		
A. PARENTING SKILLS										
1. Managing children's behaviour										
2. Being involved in the children's development/learning										
B. PARENTING WELL-BEING										
3. Coping with physical health										
4. Coping with mental health										
5. Coping with feeling isolated										
6. Parent's self-esteem										
C. CHILDREN'S WELL-BEING										
7. Coping with child's physical health										
8. Coping with child's mental health										
D. FAMILY MANAGEMENT										
9. Managing the household budget										
10. The day-to-day running of the home										
11. Stress caused by conflict in the family										
12. Coping with extra work caused by multiple birth/children under 5										
13. Use of services										
14. Other (specify)................										

Use of Services	Which services are the family currently using? Please √	Service availability Please code: service needed but:- 1 = does not exist 2 = recently closed 3 = too far away	How can Home-Start help the family to make better use of available services?					
			Signposted – provided address and contact details	Transported to service	Accompany family to appointment	Discussed the service prior to or after use	Looked after children while family attended appointment	Other: please specify
1. Family GP								
2. Health Visitor								
3. Social worker								
4. Mother & Baby Clinic								
5. Children's centre								
6. CAMHS								
7. CPN/Mental health								
8. CAB								
9. Debt counselling								
10. Turn2Us online and/or helpline services								
11. Housing advice/support								
12. Benefits department								
13. Legal support								
14. Job Centre Plus								
15. Adult education								
16. Parent & Tots group/ Nursery/Schools								
17. Parenting programme								
18. Dentist								
19. Other statutory services (specify)								
20. Other voluntary services (specify)								
21. Other (specify)								
22. Speech & Language								

Housing (✓ tick all appropriate)

Privately Owned	Private rented	Household in social housing [owned by local authority or housing association]	Family in temporary accommodation (B and B, hostel)	Overcrowded housing [defined as more than 2 people per bedroom]	Other Please specify:

Transport (✓ tick all appropriate)

House with available car	Household with no available car	On public transport route	Not on public transport route	Public transport too expensive/difficult to access with children under 5	Other Please specify:

Employment Is anyone in the household in paid employment ☐

Is any household member employed by the armed forces ☐

If 'Yes', which family member? _____

Is any main family carer in prison ☐

Has the family received Home-Start support previously? YES / NO   If yes, when did Home-Start support end?   Date:

Is support offered? YES / NO   **Date:**

If no, or family declines, what is the reason? (please ✓ one):

☐ **Family declines support**   ☐ **Support postponed**   ☐ **Other**
☐ **HS not appropriate for family**   ☐ **Inappropriate referral**

If yes, what support will be offered? (please select any appropriate)   Home-Visiting   Group   Paid Worker   Social Activities

If **Group** is a preferred option please continue: Is transport needed   **Yes/No**

Hardiker level of need: please circle the appropriate level for this family: Level 1   Level 2   Level 3   Level 4

The following written information was given to the family (please tick box):

□ Scheme information   □ Information on confidentiality   □ Information sharing   □ Complaints procedure

□ Family group information   □ Safeguarding information   □ Other information (please specify): ....

The family has also been informed that Home-Start retains essential information about their support which is used by the scheme and Home-Start UK for monitoring and evaluation purposes. These records are kept securely and are subject to the provisions of the Data Protection Act and the Home-Start confidentiality policy.

Organiser's/ Co-ordinator's signature: ....**Parent's signature:** .... **Date:** ....

Comments:

Review Visit Form

Review Form: Home-Start Family No: _____ Scheme Code.: _____Organiser/co-ordinator name.........................

Project no:

Interpreter used: YES/NO   **Who is answering the questions:** Mother/Father/Other (please identify)

Please refer to Initial/last Review visit forms for the needs identified, outcomes and the coping scores in the previous visit. Please read guidance before completing this section

Needs identified at last visit and new needs

Date _____

Date of last visit _____

Needs identified at last visit	Coping score at last visit	Please complete the 4 Section headings for A, B, C & D. Level of coping today 0 = not coping very well 5 = coping very well							Family Outcome: What would it be like if it was better?	Family Outcome achieve: partially achieved; not achieved	If partially or not achieved how can HS help further? Code activities*	New needs identified today	How has Home-Start helped/can Home-Start help? Code activities*, select all appropriate
		0	1	2	3	4	5	NG					
A. PARENTING SKILLS													
1. Managing children's behaviour													
2. Being involved in the children's development/learning													
B. PARENTS' WELL BEING													
3. Coping with physical health													
4. Coping with mental health													
5. Coping with feeling isolated													
6. Parent's self-esteem													

*Please code:
1. Practical support
2. Activities with children
3. Emotional support)
4. Support to use other service
5. Other (specify).

MESH Review Visit Form   last reviewed & edited 19/03/2013   Page 1 of 5

Needs identified at last visit and new needs	Needs identified at last visit	Coping score at last visit	Please complete the 4 Section headings for A, B, C & D. Level of coping today 0 = not coping very well 5 = coping very well							Family Outcome: What would it be like if it was better?	Family Outcome: partially achieved; not achieved	If partially or not achieved how can HS help further? Code activities*	New needs identified today	How has Home-Start helped/can Home-Start help? Code activities*, select all appropriate
			0	1	2	3	4	5	NG					
C. CHILDREN'S WELL BEING														
7. Coping with child's physical health														
8. Coping with child's mental health														
D. FAMILY MANAGEMENT														
9. Managing the household budget														
10. The day-to-day running of the home														
11. Stress caused by conflict in the family														
12. Coping with extra work caused by multiple birth/children under 5														
13. Use of services														
14. Other (specify)														

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*Please code:
1. Practical support
2. Activities with children
3. Emotional support
4. Support to use other service
5. Other (specify)

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Services used

Services used	Which services are the family currently using or used since last visit? Please √	Local Services availablity Please code – service needed but:- 1 = does not exist 2 = service needed but recently closed 3 = service needed but too far away	Has Home-Start helped the family access the service? Yes/No	If Yes, how has Home-Start helped the family to make better use of the services?					
				Signposted – provided address and	Transported to service	Accompanied family to appointment	Discussed the service prior to or after use	Looked after children while family attended appointment	Other: please specify
1. Family GP									
2. Health Visitor									
3. Social worker									
4. Mother & Baby Clinic									
5. Children's centre									
6. CAMHS									
7. CPN/Mental health									
8. CAB									
9. Debt counselling									
10. Turn2Us online and/or helpline services									
11. Housing advice/support									
12. Benefits department									
13. Legal support									
14. Job Centre Plus									
15. Adult education									
16. Parent & Tots group/ Nursery/Schools									
17. Parenting programme									
18. Dentist									
19. Other statutory services (specify)									
20. Other voluntary services (specify)									
21. Other (specify)									
22. Speech & Lang									

Comments:

Hardiker level of need: please <u>circle</u> the appropriate level for this family: Level 1   Level 2   Level 3   Level 4
*(Please complete online form)
Family supported by:-   **Home visiting**   **Group**   **Paid Worker**   **Social Activities**
*(NB If type of support has changed, please complete online family match placement form)

*Recent Life Events
Has the family had a recent life event?   Yes/No (please circle).   If yes, please state when and describe briefly:

No	Life Event	Date	Describe
1	Recent bereavement		
2	Change in employment status		
3	Reduction in income (e.g. benefits, tax credits, salary)		
4	Change in relationship Separation/new partner/marriage		
5	Serious Illness		
a	Parent		
b	Child		
6	New child in family		
7	A&E visit adult or children		
8	Becoming a carer		
9	Change in housing		
10	Change in immigration status		
11	Domestic violence/abuse		
12	Other (specify)		

*Please note: If family ticks No.6 please also fill in 'New Child In Family' form
* All these forms are found online on the Family Summary page

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Children's Assessments. please complete for any of the children who have been subject to an assessment since last review or since Initial Visit

Note: the terms are nation-specific - not all will be relevant in your area

Child's name: eldest first NB Refer to guidance when allocating nos. for new babies/children	Date of birth	Subject to assessment of needs e.g. CAF/UNOCINI (√)	Was the assessment initiated by H-S? (√)	Who is the lead professional?	Child in Need (√)	Changes in child care/ protection plan status yes = on; no = off
C1.						
C2.						
C3.						
C4.						
C5.						
C6.						
C7.						
C8.						
C9.						
C10.						

MESH Review Visit Form

last reviewed & edited 19/03/2013

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Volunteer Diary

Volunteer Monthly Structured Diary Month/Year:

Home-Start Family No: Scheme code   Vol. No: Volunteer name:

Planned visit date	Visit took place? Y/N	A. Reason visit did not take place* (Code 1 to 6)	B. Who did you see at home when you visited?* (Code M, D, C1,C2 etc...)	Visit start time	Visit end times	C. Activities* (Code 1 to 5)	D. Service* (Code 1 to 27)	E. Role with service* (Code 1 to 6)	Interpreter used YES/NO
1.									
2.									
3.									
4.									
5.									
6.									
7.									
8.									

Volunteer Monthly Structured Diary   ©Home-Start   last reviewed 11/3/2013   Page 1 of 4

*Codes for column headings:

A. Reason visit did not take place (select one only):
1. Parent cancelled;
2. Parent re-arranged
3. Volunteer cancelled
4. Volunteer re-arranged
5. Parent not at home
6. Other (specify)

B. Who did you see at home (select all appropriate):
M = Mum
D = Dad
C1 = eldest child
C2 = second eldest child (and continue for as many children as you want)
O = Other (specify e.g. neighbour, relative, unknown female)

C. Activities (select all appropriate):
1. Practical support (for example: budgeting, telephone calls, cooking, shopping, improving hygiene, writing letters, respite, took family out)
2. Activities with children (for example: playing with children, reading, listening to children, fun outdoor activity) help with routine/behaviour
3. Emotional support (listening, empathising)
4. Support to use other service (for example signposting accompanying, discussing prior to/after appointment)
5. Other (specify)

Please insert the appropriate number(s) in the box

D. Services (select all appropriate):
1. Family GP
2. Health Visitor
3. Social worker
4. Mother & Baby clinic
5. Children's centre/Flying Start
6. Job centre plus
7. CAB
8. Debt counselling
9. Turn2Us online and/or helpline services
10. Housing advice/support
11. Benefits Department
12. Speech & Language
13. CPN/Mental Health

D. Services cont:
14. CAMHS
15. Adult education
16. Received books free from Book-Start
17. Family joined local library
18. Toddler group/Nursery/School
19. Religious organisations
20. Free eye sight test
21. Attended appointments
22. Dental check
23. Up to date vaccination
24. Other vol. service
25. Other statutory service
26. Internet access
27. Parenting programme

E. Role related to service use see D (select all appropriate):
1. Signposting the service, gave address, contact details etc
2. Transport - provided transport to the appointment
3. Accompanying - went to the appointment with the family
4. Discussed information about the service prior to or following use with the family
5. Looked after children while parents used service
6. Other (specify)

Family No. ....   Scheme Code ....

Recent Life Events

Has the family had a recent life event, <u>during support or within one year before the start of support?</u>

No	Life Event	Date	Describe
1	Recent bereavement		
2	Change in employment status		
3	Reduction in income (e.g. Benefits, tax credits, salary)		
4	Change in relationship Separation New partner/marriage		
5 a b	**Serious Illness** Parent Child		
6	New child in family		
7	A&E visit adult or children		
8	Becoming a carer		
9	Change in housing		
10	Change in immigration status		
11	Other (specify)		

Family No. ....   Scheme Code ....

Additional volunteer support:
Only complete if applicable: please record date/type of any one-off additional support outside planned home visits.
Codes for on-line data entry: 1-supportive telephone call or text; 2-emergency eg hospital; 3-outing; 4-celebration; 5-other.

Date	Type of support	Comments

Additional Volunteer's comments (optional)

Comments	Date:.......................
Comments	Date:.......................
Comments	Date:.......................
Comments	Date:.......................

Volunteer signature: _____

Home-Start Co-ordinator/manager signature:_____

Volunteer Monthly Structured Diary   ©Home-Start   last reviewed 11/3/2013   Page 4 of 4

Paid worker Diary

Paid Worker Structured Diary Month/Year:

Home-Start Family No: Scheme code: Paid Worker Number: Paid Worker Name:

Planned visit date	Visit took place? Y/N	A. Reason visit did not take place* (Code 1 to 6)	B. Who did you see at home when you visited?* (Code M, D, C1,C2 etc...)	Visit start time	Visit end times	C. Activities* (Code 1 to 5)	D. Service* (Code 1 to 27)	E. Role with service* (Code 1 to 6)	Interpreter used YES/NO
1.									
2.									
3.									
4.									
5.									
6.									
7.									
8.									

Paid Worker Structured Diary   ©Home-Start   last reviewed 13/03/2013   Page 1 of 4

A. Reason visit did not take place (select <u>one</u> only):
1. Parent cancelled;
2. Parent re-arranged
3. Paid Worker cancelled
4. Paid Worker re-arranged
5. Parent not at home
6. Other (specify)

B. Who did you see at home (select all appropriate):
M   = Mum
D   = Dad
C1 = eldest child
C2 = second eldest child (and continue for as many children as you want)
O   = Other (specify e.g. neighbour, relative, unknown female)

C. Activities (select all appropriate):
1. Practical support (for example: budgeting, telephone calls, cooking, shopping, improving hygiene, writing letters, respite, took family out)
2. Activities with children (for example: playing with children, reading, listening to children, fun outdoor activity) help with routine/behaviour
3. Emotional support (listening, empathising)
4. Support to use other service (for example signposting accompanying, discussing prior to/after appointment)
5. Other (specify)

D. Services (select all appropriate):
1. Family GP
2. Health Visitor
3. Social worker
4. Mother & Baby clinic
5. Children's centre/Flying Start
6. Job centre plus
7. CAB
8. Debt counselling
9. Turn2Us online and/or helpline services
10. Housing advice/support
11. Benefits Department
12. Speech & Language
13. CPN/Mental Health

D. Services cont:
14. CAMHS
15. Adult education
16. Received books free from Book-Start
17. Family joined local library
18. Toddler group/Nursery/School
19. Religious organisations
20. Free eye sight test
21. Attended appointments
22. Dental check
23. Up to date vaccination
24. Other vol. service
25. Other statutory service
26. Internet access
27. Parenting programme

E. Role related to service use see D (select all appropriate):
1. Signposting the service, gave address, contact details etc
2. Transport – provided transport to the appointment
3. Accompanying – went to the appointment with the family
4. Discussed information about the service prior to or following use
5. Looked after children while parents used service
6. Other (specify)

Paid Worker Structured Diary   ©Home-Start   last reviewed 13/03/2013   Page 2 of 4

Family No. ....   **Scheme Code** ....

Recent Life Events
Has the family had a recent life event, <u>during support or within one year before the start of support</u>?

No	Life Event	Date	Describe
1	Recent bereavement		
2	Change in employment status		
3	Reduction in income (e.g. Benefits, tax credits, salary)		
4	Change in relationship Separation New partner/marriage		
5 a b	**Serious Illness** Parent Child		
6	New child in family		
7	A&E visit adult or children		
8	Becoming a carer		
9	Change in housing		
10	Change in immigration status		
11	Other (specify)		

Family No. ....   Scheme Code ....

Additional paid worker support:
Only complete if applicable: please record date/type of any one-off additional support outside planned home visits.
Codes for on-line data entry: 1-supportive telephone call or text; 2-emergency e.g. hospital; 3-outing; 4-celebration; 5-other.

Date	Type of support	Comments

Additional Paid Worker comments (optional)

Comments	Date:.......................

Comments	Date:.......................

Comments	Date:.......................

Comments	Date:.......................

Paid Worker signature: _____

Home-Start Co-ordinator/manager signature:_____

Paid Worker Structured Diary   last reviewed & edited 13/03/2013   Page 4 of 4

New Child in Family Form

New Child in Family Form - Please complete this form when there is a new birth in the family or when another child becomes part of the family (e.g. step/foster/adopted child)

Child's name	Gender		Date of birth	Date of entry into family	Immigration status			Considered to be disabled by main carer? ✓ if yes	Asian or Asian British				Black or Black British			Chinese or Other Ethnic Group		Mixed	White			Subject to assessment of needs e.g. CAF/ UNOCINI (✓)	Who is the lead professional?	Child in need ✓	Child care/ protection plan (✓)
	Male	Female			Asylum seeker	Refugee	Pending		Indian	Pakistani	Bangladeshi	Other Asian	Caribbean	African	Other	Chinese	Other Ethnic	Any mixed	British	Irish	Other White				

Please complete those boxes which apply to any of the new children

Note: the terms above are nation-specific - not all will be relevant in your area

MESH New Child Form   ©Home-Start   last reviewed 11/03/2013   Page 1 of 1

End Visit Form

End Visit Form Home-Start Family No:_____ Scheme code.: _____ Organiser/co-ordinator name: _____

Date of visit: _____   This form to be used only when all Home-Start support to the family ceases

Please provide reason for Home-Start support ending (please circle one):

Family no longer requires Home-Start support. Mutually agreed closure.	Home-Start identifies family's needs as better met via alternative service(s).	Family prematurely ends support.	Family becomes unobtainable.	Safety concern or statutory intervention (child protection or police requirement) results in withdrawal of service.	Other (specify)

Please refer to Initial visit/Review visit forms for the needs identified, outcomes and the coping scores in the initial and previous visit. The report <u>family journey</u> will provide a chart illustrating this which can be used with the family.

	Needs identified last visit √	Coping score initial visit	Coping score last review	Level of coping today 0 = not coping very well 5 = coping very well 0 1 2 3 4 5 NG	**Outcome:** Achieved, partially achieved or not achieved
A. PARENTING SKILLS					
1. Managing children's behaviour					
2. Being involved in the children's development/learning					
B. PARENTS' WELL BEING					
3. Coping with physical health					
4. Coping with mental health					
5. Coping with feeling isolated					
6. Parent's self-esteem					
C. CHILDREN'S WELL BEING					
7. Coping with child's physical health					
8. Coping with child's mental health					
D. FAMILY MANAGEMENT					
9. Managing the household budget					
10. The day-to-day running of the home					
11. Stress caused by conflict in the family					
12. Coping with extra work caused by multiple birth/children under 5					
13. Use of services					
14. Other (specify)....................					

MESH End Visit Form   last reviewed & edited 12/03/2013   Page 1 of 4

Services used

Services used	Which services are the family currently using or used since last visit? Please ✓	Local Services availablity Please code: service needed but:- 1 = does not exist 2 = recently closed 3 = too far away	Has Home-Start helped the family access the service? Yes/No	If Yes, how has Home-Start helped the family to make better use of the services?					
				Signposted – provided address and contact details	Transported to service	Accompanied family to appointment	Discussed the service prior to or after use	Looked after children while family attended appointment	Other
1. Family GP									
2. Health Visitor									
3. Social worker									
4. Mother & Baby Clinic									
5. Children's centre									
6. CAMHS									
7. CPN/Mental health									
8. CAB									
9. Debt counselling									
10. Turn2Us online and/or helpline services									
11. Housing advice/support									
12. Benefits department									
13. Legal support									
14. Job Centre Plus									
15. Adult education									
16. Parent & Tots group/ Nursery/Schools									
17. Parenting programme									
18. Dentist									
19. Other statutory services (specify)									
20. Other voluntary services (specify)									
21. Other (specify)									
22. Speech & Language									

MESH End Visit Form

last reviewed & edited 12/03/2013

Comments:

Hardiker level of need: please <u>circle</u> the appropriate level for this family: Level 1 Level 2 Level 3 Level 4

Family supported by:- **Home visiting** **Group** **Paid Worker** **Social Activities**

* (NB please complete online family match placement form to end Home-Start support for the family)

*Recent Life Events
Has the family had a recent life event? Yes/No (please circle). If yes, please state when and describe briefly:

No	Life Event	Date	Describe
1	Recent bereavement		
2	Change in employment status		
3	Reduction in income (e.g. benefits, tax credits, salary)		
4	Change in relationship Separation/new partner/marriage		
5	Serious Illness		
a	Parent		
b	Child		
6	New child in family		
7	A&E visit adult or children		
8	Becoming a carer		
9	Change in housing		
10	Change in immigration status		
11	Domestic violence/abuse		
12	Other (specify)		

*Please note: If family **ticks No.6** please also **fill in 'New Child In Family' form**

MESH End Visit Form

last reviewed & edited 12/03/2013

* All these forms are found online on the Family Summary page

Children's Assessments. Please complete for any of the children who have been subject to an assessment since last review. Note: the terms are nation –specific, not all will be relevant in your area.

Child's name eldest first **NB Refer to guidance when allocating nos. for new babies/children**	Date of birth	Subject to assessment of needs e.g. CAF/UNOCINI (√)	Was the assessment initiated by H-S? (√)	Who is the lead professional?	Child in Need (√)	Child care/ protection plan in place
C1.						
C2.						
C3.						
C4.						
C5.						
C6.						
C7.						
C8.						
C9.						
C10.						

