



Institute of Education

CENTRE FOR
LONGITUDINAL
STUDIES



Research
Centre



Working with children
for children

Poverty and children's personal and social relationships

Secondary analysis of Millennium Cohort Study data, supported by the Joseph Rowntree Foundation

Jen Gibb, Katie Rix and Emma Wallace (National Children's Bureau)
Emla Fitzsimons and Tarek Mostafa (Centre for Longitudinal Studies)

National Children's Bureau: working with children, for children

Registered Charity Number 258825.
8 Wakley Street, London EC1V 7QE. Tel: 020 7843 6000

Connect with us: Facebook: www.facebook.com/ncbfb Twitter: @ncbtweets

© NCB, March 2016

Contents

| | |
|---|----|
| Acknowledgements | 3 |
| Executive summary..... | 4 |
| 1. Introduction..... | 9 |
| 1.1 Background, aims and context | 9 |
| 1.2 Methodology..... | 11 |
| 1.3 Report structure..... | 14 |
| 2. Findings part 1: Peer relationships..... | 15 |
| 2.1 Having friends and being popular | 15 |
| 2.2 Time spent with friends and playing alone | 17 |
| 2.3 Happiness with friendships | 20 |
| 2.4 Confiding in friends | 22 |
| 2.5 Falling out with friends..... | 22 |
| 2.6 Victimization by peers..... | 24 |
| 2.7 Bullying of peers | 26 |
| 2.8 Summary | 27 |
| 3. Findings part 2: Family relationships..... | 29 |
| 3.1 Children's happiness with their families | 29 |
| 3.2 Parent-child closeness..... | 30 |
| 3.3 Parent-child communication..... | 31 |
| 3.4 Parent-child conflict..... | 33 |
| 3.5 Sibling victimisation and bullying..... | 35 |
| 3.6 Summary | 37 |
| 4. Conclusions and recommendations | 39 |
| 4.1 Overview..... | 39 |
| 4.2 Poverty and children's relationships | 40 |
| 4.3 Implications for policy and further research | 42 |
| References..... | 45 |
| Appendices | 47 |
| Appendix A. Relationship outcome variables..... | 47 |
| Appendix B. Control variables..... | 49 |
| Appendix C. Relationships between poverty and control variables | 51 |
| Appendix D. Models: Peer relationships | 59 |
| Appendix E. Models: Parent-child relationships | 73 |
| Appendix F. Models: Sibling relationships..... | 80 |
| Appendix G. Consultation with young research advisors..... | 83 |

Acknowledgements

We would like to thank the Joseph Rowntree Foundation for supporting this research. In particular, we are grateful to Chris Goulden for his engagement with and insights throughout the project, and Helen Robinson for assisting with administration and the setup of our advisory group. Our advisory group members provided useful suggestions at key stages of the research, as did NCB's Young Research Advisors – many thanks to you all.

Within NCB we would like to thank Jayne Parkin for her assistance with gathering material for our rapid literature review, Enver Solomon and Zoe Renton for their support with dissemination and Amy Edwards for her thorough proofreading. Thanks too to Thelma Willock at NCB and Anna Hopkins at CLS for administrative support.

Executive summary

Introduction

The National Children's Bureau (NCB) Research Centre, in partnership with the Centre for Longitudinal Studies (CLS), was supported by the Joseph Rowntree Foundation (JRF) to explore associations between poverty and children's relationships, through analysis of data from Waves 1 – 5 of the Millennium Cohort Study (MCS). The release of this data provided the opportunity to test these associations in a larger sample than in previous studies.

The research aimed to address the following overarching question:

What role, if any, does low income play in shaping the quality of children's relationships with parents, peers and siblings?

Accordingly, regression analyses were conducted to measure associations between poverty and relationship outcomes before and after controlling for other factors; and to examine the effects of more and less persistent poverty. Outcome measures were drawn from Wave 5 of the MCS, while measures of poverty and controls came from all five waves of the study (when children were aged nine months, three, five, seven and eleven years). The measure of poverty was based on family income below 60 per cent of the MCS median, adjusted for family size. Children were divided into three groups as follows:

- Persistent experience of poverty (Poor at 4 or 5 waves)
- Some experience of poverty (Poor in 1, 2 or 3 waves)
- No (recorded) experience of poverty (Poor in 0 waves).

The design of the research and interpretation of findings were informed by consultation with the project advisory group and NCB's Young Research Advisors (YRAs).