MESH End Visit Form

last reviewed & edited 12/03/2013

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Unplanned Ending Form

HOME-START UNPLANNED ENDING FORM
(to be used if family ceases support before a planned ending or if unable to contact/make an initial visit to family)

Scheme code: _____   Home-Start Family number: _____

Date:_____

Family supported by:-   **Home visiting: Paid Worker: Group: Social Activities**

Date of last review visit/attendance at group (if applicable): _____

Date of last contact by volunteer (if applicable): _____

Type of support at last contact (if applicable): Visit/Group/Other (if other please specify)

Please tell us why support ended before a planned end visit:

  ☐ Family moved unexpectedly

  ☐ Family decided they no longer wish to receive support

  ☐ Scheme and/or volunteer unable to contact family

  ☐ Volunteer could not continue to support family (please specify why in comment box)

  ☐ Family stopped attending group

  ☐ Inappropriate referral

  ☐ Volunteer not available

  ☐ Other (please specify)

Additional comments

MESH Unplanned Ending Form For Groups   ©Home-Start   last reviewed & edited 2/5/12   1

Distributions of Variables

List of Figures

Nature of Support Variables

All families, regardless of initial coping scores

Figure B1. Distribution of the Number of Home Visits Variable

Figure B3. Distribution of Average Length Variable
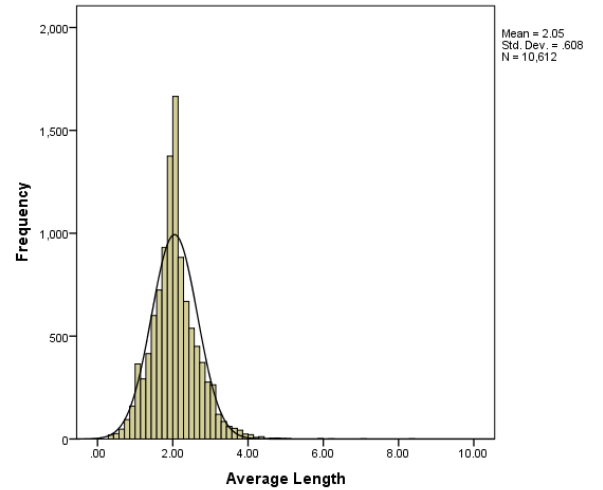
Figure B2. Distribution of Duration Variable
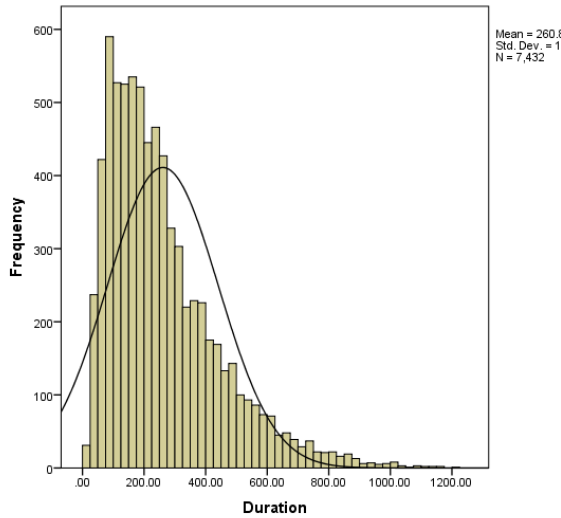
Figure B4. Distribution of the Wait Variable

258
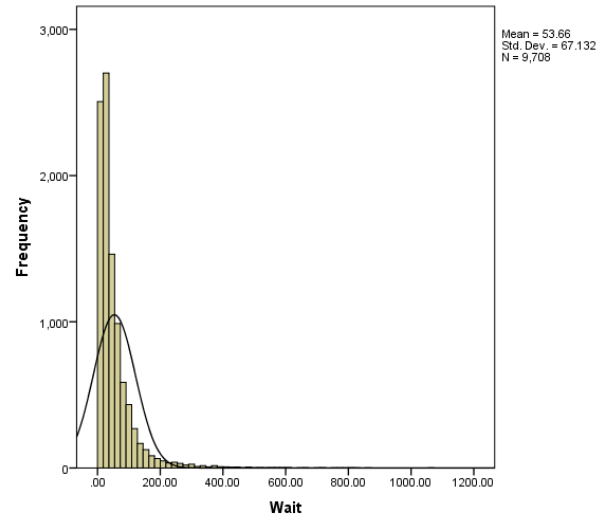
Figure B5. Distribution of the Percentage Cancelled Variable

Figure B6 Distribution of the Frequency Variable

Figure B7 Distribution of the Proportion of Visits Practical Variable

Figure B8 Distribution of the Proportion of Visits Children Variable

Figure B9 Distribution of the Proportion of Visits Emotional Variable
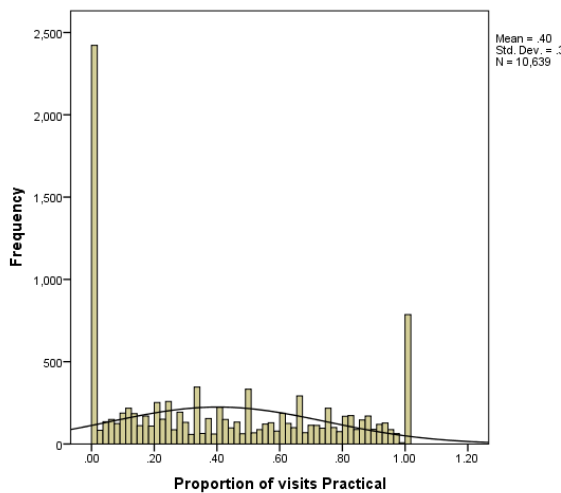
Figure B10 Distribution of the Proportion of Visits Services Variable

259
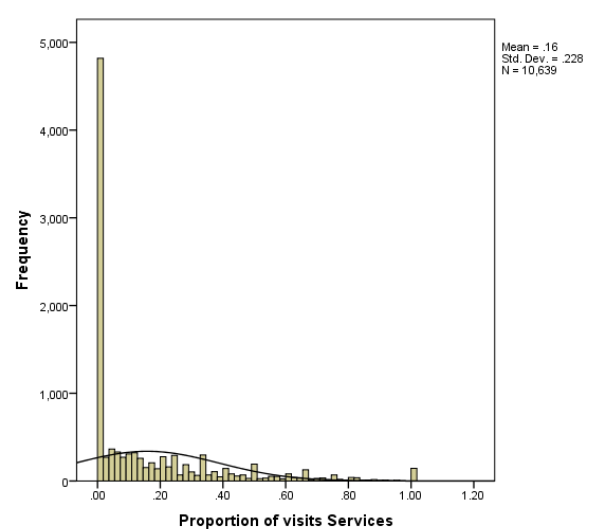
Rate of Change (ROC) Variables

Those with initial low levels of coping for relevant coping measure only

Figure B11 Distribution of the ROC Children's Behaviour Variable

Figure B12 Distribution of the ROC Children's Dev/Learning Variable

Figure B13 Distribution of the ROC Physical Health Variable
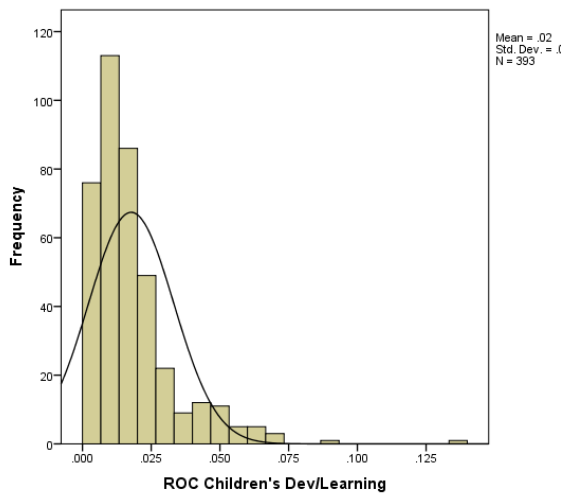
Figure B14 Distribution of the ROC Mental Health Variable
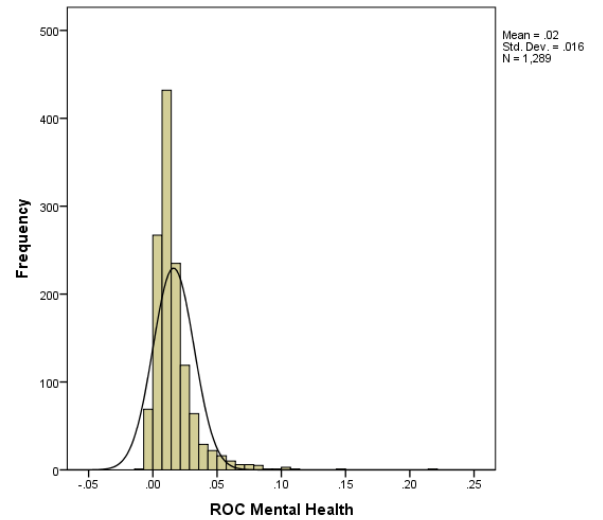
Figure B15 Distribution of the ROC Isolation Variable
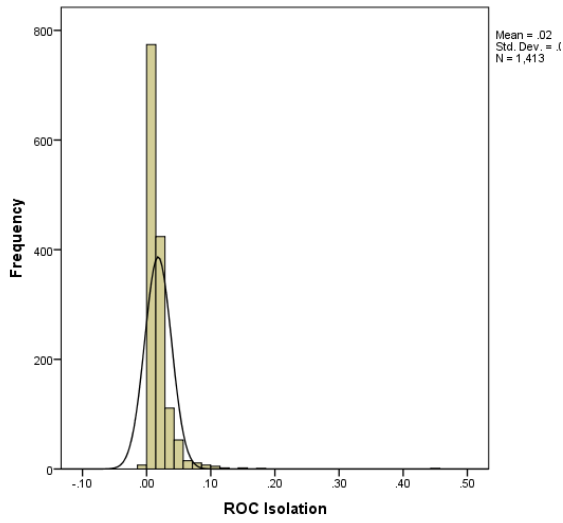
Figure B17 Distribution of the ROC Child's Physical Health Variable
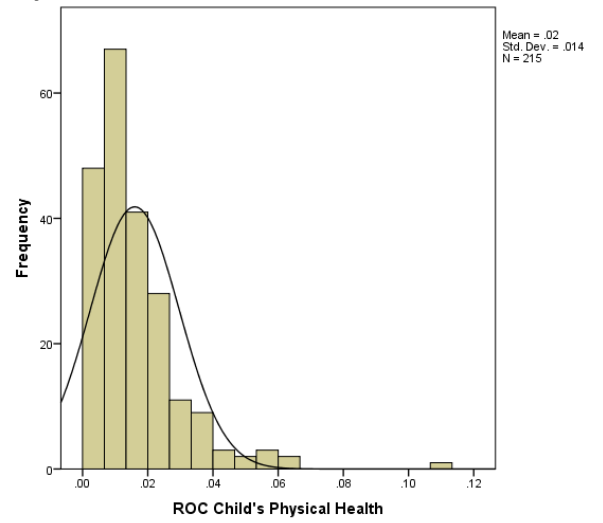
Figure B16 Distribution of the ROC Self-Esteem Variable
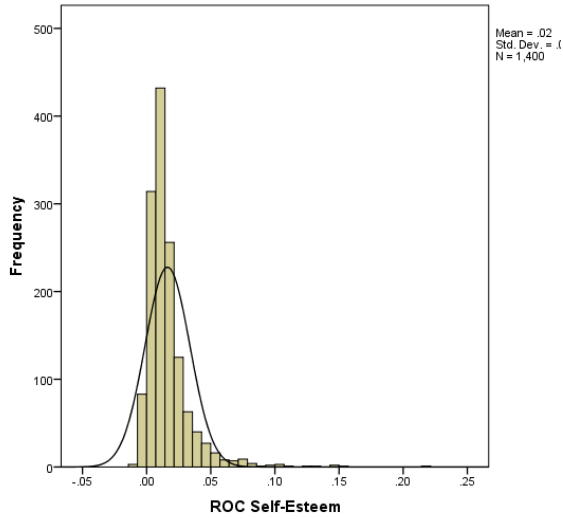
Figure B18 Distribution of the ROC Child's Mental Health Variable
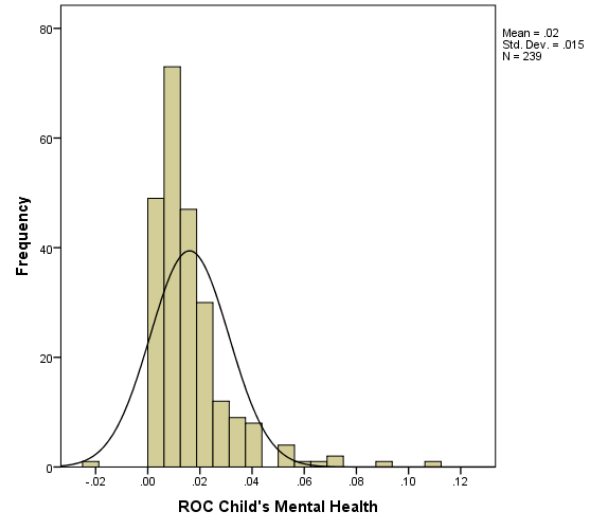
Figure B19 Distribution of the ROC Household Budget Variable
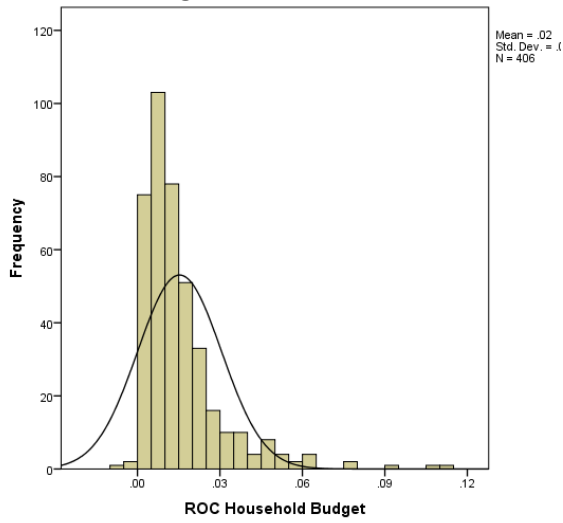
Figure B21 Distribution of the ROC Conflict in the Family Variable
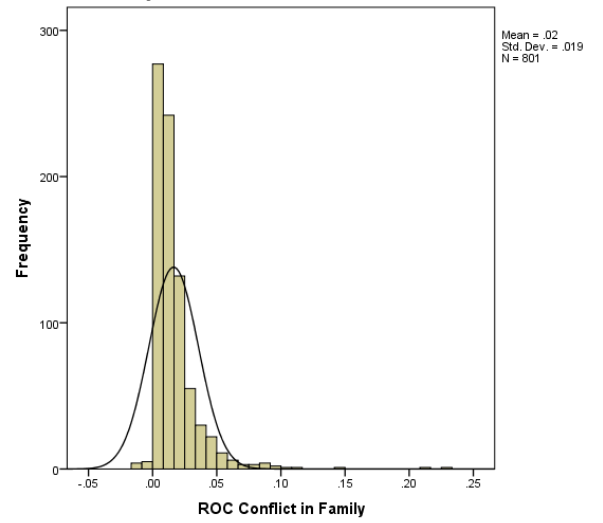
Figure B20 Distribution of the ROC Running the Home Variable
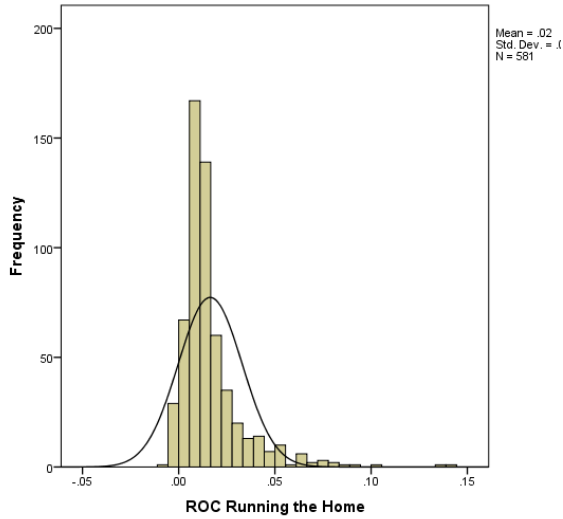
Figure B22 Distribution of the ROC Multiple Children Under 5 Variable
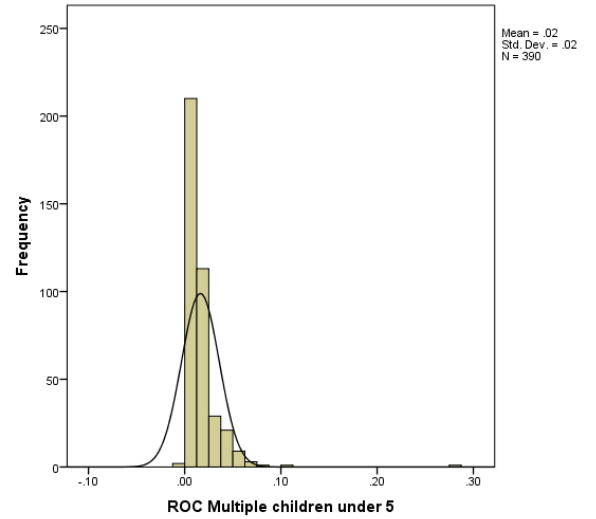
Distribution Log Rate of Change (ROC) Variables

Figure B23 Distribution of the Log ROC Children's Behaviour Variable

Figure B24 Distribution of the Log ROC Children's Dev/Learning Variable

Figure B25 Distribution of the Log ROC Physical Health Variable
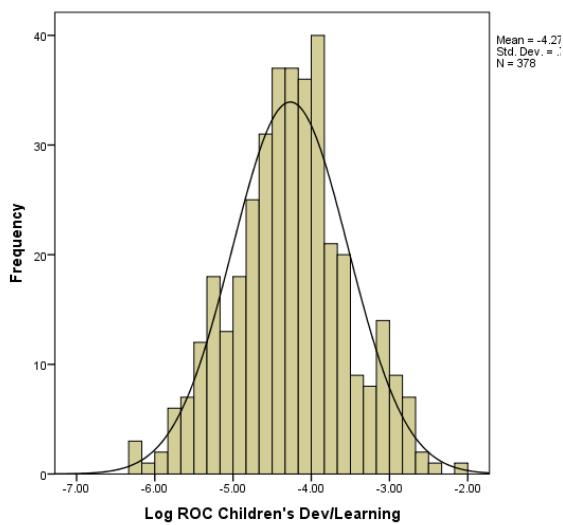
Figure B26 Distribution of the Log ROC Mental Health Variable

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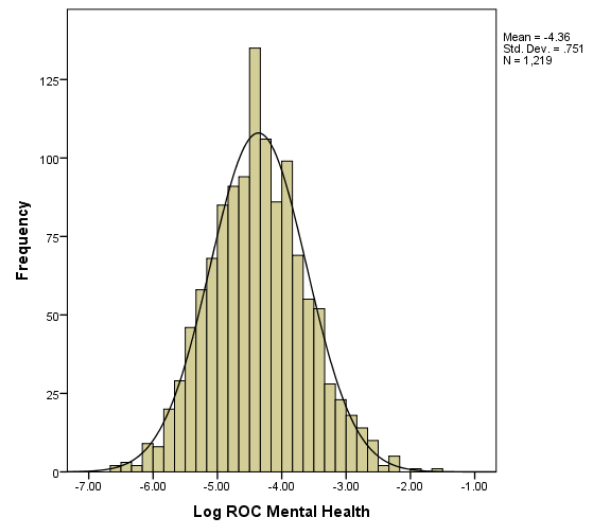
Figure B27 Distribution of the Log ROC Isolation Variable
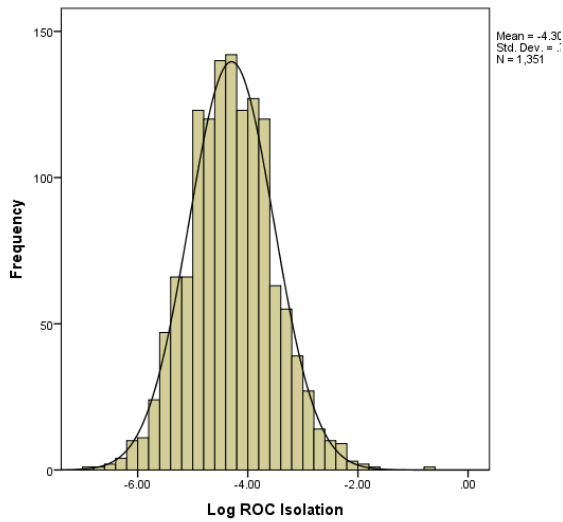
Figure B30 Distribution of the Log ROC Running the Home Variable
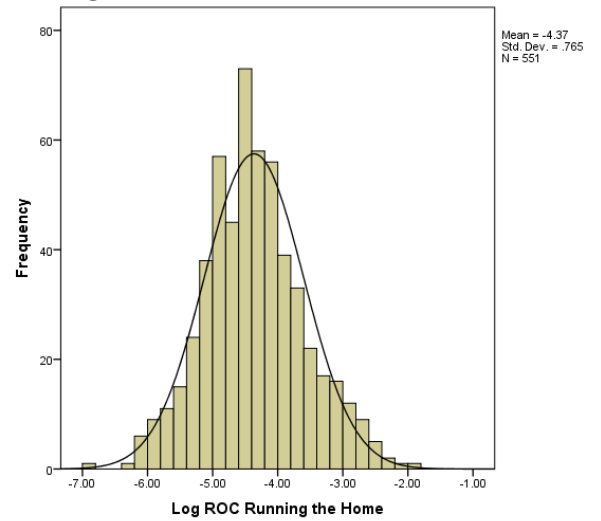
Figure B28 Distribution of the Log ROC Self-Esteem Variable
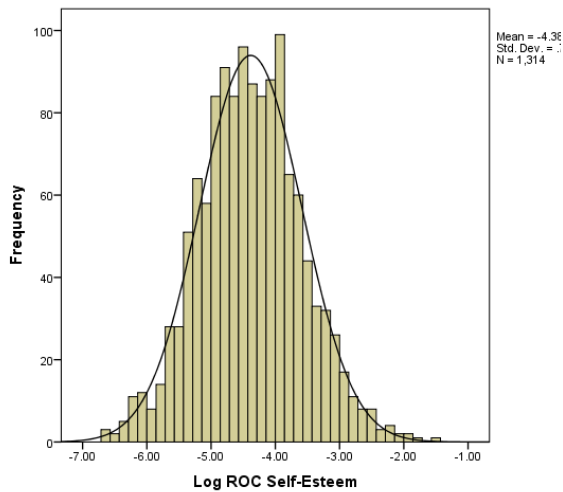
Figure B31 Distribution of the Log ROC Conflict in Family Variable
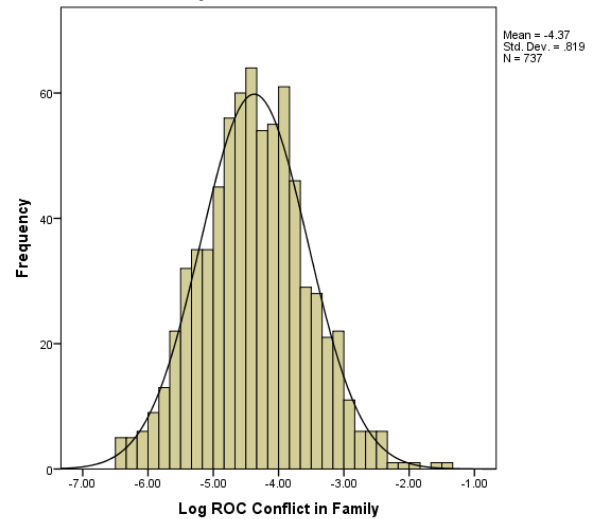
Figure B29 Distribution of the Log ROC Household Budget Variable
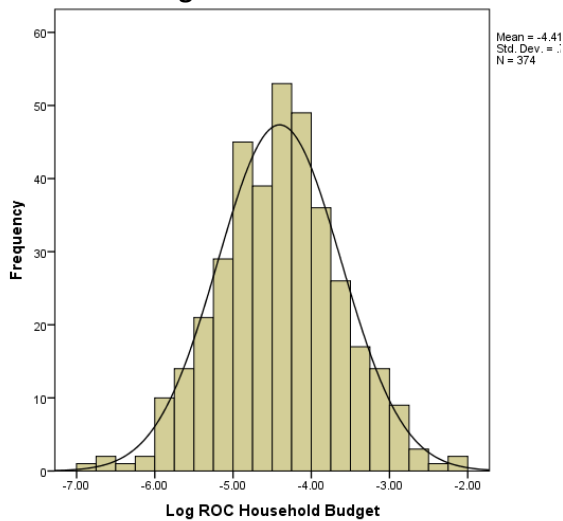
Figure B32 Distribution of the Log ROC Multiple Children Under 5 Variable

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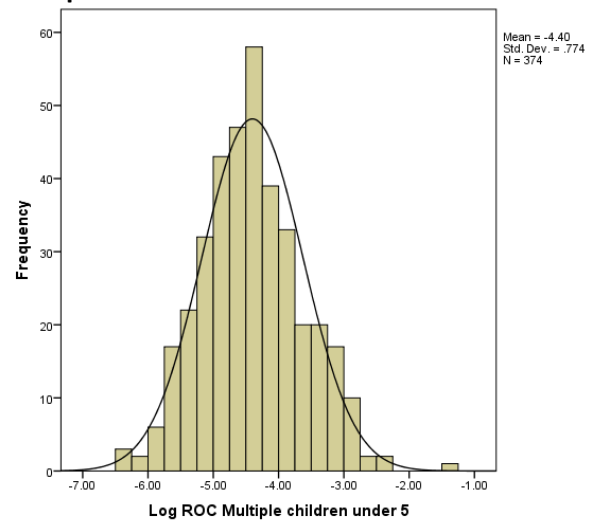
APPENDIX C

Supplementary Tables for Chapter 4

List of Tables

Table C1. Mean changes in coping scores, depending on initial coping levels

Initial Coping Score	T1 $\overline{X}$ (sd)	T2 $\overline{X}$ (sd)	T3 $\overline{X}$ (sd)	T4 $\overline{X}$ (sd)
Children's Behaviour				
low, n=214	0.66(0.47)	1.93(1.07)	2.53(1.09)	2.85(1.19)
medium, n=873	2.62(0.49)	3.01(0.88)	3.17(0.90)	3.30(0.97)
high, n=411	4.34(0.47)	4.03(0.81)	3.94(0.92)	3.94(0.92)
Total, n=1498	2.81(1.25)	3.14(1.11)	3.29(1.04)	3.41(1.05)
Children's Dev/Learning				
low, n=149	0.81(0.40)	2.19(1.11)	2.93(1.10)	3.31(1.14)
medium, n=678	2.61(0.49)	3.18(0.91)	3.46(0.88)	3.65(0.93)
high, n=600	4.44(0.50)	4.23(0.76)	4.24(0.82)	4.25(0.79)
Total, n=1427	3.19(1.28)	3.52(1.10)	3.74(0.99)	3.87(0.96)
Physical Health				
low, n=278	0.66(0.48)	1.91(1.19)	2.32(1.24)	2.62(1.28)
medium, n=743	2.56(0.50)	2.92(0.95)	3.06(1.02)	3.21(1.02)
high, n=444	4.47(0.50)	4.07(0.93)	3.97(0.89)	3.87(0.98)
Total, n=1465	2.78(1.41)	3.08(1.25)	3.20(1.18)	3.30(1.15)
Mental Health				
low, n=498	0.63(0.48)	1.94(1.20)	2.34(1.19)	2.64(1.21)
medium, n=1115	2.48(0.50)	2.83(0.92)	2.97(0.99)	3.14(1.06)
high, n=299	4.33(0.47)	3.79(1.11)	3.72(0.98)	3.60(1.18)
Total, n=1912	2.29(1.28)	2.75(1.18)	2.92(1.13)	3.08(1.16)
Isolation				
low, n=517	0.66(0.48)	2.03(1.17)	2.58(1.19)	2.96(1.23)
medium, n=1010	2.45(0.50)	2.99(0.89)	3.18(0.97)	3.43(1.03)
high, n=262	4.37(0.48)	3.92(1.06)	3.84(1.07)	3.94(1.07)
Total, n=1789	2.21(1.28)	2.85(1.17)	3.10(1.13)	3.37(1.14)
Self-esteem				
low, n=537	0.60(0.49)	1.74(1.17)	2.20(1.25)	2.54(1.28)
medium n=863	2.44(0.50)	2.82(0.90)	3.01(1.02)	3.15(1.07)
high, n=243	4.31(0.46)	3.94(0.98)	3.83(1.02)	3.88(1.11)
Total, n=1,643	2.11(1.33)	2.63(1.24)	2.87(1.23)	3.06(1.23)

Table C1/cont. Mean changes in coping scores, depending on initial coping levels

Initial Coping Score	T1 $\overline{X}$ (sd)	T2 $\overline{X}$ (sd)	T3 $\overline{X}$ (sd)	T4 $\overline{X}$ (sd)
Child's Physical Health				
low, n=72	0.71(0.46)	2.08(1.22)	2.57(1.24)	3.14(1.24)
medium, n=298	2.65(0.48)	3.16(0.93)	3.42(0.93)	3.64(0.98)
high, n=718	4.63(0.48)	4.45(0.76)	4.46(0.74)	4.43(0.78)
Total, n=1088	3.83(1.29)	3.94(1.13)	4.05(1.03)	4.13(0.98)
Child's Mental Health				
low, n=90	0.76(0.43)	1.90(1.21)	2.44(1.27)	2.98(1.36)
medium, n=338	2.64(0.48)	3.08(0.90)	3.26(0.96)	3.40(0.97)
high, n=546	4.64(0.48)	4.50(0.75)	4.45(0.81)	4.44(0.84)
Total, n=974	3.59(1.38)	3.77(1.23)	3.85(1.16)	3.94(1.10)
Household Budget				
low, n=157	0.69(0.46)	1.87(1.21)	2.45(1.39)	2.95(1.29)
medium, n=450	2.61(0.49)	2.89(0.95)	3.13(1.04)	3.28(1.07)
high, n=471	4.51(0.50)	4.22(0.87)	4.20(0.92)	4.17(0.91)
Total, n=1078	3.16(1.43)	3.32(1.28)	3.50(1.24)	3.62(1.15)
Running the home				
low, n=221	0.74(0.44)	2.20(1.15)	2.66(1.14)	2.95(1.21)
medium, n=818	2.55(0.50)	3.06(0.83)	3.26(0.93)	3.41(0.96)
high, n=401	4.37(0.48)	4.15(0.78)	4.13(0.87)	4.13(0.89)
Total, n=1,440	2.78(1.27)	3.23(1.09)	3.41(1.07)	3.54(1.06)
Conflict in Family				
low, n=303	0.62(0.49)	1.84(1.24)	2.21(1.36)	2.75(1.42)
medium, n=498	2.51(0.50)	2.80(0.98)	2.93(1.11)	3.03(1.15)
high, n=316	4.53(0.50)	4.09(1.03)	4.00(1.13)	3.93(1.17)
Total, n=1117	2.57(1.54)	2.90(1.36)	3.04(1.36)	3.21(1.32)
Multiple children under 5				
low, n=152	0.73(0.45)	1.99(1.06)	2.47(1.10)	2.86(1.12)
medium, n=522	2.57(0.50)	2.95(0.78)	3.23(0.88)	3.32(0.94)
high, n=177	4.40(0.49)	4.11(0.87)	4.14(0.89)	4.21(0.83)
Total, n=851	2.62(1.24)	3.02(1.08)	3.28(1.06)	3.42(1.05)

Table C2. Mean coping scores for families with different numbers of review visits

	T1 $\overline{X}$ (sd)	T2 $\overline{X}$ (sd)	T3 $\overline{X}$ (sd)	T4 $\overline{X}$ (sd)	T5 $\overline{X}$ (sd)
Children's Behaviour					
1 review visit, n=285	0.71(0.46)	2.26(1.19)			
2 review visits, n=198	0.74(0.44)	2.33(1.08)	2.96(1.08)		
3 review visits, n=91	0.65(0.48)	1.95(1.04)	2.60(1.11)	2.96(1.27)	
4 review visits, n=53	0.64(0.48)	2.08(0.96)	2.51(0.87)	2.91(0.90)	3.06(0.86)
Children's Dev/Learning					
1 review visit, n=204	0.77(0.42)	2.62(1.22)			
2 review visits, n=90	0.72(0.45)	2.38(1.08)	3.34(1.17)		
3 review visits, n=73	0.84(0.37)	2.23(1.14)	3.03(1.20)	3.51(1.17)	
4 review visits, n=32	0.84(0.37)	1.84(0.88)	2.81(1.00)	3.22(1.16)	3.31(1.20)
Physical Health					
1 review visit, n=377	0.70(0.46)	2.38(1.21)			
2 review visits, n=211	0.70(0.46)	2.02(1.17)	2.74(1.24)		
3 review visits, n=123	0.67(0.47)	2.02(1.19)	2.50(1.28)	2.76(1.36)	
4 review visits, n=59	0.66(0.48)	2.14(1.17)	2.31(1.19)	2.69(1.10)	3.07(1.27)
Mental Health					
1 review visit, n=565	0.74(0.44)	2.38(1.15)			
2 review visits, n=366	0.71(0.46)	2.14(1.13)	2.81(1.15)		
3 review visits, n=235	0.66(0.48)	1.93(1.24)	2.40(1.21)	2.73(1.23)	
4 review visits, n=107	0.63(0.49)	2.22(1.12)	2.53(1.17)	2.75(1.10)	3.00(1.16)
Isolation					
1 review visit, n=661	0.69(0.46)	2.52(1.22)			
2 review visits, n=425	0.68(0.47)	2.27(1.15)	3.05(1.15)		
3 review visits, n=239	0.69(0.46)	2.07(1.16)	2.67(1.19)	3.08(1.25)	
4 review visits, n=109	0.68(0.47)	2.24(1.10)	2.64(1.13)	2.96(1.15)	3.36(1.29)
Self Esteem					
1 review visit, n=631	0.66(0.48)	2.23(1.19)			
2 review visits, n=412	0.67(0.47)	2.02(1.14)	2.69(1.25)		
3 review visits, n=258	0.62(0.49)	1.81(1.17)	2.29(1.25)	2.66(1.32)	
4 review visits, n=107	0.61(0.49)	2.03(1.16)	2.40(1.26)	2.63(1.22)	2.93(1.35)

Table C2 cont. Mean coping scores for families with different numbers of review visits

	T1 $\overline{X}$ (sd)	T2 $\overline{X}$ (sd)	T3 $\overline{X}$ (sd)	T4 $\overline{X}$ (sd)	T5 $\overline{X}$ (sd)
Child Physical Health					
1 review visit, n=100	0.85(0.36)	2.71(1.06)			
2 review visits, n=58	0.64(0.48)	2.07(1.27)	2.97(1.38)		
3 review visits, n=31	0.84(0.37)	1.97(1.17)	2.74(1.03)	3.29(1.07)	
4 review visits, n=16	0.63(0.50)	2.00(1.10)	2.44(1.21)	3.31(1.14)	3.44(1.31)
Child's Mental Health					
1 review visit, n=95	0.83(0.38)	2.35(1.26)			
2 review visits, n=64	0.77(0.43)	1.94(1.04)	2.61(1.12)		
3 review visits, n=38	0.68(0.47)	2.11(1.27)	2.74(1.08)	3.24(1.28)	
4 review visits, n=20	0.70(0.47)	2.00(1.41)	2.40(1.70)	3.25(1.48)	3.10(1.33)
Household Budget					
1 review visit, n=182	0.68(0.47)	2.39(1.37)			
2 review visits, n=112	0.71(0.45)	2.09(1.23)	2.66(1.30)		
3 review visits, n=74	0.64(0.48)	1.88(1.31)	2.41(1.45)	3.01(1.34)	
4 review visits, n=33	0.88(0.33)	1.79(1.02)	2.91(1.16)	3.12(1.14)	3.33(1.19)
Running the home					
1 review visit, n=265	0.74(0.44)	2.47(1.27)			
2 review visits, n=165	0.76(0.43)	2.16(1.08)	2.81(1.25)		
3 review visits, n=93	0.75(0.43)	2.25(1.13)	2.69(1.08)	3.18(1.14)	
4 review visits, n=49	0.69(0.47)	2.18(1.18)	2.61(1.13)	2.76(1.27)	3.12(1.20)
Conflict in Family					
1 review visit, n=332	0.63(0.48)	2.18(1.30)			
2 review visits, n=239	0.62(0.49)	1.88(1.19)	2.59(1.30)		
3 review visits, n=135	0.61(0.49)	1.78(1.16)	2.18(1.32)	2.88(1.45)	
4 review visits, n=71	0.62(0.49)	1.96(1.18)	2.41(1.32)	2.92(1.27)	3.03(1.37)
Multiple children under5					
1 review visit, n=193	0.79(0.41)	2.47(1.11)			
2 review visits, n=110	0.77(0.42)	2.24(1.12)	2.87(1.05)		
3 review visits, n=79	0.76(0.43)	2.04(0.97)	2.52(1.15)	3.15(1.04)	
4 review visits, n=29	0.72(0.45)	1.79(1.24)	2.41(0.95)	2.55(1.15)	2.93(1.16)

Table C3.Mean coping scores for families with different numbers of review visits, by planned and unplanned endings

Number of review visits(n)	T1 $\overline{X}$ (sd)	T2 $\overline{X}$ (sd)	T3 $\overline{X}$ (sd)	T4 $\overline{X}$ (sd)	T5 $\overline{X}$ (sd)	T6 $\overline{X}$ (sd)
Children's Behaviour						
1, EV*, (n=187)	0.71(0.46)	2.30(1.16)	3.45(1.18)			
1, N EV* (n=85)	0.73(0.45)	2.12(1.19)				
2, EV (n=142)	0.73(0.44)	2.38(1.06)	2.89(1.08)	3.59(1.05)		
2, NEV (n=42)	0.69(0.47)	2.21(1.09)	3.02(1.02)			
3 EV (n=57)	0.63(0.49)	1.91(1.12)	2.56(1.20)	2.95(1.30)	3.67(1.14)	
3 NEV (=30)	0.67(0.48)	1.97(0.89)	2.60(0.89)	2.93(1.14)		
4EV (n=38)	0.63(0.49)	2.11(1.01)	2.58(0.86)	3.08(0.82)	3.16(0.92)	3.66(0.85)
4NEV (n=14)	0.64(0.50)	1.93(0.83)	2.29(0.91)	2.36(0.93)	2.71(0.61)	
Child's Dev/Learning						
1, EV*, (n=142)	0.77(0.42)	2.58(1.25)	3.68(1.09)			
1, NEV* (n=52)	0.79(0.41)	2.56(1.00)				
2, EV, (n=58)	0.79(0.41)	2.26(1.10)	3.14(1.05)	3.98(0.98)		
2, NEV, (n=24)	0.58(0.50)	2.54(0.98)	3.50(1.29)			
3 EV, (n=43)	0.79(0.41)	1.98(1.10)	2.91(1.15)	3.49(1.16)	4.14(0.99)	
3 NEV, (n=22)	0.91(0.29)	2.64(1.22)	3.09(1.27)	3.23(0.97)		
4EV, (n=24)	0.79(0.41)	1.67(0.82)	2.96(0.81)	3.33(0.96)	3.38(1.06)	3.88(0.95)
4NEV, (n=8)	1.00(0.00)	2.38(0.92)	2.38(1.41)	2.88(1.64)	3.13(1.64)	
Physical Health						
1, EV, (n=245)	0.70(0.46)	2.44(1.14)	3.44(1.24)			
1, NEV (n=110)	0.71(0.46)	2.23(1.37)				
2, EV, (n=161)	0.68(0.47)	2.06(1.10)	2.81(1.15)	3.47(1.17)		
2, NEV, (n=41)	0.71(0.46)	1.80(1.44)	2.34(1.53)			
3, EV, (n=78)	0.67(0.47)	1.97(1.25)	2.38(1.28)	2.95(1.34)	3.40(1.23)	
3, NEV, (n=40)	0.68(0.47)	2.20(1.09)	2.73(1.32)	2.48(1.41)		
4, EV, (n=34)	0.71(0.46)	2.29(1.19)	2.53(1.33)	2.85(1.21)	3.32(1.32)	3.47(1.26)
4, NEV, (n=24)	0.58(0.50)	1.88(1.12)	1.96(0.91)	2.54(0.88)	2.63(1.06)	
Mental Health						
1EV (n=388)	0.74(0.44)	2.46(1.10)	3.43(1.12)			
1NEV (n=155)	0.74(0.44)	2.14(1.25)				
2EV (n=285)	0.71(0.46)	2.14(1.05)	2.83(1.11)	3.62(1.08)		
2NEV (n=65)	0.66(0.48)	2.09(1.35)	2.66(1.29)			
3EV (n=164)	0.65(0.48)	1.82(1.22)	2.35(1.20)	2.86(1.18)	3.59(1.17)	
3NEV (n=63)	0.63(0.49)	2.21(1.23)	2.49(1.28)	2.35(1.27)		
4EV (n= 70)	0.60(0.49)	2.39(1.16)	2.76(1.13)	2.74(1.13)	3.24(1.13)	3.64(1.04)
4NEV (n=33)	0.64(0.49)	1.88(0.96)	1.91(0.98)	2.70(1.02)	2.45(0.90)	

EV=End Visit occurred, NEV=No End Visit Occurred

Table C3.cont/1 Mean coping scores for families with different numbers of review visits, by planned and unplanned endings

Number of review visits(n)	T1 $\overline{X}$ (sd)	T2 $\overline{X}$ (sd)	T3 $\overline{X}$ (sd)	T4 $\overline{X}$ (sd)	T5 $\overline{X}$ (sd)	T6 $\overline{X}$ (sd)
Isolation						
1EV, (n=440)	0.71(0.45)	2.55(1.18)	3.70(1.19)			
1NEV (n=184)	0.66(0.48)	2.38(1.24)				
2 EV, (n=318)	0.69(0.46)	2.35(1.11)	3.05(1.11)	3.78(1.11)		
2NEV, (n=89)	0.65(0.48)	2.00(1.24)	2.92(1.32)			
3EV, (n=165)	0.68(0.47)	2.00(1.20)	2.59(1.18)	3.13(1.27)	3.91(1.10)	
3NEV, (n=62)	0.66(0.48)	2.29(1.08)	2.90(1.21)	2.94(1.23)		
4 EV (n=70)	0.64(0.48)	2.31(1.14)	2.81(1.11)	3.16(1.11)	3.56(1.27)	3.90(1.16)
4NEV (n=36)	0.72(0.45)	2.17(1.03)	2.33(1.12)	2.64(1.07)	2.83(1.16)	
Self-Esteem						
1EV, (n=420)	0.65(0.48)	2.28(1.17)	3.35(1.27)			
1NEV (n=174)	0.66(0.47)	2.12(1.23)				
2EV, (n=303)	0.67(0.47)	2.05(1.12)	2.74(1.23)	3.53(1.15)		
2NEV,(n=90)	0.67(0.47)	1.93(1.19)	2.44(1.32)			
3EV, (n=171)	0.63(0.49)	1.77(1.17)	2.29(1.23)	2.83(1.31)	3.53(1.22)	
3NEV, (n=77)	0.62(0.49)	1.92(1.19)	2.29(1.27)	2.27(1.23)		
4EV, (n=70)	0.60(0.49)	2.16(1.07)	2.59(1.26)	2.83(1.09)	3.21(1.25)	3.76(1.11)
4 NEV, (n=33)	0.58(0.50)	1.88(1.32)	2.09(1.21)	2.21(1.39)	2.30(1.33)	
Child's Physical Health						
1EV, (n=73)	0.84(0.37)	2.77(1.02)	3.56(1.15)			
1 NEV (n=20)	0.90(0.31)	2.20(1.01)				
2EV, (n=38)	0.58(0.50)	2.05(1.23)	3.00(1.27)	3.63(1.22)		
2 NEV, (n=16)	0.75(0.45)	2.13(1.41)	2.88(1.50)			
3EV, (n=23)	0.87(0.34)	1.87(1.18)	2.70(1.02)	3.30(1.02)	3.39(1.12)	
3 NEV, (n=8)	0.75(0.46)	2.25(1.16)	2.88(1.13)	3.25(1.28)		
4EV, (n=10)	0.60(0.52)	1.60(0.70)	2.20(1.03)	3.10(1.20)	3.50(1.18)	3.70(1.06)
4 NEV, (n=5)	0.60(0.55)	3.00(1.22)	3.20(1.30)	3.40(0.89)	3.00(1.58)	
Child's Mental Health						
1 EV, (n=62)	0.84(0.37)	2.37(1.27)	3.45(1.13)			
1 NEV (n=27)	0.78(0.42)	2.07(1.27)				
2 EV, (n=48)	0.75(0.44)	2.00()1.07	2.67(1.10)	3.69(1.06)		
2 NEV, (n=11)	0.73(0.47)	2.00(1.00)	2.27(1.19)			
3 EV, (n=26)	0.69(0.47)	2.04(1.22)	2.73(1.12)	3.38(1.36)	3.65(1.32)	
3 NEV, (n=11)	0.64(0.50)	2.36(1.43)	2.73(1.10)	2.91(1.14)		
4 EV, (n=18)	0.72(0.46)	2.17(1.38)	2.61(1.65)	3.50(1.29)	3.28(1.27)	3.83(1.20)
4NEV, (n=2)	0.50(0.71)	0.50(0.71)	0.50(0.71)	1.00(1.41)	1.50(0.71)	

EV=End Visit occurred, NEV=No End Visit Occurred

Table C3.cont/2 Mean coping scores for families with different numbers of review visits, by planned and unplanned endings

Number of review visits(n)	T1 $\bar{X}$ (sd)	T2 $\bar{X}$ (sd)	T3 $\bar{X}$ (sd)	T4 $\bar{X}$ (sd)	T5 $\bar{X}$ (sd)	T6 $\bar{X}$ (sd)
Household Budget						
1 EV (n=118)	0.69(0.47)	2.58(1.31)	3.34(1.30)			
1 NEV (n=47)	0.70(0.46)	1.85(1.32)				
2 EV, (n=84)	0.68(0.47)	2.02(1.12)	2.61(1.26)	3.25(1.27)		
2 NEV, (n=22)	0.86(0.35)	2.18(1.59)	2.77(1.41)			
3 EV, (n=46)	0.50(0.51)	1.74(1.34)	2.22(1.60)	2.96(1.44)	3.74(1.06)	
3 NEV (n=26)	0.85(0.37)	2.00(1.23)	2.69(1.16)	3.00(1.13)		
4 EV, (n=22)	0.86(0.35)	1.73(0.98)	2.82(0.91)	2.91(1.06)	3.14(1.17)	3.86(1.04)
4 NEV, (n=11)	0.91(0.30)	1.91(1.14)	3.09(1.58)	3.55(1.21)	3.73(1.19)	
Running the home						
1EV (n=160)	0.77(0.42)	2.58(1.17)	3.46(1.16)			
1NEV, (n=84)	0.69(0.47)	2.27(1.36)				
2EV (n=121)	0.79(0.41)	2.18(1.11)	2.81(1.25)	3.45(1.22)		
2NEV (n=35)	0.66(0.48)	2.06(1.03)	2.63(1.29)			
3EV (n=61)	0.74(0.44)	2.16(1.24)	2.69(1.16)	3.23(1.12)	3.74(1.11)	
3NEV (n=27)	0.78(0.42)	2.44(0.93)	2.78(0.80)	2.96(1.22)		
4EV (n=30)	0.67(0.48)	2.47(1.25)	2.80(1.03)	3.00(1.14)	3.43(0.90)	3.63(0.85)
4 NEV (n=15)	0.80(0.41)	1.87(0.92)	2.33(1.35)	2.40(1.40)	2.67(1.45)	
Conflict in Family						
1EV, (n=230)	0.67(0.47)	2.17(1.26)	3.27(1.20)			
1NEV (n=84)	0.52(0.50)	2.23(1.39)				
2EV, (n=174)	0.64(0.48)	1.85(1.21)	2.54(1.28)	3.38(1.15)		
2NEV, (n=44)	0.59(0.50)	2.16(1.06)	2.73(1.26)			
3EV, (n=85)	0.61(0.49)	1.81(1.20)	2.19(1.33)	2.96(1.45)	3.58(1.20)	
3 NEV, (n=44)	0.64(0.49)	1.66(1.08)	2.18(1.32)	2.66(1.46)		
4EV, (n=48)	0.65(0.48)	1.98(1.18)	2.44(1.25)	2.92(1.23)	3.10(1.29)	3.40(1.40)
4 NEV, (n=22)	0.55(0.51)	1.95(1.21)	2.32(1.49)	2.91(1.41)	2.86(1.58)	
Multiple Children Under 5						
1EV, (n=112)	0.79(0.41)	2.64(1.08)	3.67(1.09)			
1 NEV, (n=62)	0.77(0.42)	2.26(1.02)				
2EV, (n=79)	0.78(0.41)	2.20(1.03)	2.94(1.05)	3.68(1.04)		
2 NEV, (n=26)	0.77(0.43)	2.46(1.39)	2.81(1.02)			
3EV, (n=46)	0.80(0.40)	2.07(0.93)	2.61(1.16)	3.09(1.09)	3.72(1.13)	
3 NEV, (n=30)	0.70(0.47)	2.07(0.98)	2.47(1.11)	3.20(1.00)		
4EV, (n=17)	0.82(0.39)	1.88(1.22)	2.59(0.80)	2.71(0.99)	3.29(1.16)	3.71(1.16)
4 NEV, (n=11)	0.55(0.52)	1.64(1.36)	2.18(1.17)	2.45(1.37)	2.55(0.93)	

EV=End Visit occurred, NEV=No End Visit Occurred

Table C4. Odds of Improving for different Coping Measure by reason for leaving support