Findings part 1: Peer relationships

Overall, children reported positive relationships with their peers, though around one in six reported being bullied on a weekly basis. Parents (main carers, typically mothers) tended to reinforce this picture. For the most part, before taking account of other factors, poverty – especially persistent poverty – was linked with more problematic relationships.

Compared to other children, those with experience of poverty were:

- **More likely to often fall out with friends** (9.0 per cent of those in persistent poverty fell out with friends 'most days', compared to just 2.6 per cent of the never poor)
- **More likely to fight with or bully others** (16.4 per cent of those in persistent poverty fought with or bullied others, compared to 3.8 per cent of those never poor)
- **More likely to be (frequently) bullied** (11.6 per cent of children in persistent poverty reported being hurt or picked on by their peers 'most days', compared to 4.6 per cent of the never poor)

- **More likely to play alone** (35.7 per cent of those in persistent poverty were said to be solitary, compared to 26.2 per cent of the never poor)
- **Less likely to have a good friend** (83.9 per cent of those in persistent poverty 'certainly' had a good friend, compared to 91.4 per cent of never poor children)
- **Less likely to be liked by other children** (79.0 per cent of those in persistent poverty were 'certainly' liked by their peers, compared to 88.3 per cent of the never poor)
- **Less likely to talk to their friends about their worries** (34.1 per cent of persistently poor children did so, compared to 42.5 per cent of the never poor).

However, those with experience of poverty were just as likely as other children to be happy with their friends, and overall, they spent more time with them. Notably, in relation to time with friends and being bullied, they were more likely than their peers to select response options at *both* 'extremes' (i.e. 'most days' and 'never'), reinforcing that children in poverty are not a homogenous group, and that factors other than poverty influence their relationships.

Subsequent regression analyses demonstrated that, after taking many other factors into account, (persistent) poverty remained a significant predictor of just two peer relationship outcomes: more frequent interaction with friends outside school, and more frequent fights with, or bullying of, peers.

Among other factors, the following child and family characteristics commonly emerged as significant predictors of less positive peer relationships:

- Special educational needs
- Externalising behaviour
- Internalising symptoms
- Higher body mass index (BMI)
- Age (being younger than peers)
- Having more brothers (and sometimes more sisters)
- Maternal mental health symptoms
- White, rather than BME backgrounds.

Interestingly, children (and sometimes their parents) tended to report more positive peer relationship outcomes if they lived in Wales, Scotland or Northern Ireland, rather than England – although rates of confiding in friends were higher among children in England than elsewhere.

Findings part 2: Family relationships

Overall, as with peer relationships, children and their parents presented a positive picture of family relationships. Sibling bullying was relatively common, but this was not unexpected. There were significant, though modest (bivariate) associations between poverty and most family relationship outcomes.

Compared to other children, those with experience of poverty were:

- **Less likely to talk to someone at home about their worries** (73.8 per cent of those never in poverty said that they would do so, compared with 66.8 per cent of those with persistent experience of poverty)
- **Less likely to talk to their mothers about things they cared about** (57.5 per cent of children in persistent poverty talked to them about such things (almost) every day, compared to 67.3 per cent of the never poor)
- **Slightly more likely to have conflictual relationships with their mothers** (31.3 per cent of those in persistent poverty engaged in 'frequent battles of will', compared to 27.6 per cent of the never poor)
- **Slightly less likely to be close to their mothers** (54.4 per cent of the persistently poor were 'extremely close' to their mothers, compared with 59.2 per cent of never poor children).

However, those with experience of poverty were just as likely as their peers to be happy with their families. In addition, for sibling relationships, those with experience of poverty tended to select response options at both 'extremes': they were more likely than their peers to bully, and be bullied by, siblings 'most days', but also more likely to say this 'never' happened.

Regression analyses showed that persistent poverty was a significant independent predictor in relation to just one measure of family relationships, being unexpectedly associated with *higher* levels of happiness with families. In addition, after taking other factors into account, *less* persistent poverty was associated with lower levels of confiding at home, whereas *persistent* poverty was not, after taking account of family structure.

Other factors which independently predicted several less positive family relationship outcomes included:

- Externalising behaviour
- Higher numbers of siblings
- Interparental conflict
- Harsh discipline
- Maternal mental health symptoms
- Overcrowding at home.