	Improvements Made	Family becomes unobtainable f(%)	Family no longer requires HS support f(%)	Family prematurely ends support f(%)	HS identifies Family's needs better met via alternative service f(%)	Safety concern or statutory intervention results in withdrawal of service f(%)	Other comment given f(%)	Data missing, but End Visit form completed f(%)
Children's Behaviour	No	0(0.0)	13(44.8)	4(13.8)	8(27.6)	0(0.0)	0(0.0)	4(13.8)
	Yes	4(0.7)	486(81.1)	9(1.5)	33(5.5)	5(0.8)	3(0.5)	59(9.8)
	Odds	n/a	37.4	2.3	4.1	n/a	n/a	14.8
Children's Dev/Learning	No	1(6.7)	5(33.3)	2(13.3)	3(20.0)	1(6.7)	0(0.0)	3(20.0)
	Yes	4(1.1)	309(81.7)	5(1.3)	20(5.3)	4(1.1)	3(0.8)	33(8.7)
	Odds	4.0	61.8	2.5	6.7	4.0	n/a	11.0
Physical Health	No	2(4.1)	26(53.1)	3(6.1)	6(12.2)	1(2.0)	1(2.0)	10(20.4)
	Yes	6(0.9)	566(82.1)	16(2.3)	29(4.2)	5(0.7)	6(0.9)	61(8.9)
	Odds	3.0	21.8	5.3	4.8	5.0	6.0	6.1
Mental Health	No	6(8.6)	33(47.1)	2(2.9)	14(20.0)	4(5.7)	1(1.4)	10(14.3)
	Yes	18(1.5)	1000(82.0)	25(2.1)	49(4.0)	6(0.5)	8(0.7)	113(9.3)
	Odds	3.0	30.3	12.5	3.5	1.5	8.0	11.3
Isolation	No	5(8.1)	31(50.0)	3(4.8)	9(14.5)	3(4.8)	0(0.0)	11(17.7)
	Yes	20(1.5)	1114(82.5)	28(2.1)	55(4.1)	8(0.6)	14(1.0)	112(8.3)
	Odds	4.0	35.9	9.3	6.1	2.7	n/a	10.2
Self-Esteem	No	5(5.8)	44(51.2)	5(5.8)	16(18.6)	3(3.5)	0(0.0)	13(15.1)
	Yes	17(1.3)	1085(82.6)	27(2.1)	46(3.5)	14(1.1)	12(0.9)	113(8.6)
	Odds	3.4	24.7	5.4	2.9	4.7	n/a	8.7
Child's Physical Health	No	1(9.1)	5(45.5)	1(9.1)	1(9.1)	0(0.0)	1(9.1)	2(18.2)
	Yes	3(1.5)	161(78.9)	3(1.5)	12(5.9)	1(0.5)	2(1.0)	22(10.8)
	Odds	3.0	32.2	3.0	12.0	n/a	2.0	11.0
Child's Mental Health	No	0(0.0)	7(63.6)	0(0.0)	4(36.4)	0(0.0)	0(0.0)	0(0.0)
	Yes	2(0.9)	176(77.2)	4(1.8)	18(7.9)	1(0.4)	1(0.4)	26(11.4)
	Odds	n/a	25.1	n/a	4.5	n/a	n/a	n/a
Household Budget	No	2(6.3)	19(59.4)	1(3.1)	6(18.8)	1(3.1)	1(3.1)	2(6.3)
	Yes	10(2.7)	300(80.2)	8(2.1)	22(5.9)	1(0.3)	2(0.5)	31(8.3)
	Odds	5.0	15.8	8.0	3.7	1.0	2.0	15.5
Running the home	No	0(0.0)	15(50.0)	2(6.7)	3(10.0)	1(3.3)	0(0.0)	9(30.0)
	Yes	5(0.9)	437(79.3)	7(1.3)	33(6.0)	2(0.4)	5(0.9)	62(11.3)
	Odds	n/a	29.1	3.5	11.0	2.0	n/a	6.9
Conflict in family	No	2(3.1)	38(59.4)	1(1.6)	10(15.6)	3(4.7)	2(3.1)	8(12.5)
	Yes	16(2.2)	592(80.3)	21(2.8)	34(4.6)	4(0.5)	5(0.7)	65(8.8)
	Odds	8.0	15.6	21.0	3.4	1.3	2.5	8.1
Multiple Children Under 5	No	0(0.0)	6(37.5)	2(12.5)	4(25.0)	1(6.3)	0(0.0)	3(18.8)
	Yes	6(1.6)	318(85.0)	2(0.5)	16(4.3)	2(0.5)	3(0.8)	27(7.2)
	Odds	n/a	53.0	1.0	4.0	2.0	n/a	9.0

% refers to the percentage of families who either improve or do not improve who leave support for that reason. Odds is the Odds of improvements having been made is support finished in the that way

APPENDIX D

List of Regression Equations

Purpose of Regression Model	Regression Equation	Log ROC variables used
Assessing the relative importance of different nature of support variables on the ROC (Chapter 6)	$\text{Log ROC} = B_0 + B_1 X_1 + B_2 X_2 + B_3 X_3 + B_4 X_4 + B_5 X_5 + B_6 X_6 + B_7 X_7 + B_8 X_8 + \varepsilon$ X_1= Paid worker Dummy variable, X_2= Mixed Support Dummy variable, X_3= Average Length, X_4= Frequency, X_5= Proportion Practical, X_6= Proportion Children, X_7= Proportion Emotional, X_8= Proportion Services and ε is the error term	Children's Behaviour, Children's dev/learning, Physical Health, Mental Health, Isolation, Self-esteem, Household Budget, Running the home, conflict in family, Multiple Children Under 5
Assessing the relative strength of the relationship between individual risk factors and the ROC (Chapter 7)	$\text{Log ROC} = B_0 + B_1 X_1 + B_2 X_2 + B_3 X_3 + B_4 X_4 + B_5 X_5 + B_6 X_6 + B_7 X_7 + B_8 X_8 + B_9 X_9 + B_{10} X_{10} + B_{11} X_{11} + \varepsilon$ X_1= Asylum Seeker/Refugee, , X_2= Child Protection Plan, X_3= Disabled Child, X_4= Disabled Parent, X_5= Domestic Violence, X_6= Housing Issues, , X_7= Large Family Size, X_8= Mental Health Issues, X_9= Post Natal Depression, X_{10}= Prison, X_{11}= Substance Misuse and ε is the error term	Mental Health, Isolation, Self-esteem,
Assessing the effect of cumulative risk on the ROC	$\text{Log ROC} = B_0 + B_1 X_1 + B_2 X_2 + B_3 X_3 + B_4 X_4 + B_5 X_5 + B_6 X_6 + B_7 X_7 + B_8 X_8 + B_9 X_9 + B_{10} X_{10} + B_{11} X_{11} + B_{12} X_{12} + \varepsilon$ X_1= Asylum Seeker/Refugee, , X_2= Child Protection Plan, X_3= Disabled Child, X_4= Disabled Parent, X_5= Domestic Violence, X_6= Housing Issues, , X_7= Large Family Size, X_8= Mental Health Issues, X_9= Post Natal Depression, X_{10}= Prison, X_{11}= Substance Misuse and X_{12}= cumulative risk and ε is the error term	Mental Health, Isolation, Self-esteem,

Purpose of Regression Model	Regression Equation	Log ROC variables used
Assessing the effect of Hardiker Level on the ROC	$\text{Log ROC} = B_0 + B_1 X_1 + B_2 X_2 + B_3 X_3 + B_4 X_4 + B_5 X_5 + B_6 X_6 + B_7 X_7 + B_8 X_8 + B_9 X_9 + B_{10} X_{10} + B_{11} X_{11} + B_{12} X_{12} + + B_{13} X_{13} + B_{14} X_{14} + \varepsilon$ X_1= Hardiker Level 2 Dummy, X_2=Hardiker Level 3 Dummy, X_3=Hardiker Level 4 Dummy, X_4= Asylum Seeker/Refugee, X_5=Child Protection Plan, X_6= Disabled Child, X_7= Disabled Parent, X_8=Domestic Violence, X_9=Housing Issues, , X_{10}= Large Family Size, X_{11}=Mental Health Issues, X_{12}=Post Natal Depression, X_{13}=Prison, X_{14}=Substance Misuse and ε is the error term	Mental Health, Isolation, Self-esteem,
Assessing the overall relationship between Life events and improvements in coping	$\text{Log ROC} = B_0 + B_1 X_1 + B_2 X_2 + B_3 X_3 + B_4 X_4 + B_5 X_5 + B_6 X_6 + B_7 X_7 + B_8 X_8 + B_9 X_9 + B_{10} X_{10} + B_{11} X_{11} + B_{12} X_{12} + B_{13} X_{13} + B_{14} X_{14} + B_{15} X_{15} + B_{16} X_{16} + B_{17} X_{17} + \varepsilon$ X_1= Asylum Seeker/Refugee, , X_2= Child Protection Plan, X_3= Disabled Child, X_4= Disabled Parent, X_5= Domestic Violence, X_6= Housing Issues, , X_7= Large Family Size, X_8= Mental Health Issues, X_9= Post Natal Depression, X_{10}= Prison, X_{11}= Substance Misuse, X_{12}= Bereavement LE, X_{13}= Birth LE, X_{14}= Housing LE, X_{15}=Relationship Breakdown LE, X_{16}= Physical Health LE, and , X_{17}= Mental Health LE and ε is the error term	Mental Health, Isolation, Self-esteem,
Assessing the impact of life events that occur in the first 6 months of support on overall ROCs for families who have at least six months of support	$\text{Log ROC} = B_0 + B_1 X_1 + B_2 X_2 + B_3 X_3 + B_4 X_4 + B_5 X_5 + B_6 X_6 + B_7 X_7 + B_8 X_8 + B_9 X_9 + B_{10} X_{10} + B_{11} X_{11} + B_{12} X_{12} + B_{13} X_{13} + B_{14} X_{14} + B_{15} X_{15} + B_{16} X_{16} + B_{17} X_{17} + \varepsilon$ X_1= Asylum Seeker/Refugee, , X_2= Child Protection Plan, X_3= Disabled Child, X_4= Disabled Parent, X_5= Domestic Violence, X_6= Housing Issues, , X_7= Large Family Size, X_8= Mental Health Issues, X_9= Post Natal Depression, X_{10}= Prison, X_{11}= Substance Misuse, X_{12}= Bereavement 1st 6mths, X_{13}= Birth 1st 6mths, X_{14}= Housing 1st 6mths, X_{15}=Relationship Breakdown 1st 6mths, X_{16}= Physical Health 1st 6mths, and , X_{17}= Mental Health 1st 6mths and ε is the error term	Mental Health, Isolation, Self-esteem,

Purpose of Regression Model	Regression Equation	Log ROC variables used
Assessing relationship between nature of support variables in changes in ROC when risk factors are controlled for	$\text{Log ROC} = B_0 + B_1 X_1 + B_2 X_2 + B_3 X_3 + B_4 X_4 + B_5 X_5 + B_6 X_6 + B_7 X_7 + B_8 X_8 + B_9 X_9 + B_{10} X_{10} + B_{11} X_{11} + B_{12} X_{12} + B_{13} X_{13} + B_{14} X_{14} + B_{15} X_{15} + B_{16} X_{16} + B_{17} X_{17} + B_{18} X_{18} + B_{19} X_{19} + \varepsilon$ X_1= Asylum Seeker/Refugee, , X_2= Child Protection Plan, X_3= Disabled Child, X_4= Disabled Parent, X_5= Domestic Violence, X_6= Housing Issues, , X_7= Large Family Size, X_8= Mental Health Issues, X_9= Post Natal Depression, X_{10}= Prison, X_{11}= Substance Misuse, X_{12}= Paid worker Dummy, X_{13}= Mixed Support Dummy, X_{14}= Average Length, X_{15}=Frequency, X_{16}= Proportion Practical, X_{17}= Proportion Children, X_{16}= Proportion Emotional , X_{17}= Proportion Services and ε is the error term	Mental Health, Isolation, Self-esteem,
Assessing the relationship between nature of support and improvements in ROC when families in certain situations only are selected	$\text{Log ROC} = B_0 + B_1 X_1 + B_2 X_2 + B_3 X_3 + B_4 X_4 + \varepsilon$ X_1= Paid worker Dummy variable, X_2= Mixed Support Dummy variable, X_3= Average Length, X_4= Frequency and ε is the error term	Mental Health, Isolation, Self-esteem,

APPENDIX E

Supplementary Tables for Chapter 6

List of Tables

Table E1. Percentage of Families who improved and who didn't improve who had support from volunteers, paid workers and mixed support, by coping measure

Coping Measure	Improvement	Volunteer visits	Paid worker visits	Mixture	Odds Ratios		
					* 1	* 2	*3
		f(%)	f(%)	f(%)			
Children's Behaviour	No	21 (72.4)	4 (13.8)	4 (13.8)			
	Yes	472 (78.8)	59(9.8)	68 (11.4)			
	Odds	22	15	17	1.52	1.32	0.87
Children's Dev/Learning	No	9 (60.0)	2 (13.3)	4 (26.7)			
	Yes	305 (80.7)	33 (8.7)	40 (10.6)			
	Odds	34	17	10	2.05	3.39	1.65
Physical Health	No	33 (67.3)	12 (24.5)	4 (8.2)			
	Yes	578 (83.9)	51 (7.4)	60 (8.7)			
	Odds	18	4	15	4.12	1.17	0.28
Mental Health	No	51 (72.9)	10 (14.3)	9 (12.9)			
	Yes	990 (81.2)	125 (10.3)	104 (8.5)			
	Odds	19	13	12	1.55	1.68	1.08
Isolation	No	44 (71.0)	13 (21.0)	5 (8.1)			
	Yes	1149 (85.0)	99 (7.3)	103 (7.6)			
	Odds	26	8	21	3.43	1.27	0.37
Self-Esteem	No	66 (76.7)	11 (12.8)	9 (10.5)			
	Yes	1085 (82.6)	124 (9.4)	105 (8.0)			
	Odds	16	11	12	1.46	1.41	0.97
Household Budget	No	22 (68.8)	4 (12.5)	6 (18.8)			
	Yes	292 (78.1)	47 (12.6)	35 (9.4)			
	Odds	13	12	6	1.13	2.28	2.01
Running the home	No	23 (76.7)	5 (16.7)	2 (6.7)			
	Yes	473 (85.8)	36 (6.5)	42 (7.6)			
	Odds	21	7	21	2.86	0.98	0.34
Conflict in Family	No	45 (70.3)	14 (21.9)	5 (7.8)			
	Yes	601 (81.5)	69 (9.4)	67 (9.1)			
	Odds	13	5	13	2.71	1.00	0.37
Multiple children under 5	No	16 (100.0)	0(0.0)	0(0.0)			
	Yes	328 (87.7)	21 (5.6)	25 (6.7)			
	Odds	21	n/a	n/a	n/a	n/a	n/a

*Odds = Odds of improving with support
Odds ratio, improving with volunteer support compared to paid worker
Odds ratio, improving with volunteers support compared to mixed
Odds ratio, improving with paid worker support compared to mixed

Table E2 Differences in the nature of support according to whether or not families improve

		Number of Visits	Duration	Average Length	Wait	Percentage cancelled	Frequency	Proportion Practical	Proportion Children	Proportion Emotional	Proportion Services
Children's Behaviour											
No improvement	$\bar{X}$	14.3	195.2	2.0	38.1	19.0	0.59	0.44	0.61	0.72	0.14
	sd	15.4	176.2	0.6	32.5	17.0	0.31	0.33	0.33	0.26	0.17
	n	29	29	28	26	29	29	29	29	29	29
Improvements made	$\bar{X}$	18.0	254.9	2.0	44.6	23.8	0.52	0.37	0.66	0.74	0.16
	sd	15.7	171.1	0.6	46.7	16.8	0.25	0.33	0.33	0.28	0.23
	n	599	599	597	548	599	597	599	599	599	599
	g	0.23	0.35	0.06	0.14	0.29	-0.27	-0.20	0.14	0.07	0.10
Children's Dev/Learning											
No improvement	$\bar{X}$	7.4	130.8	2.1	36.1	20.9	0.53	0.52	0.43	0.67	0.22
	sd	6.4	105.6	0.8	35.8	20.2	0.31	0.38	0.40	0.36	0.36
	n	15	14	14	11	15	14	15	15	15	15
Improvements made	$\bar{X}$	18.2	254.1	2.1	47.6	23.9	0.53	0.42	0.67	0.72	0.19
	sd	16.3	171.7	0.7	56.1	17.6	0.30	0.34	0.33	0.30	0.25
	n	378	378	378	352	378	377	378	378	378	378
	g	0.67	0.72	0.04	0.21	0.17	0.00	-0.29	0.72	0.18	-0.13
Physical Health											
No improvement	$\bar{X}$	15.6	213.6	1.9	46.0	26.9	0.59	0.48	0.63	0.80	0.18
	sd	13.3	158.3	0.7	46.8	19.9	0.35	0.38	0.36	0.30	0.27
	n	49	49	48	45	49	49	49	49	49	49
Improvements made	$\bar{X}$	20.4	270.4	2.1	46.1	21.7	0.55	0.43	0.67	0.76	0.14
	sd	18.3	186.5	0.6	53.1	16.3	0.27	0.34	0.34	0.28	0.20
	n	689	689	689	642	689	687	689	689	689	689
	g	0.27	0.31	0.38	0.00	-0.31	-0.15	-0.15	0.10	-0.11	-0.16

Table E2/cont.1 Differences in the nature of support according to whether or not families improve

		Number of Visits	Duration	Average Length	Wait	Percentage cancelled	Frequency	Proportion Practical	Proportion Children	Proportion Emotional	Proportion Services
Mental Health											
No improvement	$\bar{X}$	17.5	256.9	2.0	34.6	32.6	0.46	0.37	0.59	0.81	0.17
	sd	18.8	177.7	0.6	36.1	16.1	0.23	0.34	0.35	0.25	0.25
	n	*70*	*70*	*69*	*59*	*70*	*70*	*70*	*70*	*70*	*70*
Improvements	$\bar{X}$	19.1	268.6	2.0	48.5	23.8	0.52	0.40	0.62	0.78	0.16
made	sd	17.3	177.9	0.6	56.8	17.2	0.26	0.34	0.35	0.26	0.21
	n	*1219*	*1219*	*1217*	*1151*	*1219*	*1219*	*1219*	*1219*	*1219*	*1219*
	g	0.09	0.07	0.07	0.25	-0.51	0.24	0.09	0.08	-0.14	-0.05
Isolation											
No improvement	$\bar{X}$	14.8	206.6	1.9	64.7	27.5	0.51	0.44	0.64	0.82	0.21
	sd	14.7	150.2	0.5	122.0	17.9	0.25	0.39	0.37	0.26	0.27
	n	62	61	61	55	62	61	62	62	62	62
Improvements	$\bar{X}$	19.0	267.9	2.1	49.3	23.5	0.52	0.41	0.64	0.75	0.17
made	sd	17.0	177.7	0.6	59.7	16.9	0.26	0.34	0.34	0.29	0.22
	n	*1351*	*1351*	*1350*	*1274*	*1351*	*1348*	*1351*	*1351*	*1351*	*1351*
	g	0.25	0.35	0.23	-0.25	-0.23	0.05	-0.10	0.01	-0.23	-0.18
Self-Esteem											
No improvement	$\bar{X}$	16.6	224.2	2.0	48.6	26.6	0.54	0.44	0.62	0.82	0.15
	sd	18.2	174.3	0.6	79.7	17.2	0.28	0.36	0.35	0.27	0.23
	n	*86*	*85*	*85*	*80*	*86*	*85*	*86*	*86*	*86*	*86*
Improvements	$\bar{X}$	19.4	274.2	2.0	48.6	23.9	0.52	0.41	0.61	0.77	0.16
made	sd	17.7	187.6	0.6	55.0	17.0	0.26	0.33	0.35	0.27	0.22
	n	*1314*	*1314*	*1312*	*1228*	*1314*	*1313*	*1314*	*1314*	*1314*	*1314*
	g	0.15	0.27	0.03	0.00	-0.16	-0.08	-0.08	-0.04	-0.17	0.05

Table E2/cont.2 Differences in the nature of support according to whether or not families improve

		Number of Visits	Duration	Average Length	Wait	Percentage cancelled	Frequency	Proportion Practical	Proportion Children	Proportion Emotional	Proportion Services
Household Budget											
No improvement	$\bar{X}$	21.1	227.8	2.1	43.4	24.1	0.61	0.55	0.48	0.81	0.17
	sd	20.7	172.5	0.7	30.6	16.2	0.26	0.35	0.35	0.20	0.22
	n	32	31	32	27	32	31	32	32	32	32
Improvements made	$\bar{X}$	19.0	271.9	2.0	45.2	23.6	0.52	0.47	0.55	0.75	0.19
	sd	15.4	183.0	0.7	48.9	17.1	0.27	0.33	0.35	0.27	0.23
	n	*374*	*374*	*371*	*337*	*374*	*374*	*374*	*374*	*374*	*374*
	g	-0.13	0.24	-0.19	0.04	-0.03	-0.32	-0.22	0.20	-0.20	0.06
Running the home											
No improvement	$\bar{X}$	12.5	187.1	2.0	49.3	25.2	0.61	0.52	0.52	0.79	0.18
	sd	11.4	132.3	0.7	51.4	16.7	0.55	0.36	0.38	0.28	0.25
	n	*30*	*30*	*30*	*26*	*30*	*30*	*30*	*30*	*30*	*30*
Improvements made	$\bar{X}$	19.4	259.1	2.1	48.7	22.3	0.55	0.47	0.66	0.74	0.14
	sd	16.8	179.1	0.6	62.5	16.7	0.26	0.34	0.34	0.30	0.20
	n	*551*	*551*	*548*	*519*	*551*	*551*	*551*	*551*	*551*	*551*
	g	0.42	0.41	0.22	-0.01	-0.18	-0.25	-0.14	0.42	-0.19	-0.20

Table E2/cont.3 Differences in the nature of support according to whether or not families improve

		Number of Visits	Duration	Average Length	Wait	Percentage cancelled	Frequency	Proportion Practical	Proportion Children	Proportion Emotional	Proportion Services
Conflict in Family											
No improvement	$\overline{X}$	18.6	242.5	2.0	43.3	24.6	0.54	0.38	0.53	0.81	0.20
	sd	18.8	167.5	0.7	41.5	17.3	0.27	0.33	0.34	0.27	0.25
	n	*64*	*64*	*64*	*55*	*64*	*64*	*64*	*64*	*64*	*64*
Improvements	$\overline{X}$	19.1	266.8	2.0	45.4	23.2	0.52	0.40	0.59	0.80	0.17
made	sd	18.5	181.5	0.6	49.9	17.5	0.26	0.34	0.36	0.24	0.23
	n	*737*	*737*	*734*	*675*	*737*	*737*	*737*	*737*	*737*	*737*
	g	0.03	0.13	0.06	0.04	-0.08	-0.08	0.07	0.15	-0.04	-0.11
Multiple children under 5											
No improvement	$\overline{X}$	12.4	169.5	2.1	55.3	23.4	0.51	0.43	0.82	0.86	0.13
	sd	11.0	121.7	0.5	46.2	15.3	0.21	0.35	0.19	0.29	0.19
	n	*16*	*16*	*16*	*16*	*16*	*16*	*16*	*16*	*16*	*16*
Improvements	$\overline{X}$	21.1	276.0	2.2	49.0	22.1	0.54	0.43	0.78	0.69	0.12
made	sd	17.8	175.8	0.6	68.4	16.6	0.24	0.36	0.27	0.33	0.20
	n	*374*	*374*	*373*	*357*	*374*	*373*	*374*	*374*	*374*	*374*
	g	0.49	0.61	0.27	-0.09	-0.08	0.14	0.00	-0.16	-0.51	-0.07

Table E3. Mean ROC values according to whether support is provided by volunteers, paid workers or a mixture

ROC of Coping Measure		Volunteer	Paid Worker	Mixture	g (1*)	g (2**)
Children's Behaviour	$\bar{X}$	.0172	.0226	.0127		
	sd	.0168	.0240	.0165		
	n	493	63	72	0.30	-0.27
Children's Dev/Learning	$\bar{X}$	.0178	.0219	.0137		
	sd	.0154	.0166	.0145		
	n	314	35	44	0.26	-0.27
Physical Health	$\bar{X}$	.0164	.0201	.0122		
	sd	.0190	.0254	.0145		
	n	611	63	64	0.19	-0.22
Mental Health	$\bar{X}$	.0156	.0246	.0107		
	sd	.0139	.0280	.0092		
	n	1041	135	113	0.58	-0.36
Isolation	$\bar{X}$	.0179	.0218	.0128		
	sd	.0212	.0207	.0147		
	n	1193	112	108	0.18	-0.25
Self-Esteem	$\bar{X}$	.0157	.0239	.0128		
	sd	.0163	.0262	.0136		
	n	1151	135	114	0.47	-0.18
Household Budget	$\bar{X}$	.0146	.0235	.0110		
	sd	.0137	.0236	.0088		
	n	314	51	41	0.59	-0.27
Running the home	$\bar{X}$	.0163	.0234	.0108		
	sd	.0166	.0203	.0093		
	n	496	41	44	0.42	-0.34
Conflict in Family	$\bar{X}$	.0155	.0268	.0121		
	sd	.0172	.0326	.0106		
	n	646	83	72	0.59	-0.21
Multiple children under 5	$\bar{X}$	.0164	.0227	.0090		
	sd	.0205	.0133	.0042		
	n	344	21	25	0.31	-0.38

Table E4. Spearman's Rho Correlation Coefficients for relationships between ROCs and Nature of Support Variables

ROC for Coping Measures		Average Length	Wait	Percentage cancelled	Frequency	Proportion Practical	Proportion Children	Proportion Emotional	Proportion Services
Children's Behaviour	r_s	-.150	.014	.015	.121	-.122	-.061	-.012	-.118
	n	625	574	628	626	628	628	628	628
Children's Dev/Learning	r_s	-.138	-.085	-.037	.116	-.004	.028	.032	.011
	n	392	363	393	391	393	393	393	393
Physical Health	r_s	-.110	-.046	-.071	.104	-.046	-.051	.026	-.130
	n	737	687	738	736	738	738	738	738
Mental Health	r_s	-.123	-.036	-.040	.123	-.100	-.042	-.040	-.098
	n	1286	1210	1289	1289	1289	1289	1289	1289
Isolation	r_s	-.147	-.028	-.013	.135	-.113	-.008	-.051	-.089
	n	1411	1329	1413	1409	1413	1413	1413	1413
Self-Esteem	r_s	-.169	-.033	-.014	.114	-.087	-.091	-.056	-.062
	n	1397	1308	1400	1398	1400	1400	1400	1400
Household Budget	r_s	-.148	-.085	-.024	.081	-.049	-.118	.021	-.046
	n	403	364	406	405	406	406	406	406
Running the home	r_s	-.135	-.006	.004	.117	-.091	-.057	-.112	-.131
	n	578	545	581	581	581	581	581	581
Conflict in Family	r_s	-.141	-.040	.011	.122	-.080	-.110	-.001	-.012
	n	798	730	801	801	801	801	801	801
Multiple children under 5	r_s	-.145	-.008	-.087	.120	-.034	-.029	.046	-.137
	n	389	373	390	389	390	390	390	390

Table E5. Descriptive Statistics, Nature of Support Variables in Subsamples used in Linear Regression Models

	Mental Health	Isolation	Self-Esteem	Children's Behaviour	Children's Dev/ Learning	Physical Health	Household Budget	Running the Home	Conflict in Family	Multiple Children Under 5
	f(%)	f(%)	f(%)	f(%)	f(%)	f(%)	f(%)	f(%)	f(%)	f(%)
Volunteer visits	988(81.3)	1145(85.2)	1082(82.8)	469(79.4)	304(80.9)	576(83.8)	288(78.5)	472(86.3)	599(81.8)	326(87.9)
Paid worker	123(10.1)	97(7.2)	121(9.3)	57(9.6)	33(8.8)	51(7.4)	45(12.3)	33(6.0)	67(9.2)	21(5.7)
Mixture	104(8.6)	102(7.6)	104(8.0)	65(11.0)	39(10.4)	60(8.7)	34(9.3)	42(7.7)	66(9.0)	24(6.5)
	$\bar{X}$ (sd)	$\bar{X}$ (sd)	$\bar{X}$ (sd)	$\bar{X}$ (sd)	$\bar{X}$ (sd)	$\bar{X}$ (sd)	$\bar{X}$ (sd)	$\bar{X}$ (sd)	$\bar{X}$ (sd)	$\bar{X}$ (sd)
Average Length	2.04(0.60)	2.06(0.59)	2.05(0.58)	2.00(0.57)	2.12(0.66)	2.15(0.61)	2.01(0.69)	2.14(0.62)	2.02(0.60)	2.22(0.61)
Frequency	0.52(0.26)	0.52(0.26)	0.52(0.26)	0.52(0.25)	0.53(0.30)	0.55(0.27)	0.52(0.27)	0.55(0.26)	0.52(0.26)	0.54(0.24)
Proportion Practical	0.40(0.34)	0.41(0.34)	0.41(0.34)	0.37(0.33)	0.42(0.34)	0.43(0.34)	0.47(0.32)	0.47(0.34)	0.40(0.34)	0.43(0.36)
Proportion Children	0.62(0.35)	0.64(0.34)	0.61(0.35)	0.67(0.33)	0.67(0.33)	0.67(0.33)	0.56(0.35)	0.67(0.33)	0.59(0.36)	0.78(0.27)
Proportion Emotional	0.78(0.26)	0.75(0.29)	0.77(0.27)	0.74(0.28)	0.73(0.30)	0.76(0.28)	0.76(0.27)	0.74(0.30)	0.80(0.24)	0.69(0.33)
Proportion Services	0.16(0.21)	0.17(0.22)	0.17(0.22)	0.16(0.23)	0.19(0.25)	0.14(0.20)	0.19(0.23)	0.14(0.20)	0.17(0.23)	0.12(0.21)

Table E6. Regression Statistics, Model Summary and Coefficients, ROC Managing Children's Behaviour and Nature of Support Variables

Model Summary					
n	R		R Square	Adjusted R Square	Std. Error of the Estimate
591	.369[a]		.136	.124	.70805

Coefficients										
	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations			Collinearity Statistics	
	B	Std. Error	Beta			Zero-order	Partial	Part	Tolerance	VIF
(Constant)	-3.943	.151		-26.034	.000					
Paid worker Dummy	.083	.110	.032	.755	.450	.123	.031	.029	.808	1.238
Mixed support Dummy	-.448	.095	-.186	-4.713	.000	-.173	-.192	-.182	.958	1.044
Average Length	-.197	.060	-.148	-3.290	.001	-.188	-.135	-.127	.734	1.363
Frequency	.751	.120	.245	6.245	.000	.200	.251	.241	.963	1.038
Proportion Practical	-.131	.095	-.057	-1.380	.168	-.101	-.057	-.053	.857	1.167
Proportion Children	-.248	.098	-.107	-2.538	.011	-.116	-.105	-.098	.835	1.198
Proportion Emotional	-.157	.104	-.059	-1.512	.131	-.082	-.063	-.058	.975	1.025
Proportion Services	.014	.129	.004	.110	.913	-.021	.005	.004	.975	1.026

Table E7 Regression Statistics, Model Summary and Coefficients, ROC Children's dev/learning and Nature of Support Variables

Model Summary				
n	**R**	**R Square**	**Adjusted R Square**	**Std. Error of the Estimate**
376	.310[a]	.096	.076	.70027

Coefficients									
	Unstandardized Coefficients		**Standardized Coefficients**	**t**	**Sig.**	**Correlations**			**Collinearity Statistics**	
	B	**Std. Error**	**Beta**			**Zero-order**	**Partial**	**Part**	**Tolerance**	**VIF**
(Constant)	-4.066	.161		-25.198	.000					
Paid worker Dummy	-.014	.139	-.005	-.100	.921	.104	-.005	-.005	.839	1.192
Mixed support Dummy	-.401	.121	-.168	-3.312	.001	-.138	-.170	-.164	.955	1.047
Average Length	-.218	.062	-.196	-3.487	.001	-.161	-.179	-.173	.780	1.282
Frequency	.470	.127	.191	3.714	.000	.160	.190	.184	.933	1.072
Proportion Practical	.121	.112	.057	1.079	.281	.028	.056	.054	.896	1.116
Proportion Children	-.078	.119	-.035	-.653	.514	-.041	-.034	-.032	.858	1.166
Proportion Emotional	-.010	.124	-.004	-.077	.939	-.025	-.004	-.004	.951	1.052
Proportion Services	.267	.147	.092	1.815	.070	.086	.094	.090	.950	1.052

Table E8. Regression Statistics, Model Summary and Coefficients, ROC Physical Health and Nature of Support Variables

Model Summary				
n	R	R Square	Adjusted R Square	Std. Error of the Estimate
687	.303[a]	.092	.081	.78998

	Coefficients									
	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations			Collinearity Statistics	
	B	Std. Error	Beta			Zero-order	Partial	Part	Tolerance	VIF
(Constant)	-4.169	.144		-28.956	.000					
Paid worker Dummy	.332	.121	.106	2.746	.006	.146	.105	.100	.903	1.107
Mixed support Dummy	-.332	.109	-.114	-3.060	.002	-.106	-.117	-.112	.968	1.033
Average Length	-.147	.056	-.108	-2.643	.008	-.141	-.101	-.097	.801	1.249
Frequency	.604	.116	.194	5.190	.000	.162	.195	.190	.954	1.048
Proportion Practical	-.022	.092	-.009	-.239	.811	-.013	-.009	-.009	.906	1.103
Proportion Children	-.265	.097	-.108	-2.739	.006	-.126	-.105	-.100	.867	1.153
Proportion Emotional	-.037	.109	-.013	-.338	.735	-.034	-.013	-.012	.956	1.046
Proportion Services	-.235	.157	-.057	-1.504	.133	-.062	-.058	-.055	.919	1.088

Table E9. Regression Statistics, Model Summary and Coefficients, ROC Mental Health and Nature of Support Variables

Model Summary										
n		R		R Square			Adjusted R Square		Std. Error of the Estimate	
1214		.333[a]			.111			.105		.70526

Coefficients										
	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations			Collinearity Statistics	
	B	Std. Error	Beta			Zero-order	Partial	Part	Tolerance	VIF
(Constant)	-4.035	.100		-40.509	.000					
Paid worker Dummy	.266	.076	.108	3.529	.000	.169	.101	.096	.789	1.267
Mixed support Dummy	-.347	.073	-.130	-4.728	.000	-.140	-.135	-.128	.971	1.030
Average Length	-.152	.040	-.123	-3.810	.000	-.177	-.109	-.103	.712	1.405
Frequency	.536	.079	.189	6.805	.000	.164	.192	.185	.955	1.047
Proportion Practical	-.151	.063	-.069	-2.403	.016	-.103	-.069	-.065	.892	1.122
Proportion Children	-.101	.064	-.047	-1.576	.115	-.096	-.045	-.043	.816	1.226
Proportion Emotional	-.176	.081	-.060	-2.165	.031	-.100	-.062	-.059	.947	1.056
Proportion Services	-.215	.099	-.062	-2.176	.030	-.067	-.063	-.059	.917	1.090

Table E10. Regression Statistics, Model Summary and Coefficients, ROC Isolation and Nature of Support Variables

	Model Summary									
n	**R**		**R Square**			**Adjusted R Square**		**Std. Error of the Estimate**		
1344	.351[a]		.123			.118		.71227		

	Coefficients									
	Unstandardized Coefficients		**Standardized Coefficients**	**t**	**Sig.**	**Correlations**			**Collinearity Statistics**	
	B	**Std. Error**	**Beta**			**Zero-order**	**Partial**	**Part**	**Tolerance**	**VIF**
(Constant)	-3.936	.094		-42.045	.000					
Paid worker Dummy	.122	.080	.042	1.527	.127	.108	.042	.039	.886	1.128
Mixed support Dummy	-.392	.074	-.137	-5.285	.000	-.146	-.143	-.135	.976	1.024
Average Length	-.247	.037	-.192	-6.702	.000	-.197	-.180	-.172	.800	1.249
Frequency	.680	.077	.233	8.870	.000	.210	.236	.227	.956	1.046
Proportion Practical	-.120	.061	-.054	-1.975	.048	-.097	-.054	-.051	.878	1.139
Proportion Children	-.019	.061	-.008	-.306	.759	-.037	-.008	-.008	.882	1.134
Proportion Emotional	-.163	.070	-.061	-2.339	.020	-.103	-.064	-.060	.955	1.047
Proportion Services	-.022	.090	-.007	-.248	.804	-.011	-.007	-.006	.944	1.059

Table E11. Regression Statistics, Model Summary and Coefficients, ROC Self-Esteem and Nature of Support Variables

	Model Summary									
n	**R**		**R Square**			**Adjusted R Square**		**Std. Error of the Estimate**		
1307	.353[a]		.124			.119		.73783		
	Coefficients									
	Unstandardized Coefficients		**Standardized Coefficients**	**t**	**Sig.**	**Correlations**			**Collinearity Statistics**	
	B	**Std. Error**	**Beta**			**Zero-order**	**Partial**	**Part**	**Tolerance**	**VIF**
(Constant)	-4.003	.100		-39.961	.000					
Paid worker Dummy	.241	.077	.089	3.139	.002	.162	.087	.082	.843	1.186
Mixed support Dummy	-.241	.076	-.083	-3.162	.002	-.085	-.087	-.082	.981	1.019
Average Length	-.214	.040	-.159	-5.379	.000	-.200	-.148	-.140	.774	1.292
Frequency	.735	.081	.241	9.099	.000	.206	.245	.236	.962	1.039
Proportion Practical	-.116	.064	-.050	-1.815	.070	-.068	-.050	-.047	.906	1.104
Proportion Children	-.183	.063	-.081	-2.893	.004	-.128	-.080	-.075	.857	1.167
Proportion Emotional	-.204	.077	-.070	-2.646	.008	-.109	-.073	-.069	.960	1.042
Proportion Services	-.043	.096	-.012	-.450	.653	-.015	-.012	-.012	.942	1.062

Table E12. Regression Statistics, Model Summary and Coefficients, ROC Household Budget and Nature of Support Variables

Model Summary				
n	R	R Square	Adjusted R Square	Std. Error of the Estimate
367	.376[a]	.142	.122	.70745

Coefficients										
	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations			Collinearity Statistics	
	B	Std. Error	Beta			Zero-order	Partial	Part	Tolerance	VIF
(Constant)	-4.342	.170		-25.501	.000					
Paid worker Dummy	.269	.132	.117	2.036	.042	.203	.107	.100	.728	1.374
Mixed support Dummy	-.141	.130	-.054	-1.083	.280	-.038	-.057	-.053	.959	1.043
Average Length	-.074	.062	-.067	-1.177	.240	-.163	-.062	-.058	.746	1.341
Frequency	.732	.140	.264	5.227	.000	.248	.266	.256	.943	1.061
Proportion Practical	-.102	.119	-.044	-.858	.391	-.045	-.045	-.042	.915	1.093
Proportion Children	-.376	.120	-.175	-3.145	.002	-.197	-.164	-.154	.776	1.288
Proportion Emotional	.021	.141	.008	.152	.879	-.044	.008	.007	.947	1.056
Proportion Services	-.323	.169	-.099	-1.912	.057	-.036	-.101	-.094	.889	1.124

Table E13. Regression Statistics, Model Summary and Coefficients, ROC Running the home and Nature of Support Variables

Model Summary				
n	R	R Square	Adjusted R Square	Std. Error of the Estimate
547	.351[a]	.123	.110	.71436

Coefficients										
	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations			Collinearity Statistics	
	B	Std. Error	Beta			Zero-order	Partial	Part	Tolerance	VIF
(Constant)	-3.960	.150		-26.477	.000					
Paid worker Dummy	.360	.138	.113	2.613	.009	.164	.112	.105	.868	1.152
Mixed support Dummy	-.348	.116	-.123	-3.002	.003	-.136	-.128	-.121	.977	1.024
Average Length	-.130	.056	-.106	-2.331	.020	-.172	-.100	-.094	.792	1.263
Frequency	.553	.121	.187	4.557	.000	.168	.193	.184	.971	1.029
Proportion Practical	-.180	.093	-.081	-1.922	.055	-.100	-.083	-.078	.909	1.100
Proportion Children	-.132	.098	-.059	-1.350	.178	-.111	-.058	-.054	.867	1.154
Proportion Emotional	-.290	.105	-.113	-2.754	.006	-.157	-.118	-.111	.969	1.032
Proportion Services	-.254	.154	-.069	-1.655	.098	-.089	-.071	-.067	.944	1.059

Table E14. Regression Statistics, Model Summary and Coefficients, ROC Conflict in family and Nature of Support Variables

	Model Summary									
n	**R**		**R Square**		**Adjusted R Square**		**Std. Error of the Estimate**			
732	.420[a]		.176		.167		.74286			
	Coefficients									
	Unstandardized Coefficients		**Standardized Coefficients**	**t**	**Sig.**	**Correlations**			**Collinearity Statistics**	
	B	**Std. Error**	**Beta**			**Zero-order**	**Partial**	**Part**	**Tolerance**	**VIF**
(Constant)	-4.140	.140		-29.658	.000					
Paid worker Dummy	.378	.103	.134	3.656	.000	.240	.135	.123	.849	1.178
Mixed support Dummy	-.228	.097	-.080	-2.354	.019	-.083	-.087	-.079	.978	1.023
Average Length	-.265	.052	-.196	-5.105	.000	-.223	-.187	-.172	.775	1.291
Frequency	.892	.110	.282	8.112	.000	.228	.289	.274	.945	1.058
Proportion Practical	-.084	.085	-.035	-.985	.325	-.076	-.037	-.033	.912	1.096
Proportion Children	-.274	.084	-.121	-3.282	.001	-.178	-.121	-.111	.839	1.192
Proportion Emotional	-.039	.115	-.012	-.343	.732	-.042	-.013	-.012	.979	1.021
Proportion Services	.294	.123	.083	2.391	.017	.061	.089	.081	.943	1.061

Table E15. Regression Statistics, Model Summary and Coefficients, ROC Multiple Children Under 5 and Nature of Support Variables

Model Summary										
n	R			R Square		Adjusted R Square		Std. Error of the Estimate		
371	.349ᵃ			.122		.103		.71182		

Coefficient										
	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations			Collinearity Statistics	
	B	Std. Error	Beta			Zero-order	Partial	Part	Tolerance	VIF
(Constant)	-3.956	.200		-19.781	.000					
Paid worker Dummy	.190	.172	.059	1.105	.270	.143	.058	.054	.863	1.159
Mixed support Dummy	-.493	.153	-.162	-3.229	.001	-.137	-.167	-.159	.968	1.033
Average Length	-.281	.067	-.228	-4.202	.000	-.210	-.216	-.207	.827	1.209
Frequency	.637	.161	.202	3.966	.000	.141	.204	.195	.937	1.068
Proportion Practical	-.020	.108	-.010	-.186	.853	-.052	-.010	-.009	.924	1.083
Proportion Children	-.261	.147	-.093	-1.779	.076	-.103	-.093	-.088	.889	1.125
Proportion Emotional	.111	.113	.049	.976	.330	.041	.051	.048	.980	1.020
Proportion Services	-.169	.186	-.046	-.912	.362	-.068	-.048	-.045	.944	1.060

APPENDIX F

Supplementary Tables for Chapter 7

List of Tables

Table F1. Bivariate relationships between Risk Factors and whether or not coping improved, Parental Mental/Emotional Well-being Coping Measures

Risk Factor		ROC Mental Health				ROC Isolation				ROC Self Esteem			
		Improvements occurred		Odds of improving	Odds Ratio	Improvements occurred		Odds of improving	Odds Ratio	Improvements occurred		Odds of improving	Odds Ratio
		Yes	No			Yes	No			Yes	No		
All families													
	f	1219	70	17.41		1351	62	21.79		1314	86	15.28	
	%	94.6%	5.4%			95.6%	4.4%			93.9%	6.1%		
Asylum Seeker or Refugee													
Risk present	f	26	0	n/a		39	2	19.5		23	1	23.00	
	%	100.0%	0.00%			95.10%	4.90%			95.80%	4.20%		
No risk	f	1193	70	17.04	n/a	1312	60	21.87	0.89	1291	85	15.19	1.51
	%	94.5%	5.50%			95.60%	4.40%			93.80%	6.20%		
Child on CPP													
Risk present	f	32	3	10.67		40	2	20		46	2	23.00	
	%	91.40%	8.60%			95.20%	4.80%			95.80%	4.20%		
No risk	f	1187	67	17.72	0.6	1311	60	21.85	0.92	1268	84	15.1	1.52
	%	94.7%	5.30%			95.60%	4.40%			93.80%	6.20%		
Disabled Child													
Risk present	f	116	6	19.33		130	7	18.57		115	11	10.45	
	%	95.10%	4.90%			94.90%	5.10%			91.30%	8.70%		
No risk	f	1103	64	17.23	1.12	1221	55	22.2	0.84	1199	75	15.99	0.65
	%	94.50%	5.50%			95.70%	4.30%			94.10%	5.90%		

Table F1 cont./1. Bivariate relationships between Risk Factors and whether or not coping improved, Parental Mental/Emotional Well-being Coping Measures

Risk Factor		ROC Mental Health				ROC Isolation				ROC Self Esteem			
		Improvements		Odds of improving	Odds Ratio	Improvements		Odds of improving	Odds Ratio	Improvements		Odds of improving	Odds Ratio
		Yes	No			Yes	No			Yes	No		
Disabled Parent													
Risk present	f	105	14	7.50		119	8	15		101	8	12.63	
	%	88.20%	11.80%			93.70%	6.30%			92.70%	7.30%		
No risk	f	1114	56	19.89	0.38	1232	54	23	0.65	1213	78	15.55	0.81
	%	95.20%	4.80%			95.80%	4.20%			94.00%	6.00%		
Domestic Abuse													
Risk present	f	173	7	24.71		187	9	21		208	12	17.33	
	%	96.10%	3.90%			95.40%	4.60%			94.50%	5.50%		
No risk	f	1046	63	16.60	1.49	1164	53	22	0.95	1106	74	14.95	1.16
	%	94.30%	5.70%			95.60%	4.40%			93.70%	6.30%		
Housing													
Risk present	f	63	3	21.00		81	4	20		84	4	21	
	%	95.50%	4.50%			95.30%	4.70%			95.50%	4.50%		
No risk	f	1156	67	17.25	1.22	1270	58	22	0.92	1230	82	15	1.4
	%	94.50%	5.50%			95.60%	4.40%			93.80%	6.30%		
Large Family													
Risk present	f	383	23	16.65		425	24	18		403	35	11.51	
	%	94.30%	5.70%			94.70%	5.30%			92.00%	8.00%		
No risk	f	836	47	17.79	0.94	926	38	24	0.73	911	51	17.86	0.64
	%	94.70%	5.30%			96.10%	3.90%			94.70%	5.30%		

Table F1 cont./2. Bivariate relationships between Risk Factors and whether or not coping improved, Parental Mental/Emotional Well-being Coping Measures