Additional multivariate predictors of parent-child relationships (on more than one, mainly parent-report measure) included:

- **Gender**, with mothers reporting closer and less conflictual relationships with daughters than with sons
- **Family structure**, with living with single parents rather than both biological parents associated with lower levels of happiness among children and lower levels of communication, yet higher levels of closeness
- **BMI scores**, with higher scores associated with closer, less conflictual relationships
- **Parental educational attainment**, with higher attainment predicting less close, but more communicative, parent-child relationships
- **Parental engagement** in the early years, which predicted closer and more communicative parent-child relationships.

As might be expected, there was substantial overlap between the factors linked with more problematic parent-child and sibling relationships. However, some predictors were unique to individual outcomes, and there were also differences in the nature of the associations. Higher BMI scores, for example, were associated with greater victimisation by siblings despite (as noted above) being linked to more positive parent-child relationships on a number of measures.

Conclusions

Overall, **experience of family poverty appeared to play a limited independent role in predicting relationships** at age 11.

Bivariate analyses showed that poverty – particularly *persistent* poverty - had significant and largely negative associations with a variety of relationship outcomes for children. However, adjusting (controlling) for background factors through multiple regression analyses demonstrated that these weak associations between poverty and relationships were in general no longer significant. This suggests that, for the most part, effects of poverty on relationships are mediated by a range of factors associated with poverty. Pathways found to particularly reduce the bivariate association between poverty and relationships include parental factors (low levels of educational attainment, fewer working hours, parental conflict, maternal mental health problems) and others measured in early childhood (early parenting style, child behavioural problems and low cognitive ability).

Nevertheless, persistent poverty emerged as a statistically significant multivariate predictor of three relationship outcomes. Specifically, after controlling for other factors, persistent poverty was weakly associated with:

- More frequent interaction with friends outside school
- Greater propensity to fight with or bully peers
- *Higher* levels of self-reported happiness with families.

The results concerning interaction with friends may have varied implications, depending on the reasons for, and consequences of, children spending more time with their peers. Elevated levels of conflict or bullying may be a direct result of the greater frequency of contact. However, they may also reflect a tendency for some children to target peers in response to stressors and threats to self-esteem associated with poverty.

The finding that, after controlling for other factors, persistent poverty was associated with slightly *more* happiness with families was unexpected. It may be that, in the absence of other family risk factors, *stable* life on a low income is associated with particular appreciation of family relationships.

Implications for policy and further research

This research has reinforced that poverty is by no means the sole determinant of satisfactory or problematic personal and social relationships. The vast majority of children, including those with experience of persistent poverty, report high levels of happiness with their friendships and families. Issues such as bullying, falling out with friends, and difficulty confiding in others affect children in affluent as well as low income homes.

Nevertheless, children living in poverty are more likely to experience some of these problems than their peers. This is due, in part at least, to their exposure to other, interrelated, risk factors. However, there is evidence that some of these factors, such as maternal mental health problems and adverse parenting practices, may themselves be directly influenced by poverty (Cooper and Stewart 2013). Accordingly, this study adds to the existing evidence base on the risks of growing up poor.

In terms of policy, beyond reinforcing the case for ending child poverty, the findings underline the importance of universal provision to help parents as well as schools provide *all* children with the skills and support they need to develop positive relationships.

There is clearly more work to be done in order to understand the 'causal' role of poverty and its interactions with other factors. Future research could usefully explore *changes* in relationships and how – and through which mechanisms – they might relate to changes in family income. Of note, the measure of poverty employed in this study allowed distinguishing those with more persistent experience of low income, yet it did not capture the *severity* of poverty, and therefore may have underestimated its role. Further research could usefully measure both the persistence and severity of family poverty.

In addition, further research is needed to explore the potentially mixed implications of children in poverty spending more time with their friends; whether this is linked to spending *less* time with families, or alone, compared to other children; and implications for the nature and quality of relationships. Also, future research might usefully consider the role of poverty in relationships with fathers, extended family and teachers.

Finally, this research identified some recurring differences in relationships linked to ethnic background and country, with BME children and those living outside England (in Wales, Scotland or Northern Ireland) typically reporting less problematic relationships, even after controlling for other factors. Additional exploration of these differences – and their interactions with poverty – is needed to better understand any cultural and structural influences at play.

1. Introduction

1.1 Background, aims and context

The National Children's Bureau (NCB) Research Centre, in partnership with the Centre for Longitudinal Studies (CLS), was supported by the Joseph Rowntree Foundation (JRF) to explore associations between poverty and children's relationships, through analysis of recently released data from Wave 5 of the Millennium Cohort Study (MCS), alongside data from previous waves.

The Millennium Cohort Study (MCS) is a longitudinal birth cohort study following a sample of approximately 19,000 children born in the UK in 2000/01. Five sweeps have been conducted so far (at ages 9 months, 3, 5, 7, 11 years), with the sixth (age 14) sweep underway at time of writing. This research uses the longitudinal sample of those available in all five sweeps (with data on family income, $N = 10,313$). Outcome measures were drawn from Wave 5, when children were aged 11 and in the final year of primary school, with measures of poverty and controls drawn from all five waves, as described further below.

The research aimed to address the following overarching question:

What role, if any, does low income play in shaping the quality of children's relationships with parents, peers and siblings?

The study was designed to consider relationships between poverty (assessed by low income) and relationship outcomes before and after controlling for other relevant factors; and to consider the role of more and less persistent poverty.

Context

Precisely what constitutes child poverty is contested. The Conservative Government have recently announced their intention to modify the way childhood disadvantage is measured, moving away from measuring income to focus on work and educational attainment, and to drop an existing commitment to ending child poverty by 2020¹. In this context, as welfare changes and cuts are being implemented, the number of children in poverty (living in households earning below 60 per cent of median income) rose from 3.6 million in 2011/12 to 3.7 million in 2013/14 (Department for Work and Pensions 2015)², and is predicted to rise further, to 4.7 million by 2020 (Brown *et al.* 2013).

Debates about measurement notwithstanding, it remains important to understand how living with low income impacts on children. To date, the evidence base is strongest in relation to hard outcomes, such as education, employment and health (Griggs and Walker 2008). However, the function of poverty in shaping children's interpersonal relationships is less well understood.

¹ Department of Work and Pensions (2015) *Government to Strengthen Child Poverty Measure*. Press release 15 July. <https://www.gov.uk/government/news/government-to-strengthen-child-poverty-measure>

² Figures are for children in Households below average income after housing costs.

This partly reflects the complexity of the interplay between social action and circumstances: in the literature, children's relationships with peers and parents are seen as both mediators and outcomes of material circumstances (Katz *et al.* 2007).

Understanding influences on children's relationships with peers, parents and siblings is important because there is evidence that these relationships can serve as potential protective factors that enable children to cope with life's challenges, as well as being important for the development of their social capital, their education and employment prospects and wider aspects of adult social inclusion (HM Treasury 2008).

Much of the published evidence on the links between poverty and peer relationships is qualitative. In particular, a significant number of qualitative studies have described mechanisms by which children perceive low income to contribute to poor relationships with peers, for example, by impacting on 'fitting in' and 'joining in' (Atree 2006; Ridge 2002; Ridge 2009). However, there remains a dearth of quantitative evidence that is able to quantify the function of poverty in children's peer relationships. One of the most significant relevant quantitative investigations was an analysis of poverty and social exclusion among children in 2003 using the Poverty and Social Exclusion Survey of Great Britain and the British Household Panel survey (Adelman *et al.* 2003). This study identified no clear direct links between low income and quality of peer relationships. It found that 14 year olds in poverty were no worse off than peers in terms of their relationships and satisfaction with friends or belief that they were likeable as a person. However, they were more likely to suffer from strained relationships with parents.

With regards to children's relationships with parents, there is a significant body of evidence that documents the relationship between child poverty, parenting behaviour and child outcomes, with parenting identified as a mediating factor capable of reducing potential impacts of poverty on children, but also likely to be adversely effected by poverty (Katz *et al.* 2007). However, there is much less evidence available about children's own experiences of their relationships with parents and how this is shaped by poverty, and again what exists tends to be qualitative (for example, Pope *et al.* 2013).

The release of data from the Age 11 (Wave 5) sweep of the Millennium Cohort Study (MCS5) provided an ideal opportunity for further quantitative exploration of the function of poverty in children's relationships with peers and with parents. At this age, children are approaching the transition to secondary school and becoming more independent. While parents are still central to their lives, peers play an increasingly important role. This is reflected in MCS5, which includes questions on children's and main carers' (typically mothers') views and feelings about their relationships with friends and family³.