Risk Factor		ROC Mental Health				ROC Isolation				ROC Self Esteem			
		Improvements		Odds of improving	Odds Ratio	Improvements		Odds of improving	Odds Ratio	Improvements		Odds of improving	Odds Ratio
		Yes	No			Yes	No			Yes	No		
Mental Health													
Risk present	f	590	40	14.75		543	22	25		586	38	15.42	
	%	93.70%	6.30%			96.10%	3.90%			93.90%	6.10%		
No risk	f	629	30	20.97	0.7	808	40	20	1.22	728	48	15.17	1.02
	%	95.40%	4.60%			95.30%	4.70%			93.80%	6.20%		
Post Natal Depression													
Risk present	f	292	15	19.47		274	11	25		304	20	15.2	
	%	95.10%	4.90%			96.10%	3.90%			93.80%	6.20%		
No risk	f	927	55	16.85	1.15	1077	51	21	1.18	1010	66	15.3	0.99
	%	94.40%	5.60%			95.50%	4.50%			93.90%	6.10%		
Prison													
Risk present	f	13	0	n/a		10	1	10		14	0	n/a	
	%	100.00%	0.00%			90.90%	9.10%			100.00%	0.00%		
No risk	f	1206	70	17.23	n/a	1341	61	22	0.45	1300	86	15	n/a
	%	94.50%	5.50%			95.60%	4.40%			93.80%	6.20%		
Substance Misuse													
Risk present	f	34	1	34.00		33	0	n/a		48	0	n/a	
	%	97.10%	2.90%			100.00%	0.00%			100.00%	0.00%		
No risk	f	1185	69	17.17	1.98	1318	62	21	n/a	1266	86	14.72	n/a
	%	94.50%	5.50%			95.50%	4.50%			93.60%	6.40%		

Table F2. Bivariate relationships between Risk Factors and Type of Ending

	End Visit form completed		Unplanned ending form only		No end data	
	f(%)	Odds	f(%)	Odds	f(%)	Odds
All families	7569(71.1)	2.47	2155(20.3)	0.25	915(8.6)	0.09
Asylum Seeker/Refugee						
Risk present	132(64.7)	1.83	51(25.0)	0.33	21(10.3)	0.11
No risk	7437(71.3)	2.48	2104(20.2)	0.25	894(8.6)	0.09
Child on CPP						
Risk present	289(71.9)	2.56	93(23.1)	0.30	20(5.0)	0.05
No risk	7280(71.1)	2.46	2062(20.1)	0.25	895(8.7)	0.10
Disabled Child						
Risk present	880(75.0)	3.00	190(16.2)	0.19	103(8.8)	0.10
No risk	6689(70.7)	2.41	1965(20.8)	0.26	812(8.6)	0.09
Disabled Parent						
Risk present	534(68.5)	2.17	151(19.4)	0.24	95(12.2)	0.14
No risk	7035(71.4)	2.49	2004(20.3)	0.26	820(8.3)	0.09
Domestic Abuse						
Risk present	896(68.4)	2.16	312(23.8)	0.31	102(7.8)	0.08
No risk	6673(71.5)	2.51	1843(19.8)	0.25	813(8.7)	0.10
Housing Issues						
Risk present	360(67.4)	2.07	129(24.2)	0.32	45(8.4)	0.09
No risk	7209(71.3)	2.49	2026(20.0)	0.25	870(8.6)	0.09
Large Family						
Risk present	2660(70.8)	2.42	766(20.4)	0.26	333(8.9)	0.10
No risk	4909(71.4)	2.49	1389(20.2)	0.25	582(8.5)	0.09
Mental Health						
Risk present	2338(68.4)	2.16	770(22.5)	0.29	311(9.1)	0.10
No risk	5231(72.5)	2.63	1385(19.2)	0.24	604(8.4)	0.09
Post Natal Depression						
Risk present	1246(69.8)	2.32	384(21.5)	0.27	154(8.6)	0.09
No risk	6323(71.4	2.50	1771(20.0)	0.25	761(8.6)	0.09
Prison						
Risk present	68(72.3)	2.62	20(21.3)	0.27	6(6.4)	0.07
No risk	7501(71.1)	2.46	2135(20.2)	0.25	909(8.6)	0.09
Substance Misuse						
Risk present	251(60.2)	1.51	129(30.9)	0.45	37(8.9)	0.10
No risk	7318(71.6)	2.52	2026(19.8)	0.25	878(8.6)	0.09

Table F3. Regression Statistics, Model Summary and Coefficients, ROC Mental Health and Risk Factors

Model Summary				
n	**R**	**R Square**	**Adjusted R Square**	**Std. Error of the Estimate**
1214	.147ᵃ	.021	.013	.73225

Coefficients										
	Unstandardized Coefficients		**Standardized Coefficients**	**t**	**Sig.**	**Correlations**			**Collinearity Statistics**	
	B	**Std. Error**	**Beta**			**Zero-order**	**Partial**	**Part**	**Tolerance**	**VIF**
(Constant)	-4.283	.038		-113.414	.000					
Asylum Seeker/Refugee	.129	.155	.025	.833	.405	.035	.024	.024	.913	1.095
Child Protection Plan	-.122	.134	-.026	-.906	.365	-.025	-.026	-.026	.956	1.046
Disabled Child	.104	.073	.041	1.432	.152	.037	.041	.041	.969	1.032
Disabled Parent	-.098	.075	-.037	-1.299	.194	-.038	-.037	-.037	.982	1.018
Domestic Abuse	.044	.062	.021	.713	.476	.010	.021	.020	.942	1.061
Housing Issues	.125	.100	.037	1.245	.213	.045	.036	.036	.911	1.097
Large Family Size	-.124	.046	-.078	-2.706	.007	-.076	-.078	-.077	.982	1.018
Mental Health Issues	-.117	.043	-.079	-2.746	.006	-.081	-.079	-.078	.977	1.024
Post Natal Depression	-.014	.050	-.008	-.274	.784	-.006	-.008	-.008	.977	1.023
Prison	.401	.214	.054	1.876	.061	.047	.054	.054	.989	1.011
Substance Misuse	-.054	.129	-.012	-.419	.676	-.017	-.012	-.012	.974	1.027

Table F4 Regression Statistics, Model Summary and Coefficients, ROC Isolation and Risk Factors

Model Summary				
n	R	R Square	Adjusted R Square	Std. Error of the Estimate
1343	.181[a]	.033	.025	.74025

Coefficients										
	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations			Collinearity Statistics	
	B	Std. Error	Beta			Zero-order	Partial	Part	Tolerance	VIF
(Constant)	-4.236	.034		-123.983	.000					
Asylum Seeker/Refugee	-.010	.124	-.002	-.084	.933	.003	-.002	-.002	.947	1.056
Child Protection Plan	-.006	.123	-.001	-.050	.960	.009	-.001	-.001	.940	1.064
Disabled Child	.027	.069	.011	.394	.694	.004	.011	.011	.978	1.023
Disabled Parent	-.204	.072	-.078	-2.858	.004	-.082	-.078	-.077	.987	1.013
Domestic Abuse	.177	.060	.082	2.927	.003	.073	.080	.079	.932	1.073
Housing Issues	.064	.088	.020	.730	.465	.031	.020	.020	.938	1.066
Large Family Size	-.124	.044	-.077	-2.834	.005	-.080	-.077	-.076	.985	1.015
Mental Health Issues	-.134	.042	-.088	-3.204	.001	-.081	-.087	-.086	.965	1.036
Post Natal Depression	.079	.051	.042	1.551	.121	.034	.042	.042	.971	1.030
Prison	.635	.237	.073	2.682	.007	.066	.073	.072	.985	1.015
Substance Misuse	-.068	.134	-.014	-.511	.609	-.009	-.014	-.014	.954	1.048

Table F5. Regression Statistics, Model Summary and Coefficients, ROC Self-Esteem and Risk Factors

	Model Summary				
	n	**R**	**R Square**	**Adjusted R Square**	**Std. Error of the Estimate**
	1306	.142[a]	.020	.012	.77262

	Coefficients									
	Unstandardized Coefficients		**Standardized Coefficients**	**t**	**Sig.**	**Correlations**			**Collinearity Statistics**	
	B	**Std. Error**	**Beta**			**Zero-order**	**Partial**	**Part**	**Tolerance**	**VIF**
(Constant)	-4.342	.038		-115.735	.000					
Asylum Seeker/Refugee	.164	.166	.028	.991	.322	.033	.028	.027	.962	1.040
Child Protection Plan	.024	.119	.006	.205	.838	.006	.006	.006	.948	1.055
Disabled Child	.018	.077	.007	.235	.815	.001	.007	.006	.977	1.024
Disabled Parent	-.072	.080	-.025	-.901	.368	-.022	-.025	-.025	.990	1.010
Domestic Abuse	.181	.060	.085	3.009	.003	.082	.083	.083	.948	1.054
Housing Issues	.089	.089	.028	1.002	.316	.041	.028	.028	.954	1.048
Large Family Size	-.127	.047	-.075	-2.710	.007	-.081	-.075	-.075	.981	1.019
Mental Health Issues	-.096	.043	-.061	-2.212	.027	-.060	-.061	-.061	.982	1.019
Post Natal Depression	.029	.051	.015	.558	.577	.010	.016	.015	.982	1.018
Prison	-.041	.210	-.005	-.197	.844	-.009	-.005	-.005	.978	1.023
Substance Misuse	-.104	.118	-.025	-.889	.374	-.018	-.025	-.024	.934	1.071

Table F6. Bivariate relationships between Complexity variables and whether or not coping improved, Parental Mental/Emotional Well-being Coping Measures

Risk Factor		ROC Mental Health				ROC Isolation				ROC Self Esteem			
		Improvements occurred		Odds *	Odds Ratio	Improvements occurred		Odds *	Odds Ratio	Improvements occurred		Odds *	Odds Ratio
		Yes f(%)	No f(%)			Yes f(%)	No f(%)			Yes f(%)	No f(%)		
All families		1219(94.6)	70(5.4)	17.41		1351(95.6)	62(4.4)	21.79		1314(93.9)	86(6.1)	15.28	
High Risk	3 or more risks	106(93.0)	8(7.0)	13		99(90.8)	10(9.2)	10		112(91.8)	10(8.2)	11.2	
	2 or fewer risks	1113(94.7)	62(5.3)	18	0.74	1252(96.0)	52(4.0)	24	0.41	1202(94.1)	76(5.9)	15.82	0.71
Hardiker Level	One	395(93.8)	26(6.2)	15		472(95.0)	25(5.0)	19		433(93.7)	29(6.3)	15	
	Two	639(95.2)	32(4.8)	20		692(96.2)	27(3.8)	26		675(94.3)	41(5.7)	16	
	Three	132(94.3)	8(5.7)	17		139(93.3)	10(6.7)	14		140(90.9)	14(9.1)	10	
	Four	27(96.4)	1(3.6)	27		22(100.0)	0(0.0)	n/a		32(100.00)	0(0.00)	n/a	

*Odds of improving

Table F7. Bivariate relationships between Complexity variables and Type of Ending

	End Visit form completed		Unplanned ending form only		No end data	
	f(%)	Odds	f(%)	Odds	f(%)	Odds
All families	7569(71.1)	2.47	2155(20.3)	0.25	915(8.6)	0.09
High Risk						
3 or more risks	453(66.5)	1.99	177(26.0)	0.35	51(7.5)	0.08
2 or fewer risks	7116(71.5)	2.50	1978(19.9)	0.25	864(8.7)	0.10
Hardiker Level						
One	2789(70.7)	2.41	787(19.9)	0.25	371(9.4)	0.10
Two	3690(73.7)	2.80	917(18.3)	0.22	400(8.0)	0.09
Three	745(68.7)	2.19	260(24.0)	0.32	80(7.4)	0.08
Four	134(72.0)	2.58	39(21.0)	0.27	13(7.0)	0.08

Table F8. Regression Statistics, Model Summary and Coefficients, ROC Mental Health and Risk Factors and High Risk

Model Summary										
n		R		R Square		Adjusted R Square		Std. Error of the Estimate		
1214		.147[a]		.022		.012		.73255		
Coefficients										
	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations			Collinearity Statistics	
	B	Std. Error	Beta			Zero-order	Partial	Part	Tolerance	VIF
(Constant)	-4.281	.040		-107.787	.000					
Asylum Seeker/Refugee	.125	.158	.024	.789	.430	.035	.023	.023	.879	1.138
Child Protection Plan	-.128	.141	-.028	-.908	.364	-.025	-.026	-.026	.871	1.148
Disabled Child	.102	.075	.040	1.357	.175	.037	.039	.039	.915	1.093
Disabled Parent	-.102	.082	-.039	-1.254	.210	-.038	-.036	-.036	.838	1.193
Domestic Abuse	.041	.066	.019	.620	.535	.010	.018	.018	.831	1.203
Housing Issues	.121	.104	.036	1.163	.245	.045	.034	.033	.848	1.179
Large Family Size	-.124	.046	-.078	-2.707	.007	-.076	-.078	-.077	.982	1.018
Mental Health Issues	-.119	.044	-.080	-2.685	.007	-.081	-.077	-.077	.908	1.102
Post Natal Depression	-.016	.052	-.009	-.303	.762	-.006	-.009	-.009	.897	1.115
Prison	.396	.216	.053	1.838	.066	.047	.053	.052	.971	1.030
Substance Misuse	-.058	.133	-.013	-.440	.660	-.017	-.013	-.013	.921	1.085
High Risk	.015	.106	.006	.144	.886	-.007	.004	.004	.504	1.984

Table F9. Regression Statistics, Model Summary and Coefficients, ROC Isolation and Risk Factors and High Risk

Model Summary				
n	R	R Square	Adjusted R Square	Std. Error of the Estimate
1343	.182[a]	.033	.025	.74032

Coefficients										
	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations			Collinearity Statistics	
	B	Std. Error	Beta			Zero-order	Partial	Part	Tolerance	VIF
(Constant)	-4.245	.036		-119.077	.000					
Asylum Seeker/Refugee	.012	.126	.003	.093	.926	.003	.003	.002	.908	1.102
Child Protection Plan	.024	.127	.005	.188	.851	.009	.005	.005	.869	1.150
Disabled Child	.040	.071	.016	.567	.571	.004	.016	.015	.934	1.070
Disabled Parent	-.186	.075	-.070	-2.485	.013	-.082	-.068	-.067	.904	1.106
Domestic Abuse	.195	.064	.090	3.049	.002	.073	.083	.082	.834	1.198
Housing Issues	.085	.091	.027	.932	.352	.031	.026	.025	.873	1.146
Large Family Size	-.124	.044	-.077	-2.820	.005	-.080	-.077	-.076	.985	1.015
Mental Health Issues	-.125	.043	-.082	-2.904	.004	-.081	-.079	-.078	.910	1.099
Post Natal Depression	.092	.053	.049	1.729	.084	.034	.047	.047	.896	1.116
Prison	.656	.238	.075	2.757	.006	.066	.075	.074	.974	1.026
Substance Misuse	-.035	.139	-.007	-.252	.801	-.009	-.007	-.007	.881	1.136
High Risk	-.091	.106	-.032	-.863	.388	-.012	-.024	-.023	.537	1.864

Table F10. Regression Statistics, Model Summary and Coefficients, ROC Self-Esteem and Risk Factors and High Risk

Model Summary				
n	**R**	**R Square**	**Adjusted R Square**	**Std. Error of the Estimate**
1306	.142[a]	.020	.011	.77287

Coefficients										
	Unstandardized Coefficients		**Standardized Coefficients**	**t**	**Sig.**	**Correlations**			**Collinearity Statistics**	
	B	**Std. Error**	**Beta**			**Zero-order**	**Partial**	**Part**	**Tolerance**	**VIF**
(Constant)	-4.348	.040		-109.813	.000					
Asylum Seeker/Refugee	.178	.169	.030	1.054	.292	.033	.029	.029	.927	1.079
Child Protection Plan	.035	.122	.008	.291	.771	.006	.008	.008	.905	1.105
Disabled Child	.027	.080	.010	.334	.739	.001	.009	.009	.915	1.093
Disabled Parent	-.061	.085	-.021	-.710	.478	-.022	-.020	-.020	.882	1.134
Domestic Abuse	.190	.064	.089	2.971	.003	.082	.082	.082	.837	1.195
Housing Issues	.101	.093	.032	1.082	.280	.041	.030	.030	.875	1.143
Large Family Size	-.127	.047	-.075	-2.708	.007	-.081	-.075	-.075	.981	1.019
Mental Health Issues	-.091	.045	-.058	-2.003	.045	-.060	-.056	-.055	.904	1.106
Post Natal Depression	.036	.054	.019	.661	.508	.010	.018	.018	.889	1.125
Prison	-.030	.212	-.004	-.144	.886	-.009	-.004	-.004	.963	1.038
Substance Misuse	-.089	.123	-.021	-.719	.472	-.018	-.020	-.020	.849	1.178
High Risk	-.046	.107	-.016	-.425	.671	.008	-.012	-.012	.508	1.967

Table F11. Regression Statistics, Model Summary and Coefficients, ROC Mental Health and Risk Factors and Hardiker Level

Model Summary					
n		**R**	**R Square**	**Adjusted R Square**	**Std. Error of the Estimate**
1188		.163[b]	.027	.015	.73173

Coefficients										
	Unstandardized Coefficients		**Standardized Coefficients**	**t**	**Sig.**	**Correlations**			**Collinearity Statistics**	
	B	**Std. Error**	**Beta**			**Zero-order**	**Partial**	**Part**	**Tolerance**	**VIF**
(Constant)	-4.246	.048		-89.366	.000					
Asylum Seeker/Refugee	.070	.157	.013	.444	.657	.022	.013	.013	.919	1.088
Child Protection Plan	-.132	.138	-.029	-.958	.338	-.025	-.028	-.028	.909	1.101
Disabled Child	.125	.074	.049	1.688	.092	.041	.049	.049	.967	1.034
Disabled Parent	-.119	.076	-.046	-1.566	.118	-.045	-.046	-.045	.981	1.019
Domestic Abuse	.053	.063	.025	.844	.399	.011	.025	.024	.928	1.077
Housing Issues	.097	.101	.029	.966	.334	.037	.028	.028	.914	1.094
Large Family Size	-.128	.046	-.080	-2.757	.006	-.080	-.080	-.079	.977	1.024
Mental Health Issues	-.113	.043	-.077	-2.628	.009	-.084	-.077	-.076	.970	1.031
Post Natal Depression	-.019	.051	-.011	-.384	.701	-.006	-.011	-.011	.968	1.033
Prison	.477	.223	.062	2.135	.033	.054	.062	.062	.986	1.014
Substance Misuse	-.086	.132	-.019	-.653	.514	-.024	-.019	-.019	.964	1.037
Hardiker Level 2 Dummy	-.053	.048	-.036	-1.101	.271	-.028	-.032	-.032	.796	1.256
Hardiker Level 3 Dummy	-.109	.075	-.047	-1.453	.147	-.037	-.042	-.042	.807	1.240
Hardiker Level 4 Dummy	.121	.154	.024	.783	.434	.036	.023	.023	.882	1.133

Table F12. Regression Statistics, Model Summary and Coefficients, ROC Isolation and Risk Factors and Hardiker Level

Model Summary				
n	R	R Square	Adjusted R Square	Std. Error of the Estimate
1317	.190ᵃ	.036	.026	.73868

Coefficients										
	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations			Collinearity Statistics	
	B	Std. Error	Beta			Zero-order	Partial	Part	Tolerance	VIF
(Constant)	-4.215	.043		-97.900	.000					
Asylum Seeker/Refugee	-.014	.123	-.003	-.113	.910	.004	-.003	-.003	.946	1.057
Child Protection Plan	-.006	.127	-.001	-.050	.960	.009	-.001	-.001	.871	1.149
Disabled Child	.052	.071	.020	.739	.460	.012	.020	.020	.975	1.025
Disabled Parent	-.235	.072	-.089	-3.243	.001	-.095	-.090	-.088	.983	1.017
Domestic Abuse	.182	.061	.085	2.984	.003	.073	.082	.081	.915	1.093
Housing Issues	.074	.088	.024	.837	.403	.034	.023	.023	.930	1.075
Large Family Size	-.117	.044	-.073	-2.637	.008	-.077	-.073	-.072	.974	1.027
Mental Health Issues	-.134	.042	-.088	-3.170	.002	-.082	-.088	-.086	.962	1.039
Post Natal Depression	.074	.052	.040	1.440	.150	.034	.040	.039	.965	1.036
Prison	.631	.237	.073	2.669	.008	.067	.074	.073	.983	1.018
Substance Misuse	-.049	.134	-.010	-.363	.717	-.009	-.010	-.010	.939	1.065
Hardiker Level 2 Dummy	-.038	.045	-.026	-.858	.391	-.021	-.024	-.023	.834	1.199
Hardiker Level 3 Dummy	-.067	.075	-.027	-.900	.368	-.021	-.025	-.024	.796	1.256
Hardiker Level 4 Dummy	.054	.169	.009	.323	.747	.029	.009	.009	.886	1.128

Table F13. Regression Statistics, Model Summary and Coefficients, ROC Self-Esteem and Risk Factors and Hardiker Level

Model Summary					
n		R		R Square	Adjusted R Square	Std. Error of the Estimate
1272		.160[b]		.026	.015	.77047

Coefficients										
	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations			Collinearity Statistics	
	B	Std. Error	Beta			Zero-order	Partial	Part	Tolerance	VIF
(Constant)	-4.348	.047		-92.660	.000					
Asylum Seeker/Refugee	.156	.166	.027	.943	.346	.034	.027	.026	.959	1.042
Child Protection Plan	-.008	.127	-.002	-.063	.950	.006	-.002	-.002	.829	1.207
Disabled Child	.025	.079	.009	.322	.748	.008	.009	.009	.969	1.032
Disabled Parent	-.073	.082	-.025	-.890	.373	-.022	-.025	-.025	.983	1.017
Domestic Abuse	.193	.061	.091	3.137	.002	.088	.088	.087	.925	1.081
Housing Issues	.092	.091	.029	1.013	.311	.041	.029	.028	.945	1.058
Large Family Size	-.128	.047	-.076	-2.702	.007	-.083	-.076	-.075	.974	1.027
Mental Health Issues	-.114	.044	-.073	-2.585	.010	-.069	-.073	-.072	.971	1.030
Post Natal Depression	-.005	.052	-.003	-.090	.929	-.008	-.003	-.002	.975	1.025
Prison	-.014	.218	-.002	-.065	.948	-.006	-.002	-.002	.974	1.027
Substance Misuse	-.094	.120	-.023	-.786	.432	-.020	-.022	-.022	.914	1.094
Hardiker Level 2 Dummy	.043	.049	.027	.878	.380	.025	.025	.024	.794	1.259
Hardiker Level 3 Dummy	-.062	.079	-.025	-.782	.434	-.032	-.022	-.022	.759	1.318
Hardiker Level 4 Dummy	.181	.154	.036	1.176	.240	.043	.033	.033	.828	1.208

Table F14 Bivariate relationships between Life Events and whether or not coping improved, Parental Mental/Emotional Well-being Coping Measures

Life Event		ROC Mental Health				ROC Isolation				ROC Self Esteem			
		Improvements occurred		Odds	Odds Ratio	Improvements occurred		Odds	Odds Ratio	Improvements occurred		Odds	Odds Ratio
		Yes f(%)	No f(%)			Yes f(%)	No f(%)			Yes f(%)	No f(%)		
All families		1219(94.6)	70(5.4)	17.41		1351(95.6)	62(4.4)	21.79		1314(93.9)	86(6.1)	15.28	
Bereavement LE	Indicated	60(93.8)	4(6.3)	15		63(92.6)	5(7.40)	13		65(98.5)	1(1.50)	65	
	Not indicated	1159(94.6)	66(5.4)	18	0.85	1288(95.8)	57(4.20)	23	0.56	1249(93.6)	85(6.40)	14.69	4.42
Birth LE	Indicated	80(98.8)	1(1.2)	80		71(95.9)	3(4.10)	24		74(92.5)	6(7.50)	12.33	
	Not indicated	1139(94.3)	69(5.7)	17	4.85	1280(95.6)	59(4.40)	22	1.09	1240(93.9)	80(6.10)	15.5	0.8
Housing LE	Indicated	130(95.6)	6(4.4)	22		142(97.3)	4(2.70)	36		134(95.7)	6(4.30)	22.33	
		1089(94.4)	64(5.6)	17	1.27	1209(95.4)	58(4.60)	21	1.7	1180(93.7)	80(6.30)	14.75	1.51
Relationship Breakdown LE	Indicated	75(98.7)	1(1.3)	75		78(97.5)	2(2.5)	39		97(97.0)	3(3.0)	32.33	
	Not indicated	1144(94.3)	69(5.7)	17	4.52	1273(95.5)	60(4.5)	21	1.84	1217(93.6)	83(6.4)	14.66	2.21
Physical Health LE	Indicated	121(93.8)	8(6.2)	15		115(97.5)	3(2.5)	38		112(94.9)	6(5.1)	18.67	
	Not indicated	1098(94.7)	62(5.3)	18	0.85	1236(95.4)	59(4.6)	21	1.83	1202(93.8)	80(6.2)	15.03	1.24
Mental Health LE	Indicated	18(90.0)	2(10.0)	9		13(86.7)	2(13.3)	7		25	2	12.5	
	Not indicated	1201(94.6)	68(5.4)	18	0.51	1338(95.7)	60(4.3)	22	0.29	1289(93.9)	84(6.1)	15.35	0.81