³Further information about the Millennium Cohort Study is available on the CLS website: [http://www.cls.ioe.ac.uk/page.aspx?&sitesectionid=883&sitesectiontitle=The+age+11+survey+of+the+MCS+\(2012\)](http://www.cls.ioe.ac.uk/page.aspx?&sitesectionid=883&sitesectiontitle=The+age+11+survey+of+the+MCS+(2012))

Importantly, the large MCS5 sample allows the detection of much smaller effects than were possible in previous analyses of social exclusion among children (Adelman *et al.* 2003), using the Poverty and Social Exclusion Survey of Great Britain and the British Household Panel survey, where the available sample sizes were much smaller (fewer than 800 and 500 children respectively). The MCS5 data set also includes a wealth of longitudinal data collected from earlier in children's lives which can be drawn on to build complex models, incorporating not only the recurrence of poverty over time, but other predictive factors (e.g. parenting and other factors in the early years). As such, MCS5 is ideal for enabling an assessment of the role of poverty versus other factors in influencing children's personal and social relationships at age 11.

1.2 Methodology

Initial bivariate analyses were conducted to explore 'raw' associations between measures of poverty and relationships, and subsequent regression analyses controlled for other potentially confounding factors, as outlined below. At both stages, cases were weighted to adjust for design features which resulted in oversampling of certain areas and groups, and for differential non-response.

1.2.1 Bivariate analyses

For each of 19 variables measuring peer, sibling and parent-child relationships based on child and parent-report data⁴ (see Appendix A), frequency tables were generated and regression (linear and/or multinomial logistic) analyses conducted to assess group differences by experience of poverty.

Three sets of bivariate analyses were conducted, based on the following measures of poverty:

- Income poverty (based on <60 per cent of median MCS income, adjusted for family size)
- Material deprivation (based on main carer responses to five items tapping inability to afford particular items or activities)⁵
- Combined income and material deprivation.

This report focuses on results from the first set of analyses, for two reasons. Firstly, the intention was to use a measure of poverty throughout childhood, as far as possible. Measures of income poverty were available for Waves 1 - 5 of the study⁶, whereas comparable measures of material deprivation were available only in Waves 3 - 5, and so the second and third sets of analyses were based on data from a shorter timeframe. Secondly, the pattern of results from each set of analyses was remarkably similar. Accordingly, Chapters 2 and 3 report results based on the (commonly used) income-based measure.

⁴ From children's main carers, who were in the vast majority of cases their mothers.

⁵ These recorded main carers' inability to: replace essential household items; spend a small amount of money on themselves; have annual holidays; celebrate events such as birthdays or religious festivals; or host children's friends, due to the costs involved.

⁶ When children were aged nine months, then three, five, seven and eleven years.

In relation to family income, children were divided into three groups as follows:

Table 1.1 Distribution of poverty, based on family income

| Poverty group | Definition | Frequency | Per cent |
|---------------|-----------------------------------|---------------|--------------|
| None | Never recorded as poor | 5,604 | 54.3 |
| Some | Poor at 1, 2 or 3 waves | 2,974 | 28.8 |
| Persistent | Poor at 4 or 5 waves ⁷ | 1,735 | 16.8 |
| Total | | 10,313 | 100.0 |

For bivariate analyses, the maximum available sample was used in each case. The level of missing data varied, but was higher for analyses of sibling relationship measures, as singleton children were excluded, and lowest for parent-report measures. As a result, the sample size varied substantially, from 9,237 to 10,252.

1.2.2 Multivariate analyses

Hierarchical linear regression analyses were conducted for each of the peer, sibling and parent relationship variables listed in Appendix A. This shows which factors are mediating the relationship between poverty and relationships: in general, if the estimated effects of poverty on relationships are reduced when controls are added, it suggests that the additional controls are an important pathway in the relationship between poverty and relationships.

Selection of control variables was informed by findings from a rapid review of the UK literature, and guided by consultation with JRF, the project advisory group, and NCB's Young Research Advisors, as described further below.

For multivariate analyses, consistent bases were used across analyses, as far as possible. The total sample for analyses pertaining to relationships with siblings was necessarily restricted to those children who *had* siblings ($N = 9,186$, after excluding cases with missing data). Singleton children were included in all other analyses, using a consistent base of 8,682⁸.