*Odds =Odds of improving

Table F15. Bivariate relationships between Life Events and Types of Ending

	End Visit form completed		Unplanned ending form only		No end data	
	f(%)	Odds	f(%)	Odds	f(%)	Odds
All families	7569(71.1)	2.47	2155(20.3)	0.25	915(8.6)	0.09
Bereavement LE						
Indicated	329(66.9)	2.02	70(14.2)	0.17	93(18.9)	0.23
Not indicated	7240(71.4	2.49	2085(20.5)	0.26	822(8.1)	0.09
Birth LE 9						
Indicated	470(63.9)	1.77	110(15.0)	0.18	155(21.1)	0.27
Not indicated	7099(71.7)	2.53	2045(20.6)	0.26	760(7.7)	0.08
Housing LE						
Indicated	704(67.2)	2.05	164(15.7)	0.19	179(17.1)	0.21
Not indicated	6865(71.6)	2.52	1991(20.8)	0.26	736(7.7)	0.08
Relationship Breakdown LE						
Indicated	381(65.0)	1.86	106(18.1)	0.22	99(16.9)	0.20
Not indicated	7188(71.5)	2.51	2049(20.4)	0.26	816(8.1)	0.09
Physical Health LE						
Indicated	586(67.3)	2.06	114(13.1)	0.15	171(19.6)	0.24
Not indicated	6983(71.5)	2.51	2041(20.9)	0.26	744(7.6)	0.08
Mental Health LE						
Indicated	77(64.2)	1.79	21(17.5)	0.21	22(18.3)	0.22
Not indicated	7492(71.2)	2.48	2134(20.3)	0.25	893(8.5)	0.09

Table F16. Regression Statistics, Model Summary and Coefficients, ROC Mental Health, with Risk Factors and Life Events

Model Summary				
n	R	R Square	Adjusted R Square	Std. Error of the Estimate
1214	.300ª	.090	.077	.70799

Coefficients										
	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations			Collinearity Statistics	
	B	Std. Error	Beta			Zero-order	Partial	Part	Tolerance	VIF
(Constant)	-4.202	.038		-111.932	.000					
Asylum Seeker/Refugee	.086	.150	.016	.571	.568	.035	.017	.016	.912	1.097
Child Protection Plan	-.113	.130	-.025	-.868	.385	-.025	-.025	-.024	.954	1.049
Disabled Child	.122	.071	.049	1.729	.084	.037	.050	.048	.960	1.042
Disabled Parent	-.094	.073	-.036	-1.288	.198	-.038	-.037	-.036	.977	1.024
Domestic Abuse	.090	.061	.042	1.482	.139	.010	.043	.041	.929	1.077
Housing Issues	.149	.098	.044	1.521	.129	.045	.044	.042	.889	1.125
Large Family Size	-.102	.044	-.064	-2.288	.022	-.076	-.066	-.063	.969	1.032
Mental Health Issues	-.108	.041	-.073	-2.627	.009	-.081	-.076	-.072	.973	1.027
Post Natal Depression	-.005	.048	-.003	-.097	.923	-.006	-.003	-.003	.972	1.028
Prison	.398	.207	.053	1.926	.054	.047	.056	.053	.988	1.012
Substance Misuse	-.007	.127	-.002	-.059	.953	-.017	-.002	-.002	.945	1.058
Bereavement LE	-.350	.096	-.103	-3.655	.000	-.152	-.105	-.101	.956	1.046
Birth LE	-.153	.084	-.051	-1.814	.070	-.092	-.052	-.050	.957	1.045
Housing LE	-.228	.068	-.096	-3.335	.001	-.128	-.096	-.092	.927	1.079
Relationship Breakdown LE	-.233	.087	-.076	-2.659	.008	-.115	-.077	-.073	.931	1.075
Physical Health LE	-.355	.069	-.144	-5.123	.000	-.174	-.147	-.141	.957	1.045
Mental Health LE	-.231	.172	-.038	-1.348	.178	-.085	-.039	-.037	.958	1.043

Table F17. Regression Statistics, Model Summary and Coefficients, ROC Isolation, with Risk Factors and Life Events

Model Summary				
n	**R**	**R Square**	**Adjusted R Square**	**Std. Error of the Estimate**
1341	.291ᵃ	.085	.073	.71832

Coefficients										
	Unstandardized Coefficients		**Standardized Coefficients**	**t**	**Sig.**	**Correlations**			**Collinearity Statistics**	
	B	**Std. Error**	**Beta**			**Zero-order**	**Partial**	**Part**	**Tolerance**	**VIF**
(Constant)	-4.153	.035		-120.222	.000					
Asylum Seeker/Refugee	-.024	.120	-.005	-.196	.844	.003	-.005	-.005	.945	1.058
Child Protection Plan	-.004	.119	-.001	-.033	.974	.009	-.001	-.001	.937	1.068
Disabled Child	.001	.068	.000	.017	.986	-.002	.000	.000	.970	1.031
Disabled Parent	-.195	.070	-.074	-2.806	.005	-.083	-.077	-.074	.982	1.018
Domestic Abuse	.214	.059	.099	3.618	.000	.079	.099	.095	.920	1.087
Housing Issues	.077	.086	.025	.901	.368	.031	.025	.024	.927	1.078
Large Family Size	-.120	.043	-.075	-2.821	.005	-.081	-.077	-.074	.978	1.022
Mental Health Issues	-.140	.041	-.092	-3.435	.001	-.086	-.094	-.090	.964	1.038
Post Natal Depression	.076	.050	.041	1.538	.124	.035	.042	.040	.967	1.034
Prison	.683	.230	.079	2.968	.003	.066	.081	.078	.982	1.019
Substance Misuse	-.039	.130	-.008	-.296	.767	-.009	-.008	-.008	.947	1.056
Bereavement LE	-.259	.096	-.073	-2.700	.007	-.109	-.074	-.071	.950	1.052
Birth LE	-.153	.089	-.046	-1.716	.086	-.080	-.047	-.045	.962	1.040
Housing LE	-.210	.066	-.086	-3.180	.002	-.105	-.087	-.084	.946	1.057
Relationship Breakdown LE	-.204	.087	-.063	-2.340	.019	-.095	-.064	-.062	.947	1.056
Physical Health LE	-.358	.071	-.134	-5.011	.000	-.160	-.136	-.132	.969	1.032
Mental Health LE	-.220	.203	-.029	-1.082	.279	-.053	-.030	-.028	.972	1.028

Table F18. Regression Statistics, Model Summary and Coefficients, ROC Self-Esteem, with Risk Factors and Life Events

Model Summary				
n	**R**	**R Square**	**Adjusted R Square**	**Std. Error of the Estimate**
1,305	.277[a]	.077	.065	.74975

Coefficients									
	Unstandardized Coefficients		**Standardized Coefficients**	**t**	**Sig.**	**Correlations**			**Collinearity Statistics**	
	B	**Std. Error**	**Beta**			**Zero-order**	**Partial**	**Part**	**Tolerance**	**VIF**
(Constant)	-4.255	.038		-113.035	.000					
Asylum Seeker/Refugee	.146	.161	.025	.906	.365	.033	.025	.024	.956	1.046
Child Protection Plan	.017	.116	.004	.149	.881	.006	.004	.004	.945	1.059
Disabled Child	-.001	.075	-.001	-.019	.985	.001	-.001	-.001	.966	1.035
Disabled Parent	-.088	.078	-.030	-1.128	.259	-.023	-.031	-.030	.987	1.013
Domestic Abuse	.220	.059	.104	3.747	.000	.082	.104	.100	.935	1.069
Housing Issues	.107	.088	.034	1.222	.222	.040	.034	.033	.925	1.081
Large Family Size	-.109	.046	-.065	-2.387	.017	-.083	-.066	-.064	.968	1.033
Mental Health Issues	-.090	.042	-.057	-2.122	.034	-.062	-.059	-.057	.978	1.023
Post Natal Depression	.019	.050	.010	.375	.708	.009	.010	.010	.977	1.024
Prison	-.058	.204	-.008	-.285	.776	-.009	-.008	-.008	.977	1.024
Substance Misuse	-.067	.115	-.016	-.584	.559	-.018	-.016	-.016	.925	1.081
Bereavement LE	-.296	.100	-.083	-2.967	.003	-.134	-.082	-.079	.925	1.081
Birth LE	-.248	.093	-.074	-2.678	.008	-.116	-.074	-.072	.941	1.063
Housing LE	-.240	.072	-.093	-3.338	.001	-.119	-.093	-.089	.919	1.088
Relationship Breakdown LE	-.230	.081	-.077	-2.825	.005	-.114	-.078	-.076	.953	1.049
Physical Health LE	-.246	.077	-.088	-3.201	.001	-.124	-.089	-.086	.945	1.058
Mental Health LE	-.313	.156	-.055	-2.007	.045	-.098	-.056	-.054	.940	1.064

Table F19. Regression Statistics, Model Summary and Coefficients, ROC Mental Health, with Risk Factors and Life Events that occur in first six months, families with six months of support or more only

Model Summary					
	n	R	R Square	Adjusted R Square	Std. Error of the Estimate
	884	.186ª	.035	.016	.58164

Coefficients										
	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations			Collinearity Statistics	
	B	Std. Error	Beta			Zero-order	Partial	Part	Tolerance	VIF
(Constant)	-4.533	.036		-124.513	.000					
Asylum Seeker/Refugee	-.009	.153	-.002	-.057	.954	-.001	-.002	-.002	.924	1.082
Child Protection Plan	.074	.113	.022	.652	.514	.019	.022	.022	.947	1.056
Disabled Child	.029	.070	.014	.419	.675	.007	.014	.014	.957	1.045
Disabled Parent	-.174	.071	-.082	-2.436	.015	-.078	-.083	-.081	.977	1.023
Domestic Abuse	.015	.059	.009	.250	.803	.009	.008	.008	.911	1.097
Housing Issues	.069	.096	.025	.712	.476	.037	.024	.024	.913	1.095
Large Family Size	-.158	.043	-.126	-3.716	.000	-.113	-.125	-.124	.965	1.036
Mental Health Issues	-.048	.040	-.041	-1.194	.233	-.052	-.041	-.040	.966	1.035
Post Natal Depression	-.028	.047	-.020	-.597	.551	-.011	-.020	-.020	.966	1.035
Prison	.171	.223	.026	.767	.444	.015	.026	.026	.982	1.018
Substance Misuse	-.160	.122	-.045	-1.312	.190	-.037	-.045	-.044	.938	1.066
Bereavement LE Six months	-.209	.111	-.064	-1.888	.059	-.065	-.064	-.063	.981	1.019
Birth LE Six months	.088	.089	.034	.993	.321	.020	.034	.033	.979	1.022
Housing Six months	.026	.080	.011	.325	.745	.003	.011	.011	.936	1.069
Relationship Breakdown Six months	-.010	.098	-.003	-.101	.920	-.011	-.003	-.003	.936	1.068
Physical Health Six Months	-.070	.081	-.030	-.873	.383	-.034	-.030	-.029	.962	1.039
Mental Health Six Months	-.306	.240	-.043	-1.272	.204	-.048	-.043	-.042	.983	1.017

Table F20. Regression Statistics, Model Summary and Coefficients, ROC Isolation, with Risk Factors and Life Events that occur in first six months, families with six months of support or more only

Model Summary				
n	**R**	**R Square**	**Adjusted R Square**	**Std. Error of the Estimate**
973	.195ᵃ	.038	.021	.58202

Coefficients										
	Unstandardized Coefficients		**Standardized Coefficients**	**t**	**Sig.**	**Correlations**			**Collinearity Statistics**	
	B	**Std. Error**	**Beta**			**Zero-order**	**Partial**	**Part**	**Tolerance**	**VIF**
(Constant)	-4.516	.033		-137.998	.000					
Asylum Seeker/Refugee	-.159	.123	-.043	-1.289	.198	-.020	-.042	-.041	.917	1.091
Child Protection Plan	.238	.110	.071	2.164	.031	.073	.070	.069	.933	1.072
Disabled Child	.069	.062	.036	1.109	.268	.031	.036	.035	.977	1.023
Disabled Parent	-.152	.063	-.077	-2.416	.016	-.071	-.078	-.077	.981	1.020
Domestic Abuse	.109	.058	.062	1.879	.061	.069	.061	.060	.918	1.089
Housing Issues	.187	.084	.074	2.221	.027	.074	.072	.070	.906	1.103
Large Family Size	-.108	.040	-.086	-2.661	.008	-.079	-.086	-.084	.970	1.031
Mental Health Issues	-.055	.039	-.046	-1.427	.154	-.049	-.046	-.045	.950	1.053
Post Natal Depression	.002	.049	.001	.042	.966	-.005	.001	.001	.959	1.043
Prison	.047	.265	.006	.178	.859	.007	.006	.006	.967	1.034
Substance Misuse	-.127	.124	-.033	-1.023	.306	-.024	-.033	-.032	.944	1.059
Bereavement LE Six months	-.215	.118	-.058	-1.812	.070	-.063	-.059	-.058	.991	1.009
Birth LE Six months	.078	.094	.027	.832	.405	.019	.027	.026	.976	1.025
Housing LE Six months	-.095	.079	-.039	-1.206	.228	-.031	-.039	-.038	.952	1.051
Relationship Breakdown LE Six months	-.006	.094	-.002	-.065	.948	.002	-.002	-.002	.961	1.040
Physical Health LE Six Months	-.024	.080	-.010	-.301	.764	-.015	-.010	-.010	.966	1.035
Mental Health LE Six Months	-.141	.295	-.015	-.479	.632	-.017	-.016	-.015	.980	1.020

Table F21. Regression Statistics, Model Summary and Coefficients, ROC Self-Esteem, with Risk Factors and Life Events that occur in first six months, families with six months of support or more only

Model Summary				
n	**R**	**R Square**	**Adjusted R Square**	**Std. Error of the Estimate**
	.170ᵃ	.029	.011	.61103

Coefficients										
	Unstandardized Coefficients		**Standardized Coefficients**	**t**	**Sig.**	**Correlations**			**Collinearity Statistics**	
	B	**Std. Error**	**Beta**			**Zero-order**	**Partial**	**Part**	**Tolerance**	**VIF**
(Constant)	-4.649	.036		-128.085	.000					
Asylum Seeker/Refugee	-.169	.181	-.031	-.934	.350	-.022	-.031	-.030	.960	1.041
Child Protection Plan	.270	.106	.086	2.560	.011	.086	.084	.083	.941	1.062
Disabled Child	.058	.073	.026	.794	.428	.019	.026	.026	.966	1.035
Disabled Parent	-.108	.074	-.048	-1.458	.145	-.041	-.048	-.047	.981	1.020
Domestic Abuse	.093	.058	.055	1.617	.106	.066	.053	.053	.927	1.079
Housing Issues	.167	.085	.066	1.972	.049	.073	.065	.064	.940	1.064
Large Family Size	-.077	.044	-.058	-1.759	.079	-.057	-.058	-.057	.961	1.041
Mental Health Issues	-.054	.041	-.044	-1.331	.184	-.045	-.044	-.043	.968	1.033
Post Natal Depression	.013	.048	.009	.266	.790	.002	.009	.009	.971	1.029
Prison	-.074	.188	-.013	-.393	.694	-.010	-.013	-.013	.969	1.032
Substance Misuse	-.131	.107	-.042	-1.230	.219	-.020	-.041	-.040	.919	1.088
Bereavement LE Six months	-.152	.117	-.043	-1.302	.193	-.049	-.043	-.042	.973	1.028
Birth LE Six months	.036	.091	.013	.398	.691	.007	.013	.013	.966	1.035
Housing LE Six months	.052	.085	.020	.610	.542	.038	.020	.020	.933	1.071
Relationship Breakdown LE Six months	-.037	.093	-.013	-.401	.689	-.007	-.013	-.013	.957	1.044
Physical Health LE Six Months	.074	.088	.028	.846	.398	.023	.028	.027	.966	1.036
Mental Health LE Six Months	-.090	.254	-.012	-.354	.724	-.009	-.012	-.011	.968	1.033

APPENDIX G

Supplementary Tables for Chapter 8

List of Tables

Table G1. Comparisons of Regression Models for Nature of Support variables only, Risk factors only and both Risk factors and Nature of Support Variables, Log ROC Mental Health

Log ROC Mental Health	Nature of Support only		Risk factors only		Risk factors and Nature of Support	
R^2	0.100		0.021		0.117	
n	1,212		1,214		1,212	
Sig of ANOVA	.000		.006		.000	
	B	**β**	**B**	**β**	**B**	**β**
(Constant)	-4.037		-4.283		-3.970	
Asylum Seeker/Refugee			.129	.025	.128	.025
Child Protection Plan			-.122	-.026	-.148	-.032
Disabled Child			.104	.041	.060	.024
Disabled Parent			-.098	-.037	-.055	-.021
Domestic Violence			.044	.021	.055	.026
Housing Issues			.125	.037	.141	.042
Large Family Size			-.124	-.078	-.118	-.074
Mental Health Issues			-.117	-.079	-.097	-.066
Post Natal Depression			-.014	-.008	.004	.002
Prison			.401	.054	.314	.042
Substance Misuse			-.054	-.012	-.074	-.017
Paid worker Dummy	.239	.097			.224	.091
Mixed support Dummy	-.350	-.133			-.353	-.135
Average Length	-.147	-.120			-.140	-.114
Frequency	.500	.177			.485	.172
Proportion Practical	-.150	-.069			-.151	-.070
Proportion Children	-.098	-.046			-.109	-.052
Proportion Emotional	-.169	-.059			-.158	-.055
Proportion Services	-.180	-.052			-.221	-.064

Table G2. Regression Statistics, Model Summary and Coefficients, Log ROC Mental Health with Risk Factors and Nature of Support Variables

Model Summary				
n	R	R Square	Adjusted R Square	Std. Error of the Estimate
1,212	.342a	.117	.103	.69721

Coefficients										
	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations			Collinearity Statistics	
	B	Std. Error	Beta			Zero-order	Partial	Part	Tolerance	VIF
(Constant)	-3.970	.104		-38.182	.000					
Asylum Seeker/Refugee	.128	.148	.025	.862	.389	.035	.025	.023	.904	1.107
Child Protection Plan	-.148	.128	-.032	-1.159	.247	-.025	-.034	-.032	.951	1.051
Disabled Child	.060	.070	.024	.860	.390	.037	.025	.023	.962	1.039
Disabled Parent	-.055	.073	-.021	-.758	.449	-.038	-.022	-.021	.964	1.037
Domestic Violence	.055	.060	.026	.910	.363	.007	.026	.025	.927	1.079
Housing Issues	.141	.096	.042	1.468	.142	.045	.042	.040	.893	1.120
Large Family Size	-.118	.044	-.074	-2.703	.007	-.077	-.078	-.074	.978	1.023
Mental Health Issues	-.097	.041	-.066	-2.381	.017	-.079	-.069	-.065	.960	1.042
Post Natal Depression	.004	.048	.002	.079	.937	-.006	.002	.002	.966	1.035
Prison	.314	.204	.042	1.535	.125	.047	.044	.042	.979	1.021
Substance Misuse	-.074	.123	-.017	-.602	.547	-.017	-.017	-.016	.967	1.034
Paid worker Dummy	.224	.076	.091	2.955	.003	.154	.085	.080	.780	1.282
Mixed support Dummy	-.353	.073	-.135	-4.847	.000	-.141	-.139	-.132	.961	1.040
Average Length	-.140	.040	-.114	-3.504	.000	-.168	-.101	-.095	.701	1.427
Frequency	.485	.079	.172	6.152	.000	.147	.175	.167	.950	1.052
Proportion Practical	-.151	.063	-.070	-2.414	.016	-.100	-.070	-.066	.882	1.134
Proportion Children	-.109	.065	-.052	-1.687	.092	-.093	-.049	-.046	.793	1.261
Proportion Emotional	-.158	.081	-.055	-1.938	.053	-.094	-.056	-.053	.933	1.072
Proportion Services	-.221	.099	-.064	-2.231	.026	-.058	-.064	-.061	.896	1.117

Table G3. Comparisons of Regression Models for Nature of Support variables only, Risk factors only and both Risk factors and Nature of Support Variables, Log ROC Isolation

Log ROC Isolation	Nature of Support only		Risk factors only		Risk factors and Nature of Support	
R^2	0.116		0.033		0.141	
n	1,340		1,343		1,340	
Sig of ANOVA	.000		.000		.000	
	B	**β**	**B**	**β**	**B**	**β**
(Constant)	-3.937		-4.236		-3.894	
Asylum Seeker/Refugee			-.010	-.002	.025	.006
Child Protection Plan			-.006	-.001	-.094	-.021
Disabled Child			.027	.011	.051	.020
Disabled Parent			-.204	-.078	-.151	-.057
Domestic Violence			.177	.082	.198	.091
Housing Issues			.064	.020	.048	.015
Large Family Size			-.124	-.077	-.117	-.073
Mental Health Issues			-.134	-.088	-.115	-.075
Post Natal Depression			.079	.042	.056	.030
Prison			.635	.073	.463	.053
Substance Misuse			-.068	-.014	-.057	-.012
Paid worker Dummy	.133	.046			.134	.047
Mixed support Dummy	-.369	-.130			-.363	-.128
Average Length	-.233	-.184			-.228	-.180
Frequency	.643	.223			.628	.217
Proportion Practical	-.128	-.059			-.128	-.058
Proportion Children	-.028	-.012			-.021	-.009
Proportion Emotional	-.165	-.063			-.152	-.058
Proportion Services	-.026	-.008			-.090	-.027

Table G4. Regression Statistics, Model Summary and Coefficients, Log ROC Isolation with Risk Factors and Nature of Support Variables

	Model Summary									
n		R		R Square		Adjusted R Square		Std. Error of the Estimate		
1340		.376[a]		.141		.129		.69776		
	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations			Collinearity Statistics	
	B	Std. Error	Beta			Zero-order	Partial	Part	Tolerance	VIF
(Constant)	-3.894	.096		-40.601	.000					
Asylum Seeker/Refugee	.025	.117	.006	.211	.833	.004	.006	.005	.936	1.069
Child Protection Plan	-.094	.116	-.021	-.813	.417	.010	-.022	-.021	.932	1.073
Disabled Child	.051	.066	.020	.784	.433	.005	.022	.020	.972	1.028
Disabled Parent	-.151	.068	-.057	-2.227	.026	-.082	-.061	-.057	.979	1.021
Domestic Violence	.198	.058	.091	3.399	.001	.066	.093	.087	.901	1.110
Housing Issues	.048	.083	.015	.574	.566	.032	.016	.015	.924	1.082
Large Family Size	-.117	.042	-.073	-2.810	.005	-.079	-.077	-.072	.975	1.026
Mental Health Issues	-.115	.040	-.075	-2.835	.005	-.083	-.078	-.072	.926	1.080
Post Natal Depression	.056	.048	.030	1.162	.245	.036	.032	.030	.959	1.043
Prison	.463	.224	.053	2.065	.039	.067	.057	.053	.976	1.025
Substance Misuse	-.057	.126	-.012	-.454	.650	-.008	-.012	-.012	.946	1.057
Paid worker Dummy	.134	.079	.047	1.708	.088	.109	.047	.044	.875	1.143
Mixed support Dummy	-.363	.073	-.128	-4.950	.000	-.140	-.135	-.126	.970	1.031
Average Length	-.228	.037	-.180	-6.224	.000	-.193	-.169	-.159	.779	1.284
Frequency	.628	.076	.217	8.275	.000	.199	.222	.211	.944	1.060
Proportion Practical	-.128	.060	-.058	-2.121	.034	-.100	-.058	-.054	.860	1.163
Proportion Children	-.021	.061	-.009	-.342	.733	-.042	-.009	-.009	.856	1.168
Proportion Emotional	-.152	.070	-.058	-2.180	.029	-.104	-.060	-.056	.922	1.085
Proportion Services	-.090	.090	-.027	-.997	.319	-.012	-.027	-.025	.908	1.101