Regression models were built in stages. As shown in Table 1.2, the groups of variables included as potential mediating factors of the poverty gradient included: child characteristics; family structure; parenting factors; early childhood factors and environmental factors. Where appropriate, control variables were drawn from prior sweeps, rather than those contemporaneous to the Wave 5 outcome measures. This was designed to mitigate problems around reverse causality (or confusing cause and effect), and to allow taking into account factors such as parenting in early childhood. Although some variables

⁷ As data is not collected between sweeps, families may have moved in and out of poverty without this being recorded. In addition, there was no requirement for children to be poor at consecutive waves for instances of poverty to be counted. A child poor at waves 2 and 3 would be categorised in the same way as one poor at waves 1 and 5.

⁸ Levels of missing data were lower for analyses relating to sibling relationship variables than parent and peer variables, due to the cumulative number of cases missing data on at least one of this larger set of dependent variables.

(such as child characteristics, family structure, and the number of siblings) reflected the child's circumstances at Wave 5, a derived variable was constructed to record experience of family breakdown / transition, drawing on data from all five sweeps.

Table 1.2 lists the control variables introduced at each stage (See Appendix B for details). In the first model, poverty is the sole predictor. In the second, variables pertaining to child characteristics are also included; by the sixth and final model, all predictors have been entered.

As shown in Appendix C, relationships between poverty and covariates were generally modest; the strongest associations were with parental educational attainment, working hours, and area deprivation, as expected.

Table 1.2 Variables included in regression models

| Model | Category | Control variables |
|--------------|---------------------------------|--|
| 1 | Family poverty | N/A |
| 2 | Child characteristics | Gender |
| | | Age (in months) |
| | | Birth parity (first born v other) |
| | | Ethnicity |
| | | Special Educational Needs (SEN) |
| | | Body Mass Index (BMI) |
| 3 | Family characteristics | Sibship size (No. of brothers, No. of sisters) |
| | | Family structure (2 biological parents, single parent, stepfamily) |
| | | Experience of family transition during childhood |
| 4 | Parental characteristics | Parental educational attainment (Highest level achieved by main carer or partner) |
| | | Parental working hours (main carer and partner) |
| | | Experience of inter-parental conflict (Conflict involving physical force) |
| 5 | Early childhood characteristics | Parenting (earlier sweeps) |
| | | Maternal mental health (earlier sweeps) |
| | | Child cognitive ability (earlier sweeps) |
| | | Child socio-emotional skills (SDQ Internalising and externalising problems) (earlier sweeps) |
| 6 | Environment | Country |
| | | Neighbourhood deprivation |
| | | Urban/ rural location |
| | | Ratio of people to rooms in the home (overcrowding) |

1.2.3 Consultation with Young Research Advisors

NCB's Young Research Advisors (YRAs) are a diverse group of around eighteen 12-21 year olds, who are supported to be involved in NCB and others' research projects via regular meetings and online consultation. For the purposes of this project, they took part in group discussions at two Saturday meetings, on 25th April and 12th September, 2015.

At the first meeting, the young people were provided with an overview of the study, and shared their views on:

- Whether, how and why poverty might influence children's relationships
- Possible explanations for the patterns apparent in our initial findings
- Factors other than poverty which could influence children's relationship outcomes.

At this point, their input helped to develop the list of control variables selected for use in multivariate analyses.

At the second meeting, the YRAs were presented with key findings from the final set of regression analyses. Discussion focused on:

- Their reactions to, and interpretations of, the findings
- Key messages for dissemination
- Priorities for further research.

For a summary of the discussions at both meetings, see Appendix G. The young people's views were taken into account alongside findings from the literature and suggestions from the project advisory group.

1.3 Report structure

The remainder of this report sets out results from each stage of the analysis, focusing first on peer and then family relationships, with a final concluding chapter which discusses the implications of the findings and makes recommendations for further research.

2. Findings part 1: Peer relationships

This chapter focuses on findings concerning peer relationships. For each aspect of relationships, two sets of results are presented: firstly, the 'raw' associations between poverty and outcomes, and secondly, findings from regression analyses which take other relevant factors into account. Unless otherwise stated, relationship measures are based on children's self-report data and 'significant' results are those significant at $p < .05$. For regression analyses, key findings are presented in the text (with p values for poverty and other coefficients, to illustrate the impact of introducing controls), with full details of the models set out in Appendix D. For each regression model, the coefficients detailed for 'some' and 'persistent' poverty are interpreted relative to the reference category of 'no (recorded)' poverty.