Table G5. Regression Statistics, Model Summary and Coefficients, Log ROC Self-Esteem with Risk Factors and Nature of Support Variables

Model Summary										
n			R		R Square		Adjusted R Square		Std. Error of the Estimate	
1303			.359[a]		.129		.116		.72813	
	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations			Collinearity Statistics	
	B	Std. Error	Beta			Zero-order	Partial	Part	Tolerance	VIF
(Constant)	-3.958	.105		-37.649	.000					
Asylum Seeker/Refugee	.107	.157	.018	.679	.497	.034	.019	.018	.952	1.050
Child Protection Plan	-.022	.113	-.005	-.196	.844	.007	-.005	-.005	.943	1.061
Disabled Child	.048	.073	.017	.653	.514	.002	.018	.017	.972	1.029
Disabled Parent	-.066	.077	-.023	-.861	.390	-.022	-.024	-.022	.970	1.031
Domestic Violence	.139	.058	.065	2.416	.016	.075	.067	.063	.925	1.081
Housing Issues	.105	.085	.033	1.238	.216	.042	.035	.032	.934	1.070
Large Family Size	-.126	.044	-.075	-2.838	.005	-.080	-.079	-.074	.975	1.026
Mental Health Issues	-.086	.041	-.055	-2.066	.039	-.060	-.058	-.054	.959	1.043
Post Natal Depression	.021	.049	.011	.425	.671	.012	.012	.011	.970	1.031
Prison	-.144	.198	-.019	-.728	.467	-.009	-.020	-.019	.973	1.028
Substance Misuse	-.118	.112	-.029	-1.051	.293	-.017	-.029	-.027	.917	1.090
Paid worker Dummy	.229	.076	.085	2.999	.003	.159	.083	.078	.838	1.194
Mixed support Dummy	-.230	.075	-.081	-3.056	.002	-.083	-.085	-.080	.977	1.023
Average Length	-.201	.040	-.152	-5.063	.000	-.195	-.140	-.132	.758	1.320
Frequency	.675	.082	.221	8.265	.000	.183	.225	.215	.948	1.055
Proportion Practical	-.099	.064	-.043	-1.558	.120	-.061	-.043	-.041	.893	1.120
Proportion Children	-.188	.064	-.084	-2.950	.003	-.132	-.082	-.077	.829	1.207
Proportion Emotional	-.194	.077	-.068	-2.506	.012	-.106	-.070	-.065	.934	1.070
Proportion Services	-.094	.096	-.027	-.981	.327	-.010	-.027	-.026	.913	1.095

Table G6. Univariate Statistics, Subsamples of Families in specific circumstances entered into Linear Regression Models with Log Roc of Emotional Wellbeing Coping Measures

	All Families	Domestic Abuse	Disabled Parent	Disable d Child	Mental Health	Large Family Size	High Risk
Log Roc Mental Health							
Numbers of families in each category of means of services delivery variable							
Volunteer	987	128	83	91	483	309	80
Paid Worker	121	23	9	18	49	41	13
Mixed	104	19	13	6	55	32	11
Continuous Variables, X(s)							
Average Length	2.04 (0.60)	2.07 (0.73)	2.17 (0.74)	1.97 (0.55)	2.02(0.57)	2.06 (0.57)	2.08 (0.77)
Frequency	0.52 (0.26)	0.51 (0.29)	0.52 (0.26)	0.51 (0.26)	0.50 (0.26)	0.51 (0.24)	0.51 (0.32)
Log Roc Isolation							
Numbers of families in each category of means of services delivery variable							
Volunteer	1142	145	104	114	455	349	82
Paid Worker	97	19	5	5	38	37	9
Mixed	101	21	10	10	45	37	8
Continuous Variables, X(s)							
Average Length	2.06 (0.59)	2.03 (0.65)	2.19 (0.66)	2.09 (0.57)	2.01 (0.55)	2.08 (0.60)	2.09 (0.78)
Frequency	0.52 (0.26)	0.50 (0.26)	0.50 (0.26)	0.49 (0.25)	0.50 (0.26)	0.52 (0.24)	0.51 (0.32)
Log Roc Self-Esteem							
Numbers of families in each category of means of services delivery variable							
Volunteer	1079	156	81	96	483	331	88
Paid Worker	120	28	9	8	49	35	15
Mixed	104	21	11	9	48	34	9
Continuous Variables, X(s)							
Average Length	2.05 (0.58)	1.99 (0.68)	2.19 (0.73)	2.05 (0.56)	2.00 (0.55)	2.08 (0.56)	2.05 (0.75)
Frequency	0.51 (0.25)	0.51 (0.27)	0.54 (0.28)	0.47 (0.26)	0.50 (0.25)	0.52 (0.25)	0.50 (0.31)

Table G7. Regression Statistics, Model Summary and Coefficients, Log ROC Mental Health with Nature of Support Variables, All Families Model

Model Summary:	n		R		R Square		Adjusted R Square		Std. Error of the Estimate	
	1212		.293a		.086		.083		.70473	
Coefficients										
	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations			Collinearity Statistics	
	B	Std. Error	Beta			Zero-order	Partial	Part	Tolerance	VIF
(Constant)	-4.186	.084		-49.906	.000					
Paid worker Dummy	.197	.072	.080	2.722	.007	.154	.078	.075	.871	1.149
Mixed support Dummy	-.365	.073	-.139	-5.008	.000	-.141	-.143	-.138	.986	1.014
Average Length	-.208	.036	-.170	-5.718	.000	-.168	-.162	-.157	.859	1.164
Frequency	.493	.079	.175	6.258	.000	.147	.177	.172	.971	1.030

Table G8. Regression Statistics, Model Summary and Coefficients, Log ROC Mental Health with Nature of Support Variables, Families with Domestic Abuse Only

Model Summary	n		R		R Square		Adjusted R Square		Std. Error of the Estimate	
	170		.367a		.135		.114		.68146	
Coefficients										
	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations			Collinearity Statistics	
	B	Std. Error	Beta			Zero-order	Partial	Part	Tolerance	VIF
(Constant)	-4.140	.200		-20.655	.000					
Paid worker Dummy	.422	.174	.200	2.424	.016	.298	.185	.176	.771	1.297
Mixed support Dummy	-.340	.172	-.149	-1.982	.049	-.146	-.153	-.144	.933	1.072
Average Length	-.187	.083	-.189	-2.263	.025	-.243	-.173	-.164	.755	1.324
Frequency	.300	.186	.120	1.610	.109	.062	.124	.117	.951	1.052

Table G9. Regression Statistics, Model Summary and Coefficients, Log ROC Mental Health with Nature of Support Variables, Families with a Disabled Parent Only

Model Summary	n	R	R Square	Adjusted R Square	Std. Error of the Estimate
	105	.326[a]	.106	.070	.75562

Coefficients										
	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations			Collinearity Statistics	
	B	Std. Error	Beta			Zero-order	Partial	Part	Tolerance	VIF
(Constant)	-4.655	.275		-16.949	.000					
Paid worker Dummy	.417	.277	.150	1.504	.136	.211	.149	.142	.904	1.106
Mixed support Dummy	-.296	.226	-.125	-1.305	.195	-.127	-.129	-.123	.977	1.023
Average Length	-.073	.103	-.069	-.708	.480	-.088	-.071	-.067	.931	1.074
Frequency	.688	.294	.225	2.340	.021	.234	.228	.221	.966	1.035

Table G10. Regression Statistics, Model Summary and Coefficients, Log ROC Mental Health with Nature of Support Variables, Families with a Disabled Child Only

Model Summary	n	R	R Square	Adjusted R Square	Std. Error of the Estimate
	115	.218b	.048	.013	.70001

Coefficients										
	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations			Collinearity Statistics	
	B	Std. Error	Beta			Zero-order	Partial	Part	Tolerance	VIF
(Constant)	-3.908	.295		-13.247	.000					
Paid worker Dummy	.086	.197	.045	.436	.664	.125	.041	.041	.829	1.207
Mixed support Dummy	-.221	.296	-.070	-.746	.458	-.070	-.071	-.069	.984	1.016
Average Length	-.232	.131	-.180	-1.769	.080	-.190	-.166	-.165	.836	1.196
Frequency	.157	.250	.059	.628	.531	.050	.060	.058	.981	1.019

Table G11. Regression Statistics, Model Summary and Coefficients, Log ROC Mental Health with Nature of Support Variables, Families with Mental Health problems only

Model Summary	n	R	R Square	Adjusted R Square	Std. Error of the Estimate
	587	.322a	.104	.097	.70417

Coefficients										
	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations			Collinearity Statistics	
	B	Std. Error	Beta			Zero-order	Partial	Part	Tolerance	VIF
(Constant)	-4.278	.119		-35.989	.000					
Paid worker Dummy	.182	.110	.068	1.650	.100	.143	.068	.065	.908	1.101
Mixed support Dummy	-.343	.100	-.135	-3.414	.001	-.137	-.140	-.134	.986	1.014
Average Length	-.234	.054	-.181	-4.328	.000	-.147	-.177	-.170	.884	1.131
Frequency	.677	.115	.236	5.861	.000	.207	.236	.230	.947	1.055

Table G12. Regression Statistics, Model Summary and Coefficients, Log ROC Mental Health with Nature of Support Variables, Large Families Only

Model Summary	n	R	R Square	Adjusted R Square	Std. Error of the Estimate
	382	.210a	.044	.034	.74534

Coefficients										
	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations			Collinearity Statistics	
	B	Std. Error	Beta			Zero-order	Partial	Part	Tolerance	VIF
(Constant)	-4.094	.168		-24.382	.000					
Paid worker Dummy	-.024	.131	-.010	-.182	.856	.055	-.009	-.009	.885	1.130
Mixed support Dummy	-.393	.139	-.144	-2.831	.005	-.139	-.144	-.143	.984	1.016
Average Length	-.208	.072	-.156	-2.884	.004	-.137	-.147	-.145	.872	1.146
Frequency	.215	.161	.068	1.334	.183	.047	.069	.067	.972	1.029

Table G13. Regression Statistics, Model Summary and Coefficients, Log ROC Mental Health with Nature of Support Variables, Multiple Risk Families only

Model Summary	n	R	R Square	Adjusted R Square	Std. Error of the Estimate
	104	.324	.105	.068	.69015

Coefficients										
	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations			Collinearity Statistics	
	B	Std. Error	Beta			Zero-order	Partial	Part	Tolerance	VIF
(Constant)	-4.416	.219		-20.151	.000					
Paid worker Dummy	.380	.215	.177	1.764	.081	.240	.175	.168	.903	1.108
Mixed support Dummy	-.162	.224	-.070	-.724	.470	-.074	-.073	-.069	.966	1.035
Average Length	-.116	.094	-.124	-1.237	.219	-.112	-.123	-.118	.893	1.120
Frequency	.476	.225	.211	2.119	.037	.205	.208	.202	.913	1.095

Table G14. Regression Statistics, Model Summary and Coefficients, Log ROC Isolation with Nature of Support Variables, All Families Model

Model Summary	n	R	R Square	Adjusted R Square	Std. Error of the Estimate
	1340	.329a	.108	.105	.70718

Coefficients										
	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations			Collinearity Statistics	
	B	Std. Error	Beta			Zero-order	Partial	Part	Tolerance	VIF
(Constant)	-4.058	.079		-51.177	.000					
Paid worker Dummy	.102	.077	.035	1.314	.189	.109	.036	.034	.931	1.074
Mixed support Dummy	-.390	.073	-.138	-5.317	.000	-.140	-.144	-.137	.993	1.007
Average Length	-.268	.034	-.212	-7.885	.000	-.193	-.211	-.204	.928	1.077
Frequency	.640	.076	.222	8.471	.000	.199	.226	.219	.977	1.023

Table G15. Regression Statistics, Model Summary and Coefficients, Log ROC Isolation with Nature of Support Variables, Families with Domestic Abuse

Model Summary	n	R	R Square	Adjusted R Square	Std. Error of the Estimate
	205	.340a	.116	.096	.71912

Coefficients										
	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations			Collinearity Statistics	
	B	Std. Error	Beta			Zero-order	Partial	Part	Tolerance	VIF
(Constant)	-3.958	.202		-19.631	.000					
Paid worker Dummy	.463	.183	.186	2.528	.012	.256	.185	.177	.905	1.105
Mixed support Dummy	-.315	.170	-.133	-1.854	.065	-.133	-.137	-.130	.961	1.040
Average Length	-.207	.086	-.179	-2.417	.017	-.191	-.177	-.169	.893	1.120
Frequency	.379	.204	.133	1.862	.064	.120	.137	.131	.965	1.036

Table G16. Regression Statistics, Model Summary and Coefficients, Log ROC Isolation with Nature of Support Variables, Families with a Disabled Parent Only

Model Summary	n	R	R Square	Adjusted R Square	Std. Error of the Estimate
	119	.411a	.169	.140	.69668

Coefficients										
	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations			Collinearity Statistics	
	B	Std. Error	Beta			Zero-order	Partial	Part	Tolerance	VIF
(Constant)	-4.616	.251		-18.358	.000					
Paid worker Dummy	.561	.333	.150	1.682	.095	.250	.156	.144	.912	1.097
Mixed support Dummy	-.346	.231	-.128	-1.497	.137	-.143	-.139	-.128	.994	1.006
Average Length	-.137	.098	-.121	-1.405	.163	-.134	-.130	-.120	.983	1.017
Frequency	.858	.260	.294	3.307	.001	.330	.296	.282	.925	1.082

Table G17. Regression Statistics, Model Summary and Coefficients, Log ROC Isolation with Nature of Support Variables, Families with a Disabled Child Only

Model Summary	n	R	R Square	Adjusted R Square	Std. Error of the Estimate
	129	.320[b]	.102	.073	.69948

Coefficients										
	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations			Collinearity Statistics	
	B	Std. Error	Beta			Zero-order	Partial	Part	Tolerance	VIF
(Constant)	-3.861	.263		-14.662	.000					
Paid worker Dummy	-.280	.333	-.075	-.841	.402	.015	-.075	-.072	.918	1.089
Mixed support Dummy	-.404	.231	-.149	-1.746	.083	-.162	-.155	-.149	.992	1.008
Average Length	-.299	.110	-.236	-2.711	.008	-.219	-.237	-.231	.955	1.047
Frequency	.493	.252	.170	1.956	.053	.161	.173	.166	.953	1.049

Table G18. Regression Statistics, Model Summary and Coefficients, Log ROC Isolation with Nature of Support Variables, Families with Mental Health problems only

Model Summary	n	R	R Square	Adjusted R Square	Std. Error of the Estimate
	538	.287a	.082	.075	.71819

Coefficients										
	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations			Collinearity Statistics	
	B	Std. Error	Beta			Zero-order	Partial	Part	Tolerance	VIF
(Constant)	-4.179	.129		-32.313	.000					
Paid worker Dummy	.141	.124	.048	1.137	.256	.103	.049	.047	.955	1.047
Mixed support Dummy	-.402	.113	-.149	-3.565	.000	-.143	-.153	-.148	.985	1.016
Average Length	-.223	.057	-.165	-3.875	.000	-.139	-.166	-.161	.952	1.051
Frequency	.549	.123	.188	4.471	.000	.176	.190	.186	.974	1.027

Table G19. Regression Statistics, Model Summary and Coefficients, Log ROC Isolation with Nature of Support Variables, Large Families Only

Model Summary	n	R	R Square	Adjusted R Square	Std. Error of the Estimate
	423	.344[a]	.118	.110	.67827

Coefficients										
	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations			Collinearity Statistics	
	B	Std. Error	Beta			Zero-order	Partial	Part	Tolerance	VIF
(Constant)	-3.854	.137		-28.078	.000					
Paid worker Dummy	-.144	.122	-.057	-1.184	.237	.031	-.058	-.054	.918	1.090
Mixed support Dummy	-.398	.117	-.156	-3.387	.001	-.143	-.163	-.156	.988	1.012
Average Length	-.356	.057	-.299	-6.207	.000	-.256	-.291	-.285	.906	1.103
Frequency	.493	.137	.168	3.614	.000	.123	.174	.166	.977	1.024

Table G20. Regression Statistics, Model Summary and Coefficients, Log ROC Isolation with Nature of Support Variables, Multiple Risk Families only

Model Summary	n	R	R Square	Adjusted R Square	Std. Error of the Estimate
	99	.303	.092	.053	.73271

Coefficients										
	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations			Collinearity Statistics	
	B	Std. Error	Beta			Zero-order	Partial	Part	Tolerance	VIF
(Constant)	-4.180	.234		-17.827	.000					
Paid worker Dummy	.465	.266	.178	1.750	.083	.228	.178	.172	.930	1.075
Mixed support Dummy	-.063	.277	-.023	-.228	.820	-.009	-.024	-.022	.955	1.047
Average Length	-.171	.099	-.177	-1.731	.087	-.183	-.176	-.170	.924	1.083
Frequency	.335	.243	.141	1.376	.172	.130	.141	.135	.919	1.088

Table G21. Regression Statistics, Model Summary and Coefficients, Log ROC Self-Esteem with Nature of Support Variables, All Families Model

Model Summary	n	R	R Square	Adjusted R Square	Std. Error of the Estimate
	1303	.314[a]	.099	.096	.73648

Coefficients										
	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations			Collinearity Statistics	
	B	Std. Error	Beta			Zero-order	Partial	Part	Tolerance	VIF
(Constant)	-4.186	.086		-48.568	.000					
Paid worker Dummy	.239	.075	.089	3.208	.001	.159	.089	.085	.897	1.115
Mixed support Dummy	-.240	.076	-.084	-3.164	.002	-.083	-.087	-.083	.988	1.012
Average Length	-.263	.037	-.198	-7.083	.000	-.195	-.193	-.187	.888	1.126
Frequency	.644	.081	.211	7.925	.000	.183	.215	.209	.978	1.022

Table G22. Regression Statistics, Model Summary and Coefficients, Log ROC Self-Esteem with Nature of Support Variables, Families with Domestic Abuse Only

	n	R	R Square	Adjusted R Square	Std. Error of the Estimate
	205	.369[a]	.136	.119	.77454

Coefficients										
	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations			Collinearity Statistics	
	B	Std. Error	Beta			Zero-order	Partial	Part	Tolerance	VIF
(Constant)	-3.992	.206		-19.405	.000					
Paid worker Dummy	.449	.172	.187	2.607	.010	.280	.181	.171	.836	1.196
Mixed support Dummy	-.363	.184	-.134	-1.973	.050	-.121	-.138	-.130	.939	1.065
Average Length	-.265	.089	-.217	-2.971	.003	-.243	-.206	-.195	.811	1.234
Frequency	.467	.204	.155	2.289	.023	.097	.160	.150	.946	1.057

Table G23. Regression Statistics, Model Summary and Coefficients, Log ROC Self-Esteem with Nature of Support Variables, Families with a Disabled Parent Only

Model Summary	n	R	R Square	Adjusted R Square	Std. Error of the Estimate
	101	.313[a]	.098	.060	.77585

Coefficients	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations			Collinearity Statistics	
	B	Std. Error	Beta			Zero-order	Partial	Part	Tolerance	VIF
(Constant)	-4.898	.308		-15.900	.000					
Paid worker Dummy	.256	.284	.091	.901	.370	.096	.092	.087	.911	1.097
Mixed support Dummy	-.087	.252	-.034	-.344	.732	-.005	-.035	-.033	.968	1.033
Average Length	-.013	.112	-.012	-.119	.905	-.048	-.012	-.012	.916	1.092
Frequency	.856	.279	.300	3.064	.003	.295	.299	.297	.981	1.020

Table G24. Regression Statistics, Model Summary and Coefficients, Log ROC Self-Esteem with Nature of Support Variables, Families with a Disabled Child Only

Model Summary	n	R	R Square	Adjusted R Square	Std. Error of the Estimate
	113	.322[b]	.104	.070	.68356

Coefficients	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations			Collinearity Statistics	
	B	Std. Error	Beta			Zero-order	Partial	Part	Tolerance	VIF
(Constant)	-4.053	.281		-14.426	.000					
Paid worker Dummy	.063	.267	.023	.236	.814	.123	.023	.022	.884	1.131
Mixed support Dummy	.032	.242	.012	.133	.894	.023	.013	.012	.960	1.041
Average Length	-.306	.123	-.240	-2.493	.014	-.229	-.233	-.227	.897	1.115
Frequency	.608	.257	.222	2.365	.020	.205	.222	.215	.943	1.061

Table G25. Regression Statistics, Model Summary and Coefficients, Log ROC Self-Esteem with Nature of Support Variables, Families with Mental Health problems only

Model Summary	n	R	R Square	Adjusted R Square	Std. Error of the Estimate
	580	.292[a]	.085	.079	.73764

Coefficients										
	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations			Collinearity Statistics	
	B	Std. Error	Beta			Zero-order	Partial	Part	Tolerance	VIF
(Constant)	-4.377	.129		-33.798	.000					
Paid worker Dummy	.320	.115	.116	2.782	.006	.167	.115	.111	.917	1.091
Mixed support Dummy	-.230	.112	-.082	-2.053	.041	-.083	-.085	-.082	.987	1.013
Average Length	-.195	.059	-.139	-3.315	.001	-.133	-.137	-.132	.901	1.109
Frequency	.639	.122	.212	5.223	.000	.192	.213	.208	.968	1.033

Table G26. Regression Statistics, Model Summary and Coefficients, Log ROC Self-Esteem with Nature of Support Variables, Large Families Only

	n	R	R Square	Adjusted R Square	Std. Error of the Estimate
	400	.256[a]	.066	.056	.74013

Coefficients										
	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations			Collinearity Statistics	
	B	Std. Error	Beta			Zero-order	Partial	Part	Tolerance	VIF
(Constant)	-4.109	.168		-24.438	.000					
Paid worker Dummy	.050	.140	.018	.353	.724	.088	.018	.017	.871	1.148
Mixed support Dummy	-.246	.134	-.090	-1.834	.067	-.081	-.092	-.089	.979	1.022
Average Length	-.286	.071	-.211	-4.023	.000	-.188	-.198	-.196	.859	1.164
Frequency	.453	.152	.147	2.985	.003	.116	.149	.145	.976	1.025

Table G27. Regression Statistics, Model Summary and Coefficients, Log ROC Self-Esteem with Nature of Support Variables, Multiple Risk Families only

Model Summary	n	R	R Square	Adjusted R Square	Std. Error of the Estimate
	112	.325	.106	.072	.70962

Coefficients										
	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations			Collinearity Statistics	
	B	Std. Error	Beta			Zero-order	Partial	Part	Tolerance	VIF
(Constant)	-4.524	.214		-21.093	.000					
Paid worker Dummy	.592	.205	.275	2.883	.005	.295	.268	.264	.919	1.089
Mixed support Dummy	.057	.252	.021	.228	.820	.009	.022	.021	.957	1.044
Average Length	-.044	.095	-.044	-.459	.647	-.067	-.044	-.042	.890	1.123
Frequency	.322	.227	.137	1.421	.158	.157	.136	.130	.898	1.114