Aspects of peer relationships covered in MCS5 and discussed below include:

- Whether or not children have a good friend, and are well-liked
- Time spent with friends outside school
- Being solitary or playing alone
- Levels of happiness with friendships
- Confiding in friends
- Falling out with friends
- Involvement in peer bullying, as either victims or perpetrators.

2.1 Having friends and being popular

Having friends

Children were not asked directly whether they had close friends, or felt they were liked by other children. However, parents addressed these issues as part of the Strengths and Difficulties Questionnaire (SDQ; Goodman 1997).

Responses suggested that children with experience of poverty were significantly less likely to have a good friend or to be generally liked by other children, compared to those who were never recorded as poor.

Specifically, almost all children (97.5 per cent) were thought to have at least one good friend. However, parents in poverty were less confident about this; 91.4 per cent of never poor children 'certainly' had a good friend, compared with 83.9 per cent of those in persistent poverty (Table 2.1).

Table 2.1 Whether the child has a good friend (Parent report, $N = 9,995$)

| | Not true | Somewhat true | Certainly true | Total |
|-------------------|----------|---------------|----------------|-------|
| | (%) | (%) | (%) | (%) |
| Poverty | | | | |
| None | 1.6 | 7.0 | 91.4 | 100.0 |
| Some | 3.1 | 10.3 | 86.6 | 100.0 |
| Persistent | 4.2 | 12.0 | 83.9 | 100.0 |
| Total | 2.5 | 8.8 | 88.7 | 100.0 |

However, subsequent regression analyses showed that, after controlling for other factors, poverty was no longer a significant predictor of having a good friend (Table 2.2; Table D.10).

Table 2.2 The role of poverty within hierarchical regression analysis predicting whether the child has a good friend ^a (Parent report, $N = 8,682$)

| Poverty | Standardised (β) values of poverty by model ^{b, c} | | | | | | R ² by model | |
|--------------------------------|---|--------------------|--------------------|------------------|-----------------|-----------------|-------------------------|------|
| | 1 | 2 | 3 | 4 | 5 | 6 | 1 | 6 |
| Some (vs none) | -.047*** (.011) | -.037*** (.010) | -.033*** (.011) | -.016 (.011) | -.005 (.011) | -.004 (.011) | | |
| Persistent (vs none) | -.093*** (.019) | -.071*** (.019) | -.056*** (.019) | -.023* (.022) | .000 (.022) | -.001 (.023) | .008 | .043 |

^a Coded 1 (not true) to 3 (certainly)

^b Standard errors in parentheses; * $p < .10$, ** $p < .05$, *** $p < .01$.

^c Covariates introduced at each model:

2: Gender, age, birth parity, ethnicity, SEN, BMI

3: Number of brothers, number of sisters, family structure, family transitions

4: Parental education, working hours and parental conflict (use of force)

5: Early parenting, maternal mental health, child cognitive ability, SDQ scores

6: Country, neighbourhood deprivation, urban/rural location, overcrowding

The final model showed that whether or not children had close friends (from parents' perspectives) was independently influenced by characteristics including temperament and behaviour, academic and possibly physical ability, but also family factors. Specifically, controlling for all other factors, children were significantly **more** likely to have a good friend if they had benefitted from **higher levels of parental engagement** in early childhood ($p < .05$).

Conversely, they were **less** likely to have a good friend if they had:

- Special educational needs (**SEN**) ($p < .01$)
- Higher **BMI**s ($p < .05$)
- More **brothers** ($p < .05$)
- Higher **internalising** ($p < .01$) and **externalising (SDQ) scores** ($p < .05$)
- Mothers with higher levels of **mental health** symptoms ($p < .01$).

Popularity with peers

Focusing more broadly on popularity with peers, children with experience of poverty were seen as less popular than others, with 79.0 per cent in persistent poverty 'certainly' liked by their peers, compared to 88.3 per cent of the never poor (Table 2.3).

Table 2.3 Whether children are generally liked (Parent report, $N = 9,987$)

| Poverty | Not true (%) | Somewhat true (%) | Certainly true (%) | Total (%) |
|-------------------|-----------------|----------------------|-----------------------|--------------|
| None | 0.8 | 11.0 | 88.3 | 100.0 |
| Some | 0.8 | 16.4 | 82.9 | 100.0 |
| Persistent | 1.4 | 19.6 | 79.0 | 100.0 |
| Total | 0.9 | 14.0 | 85.1 | 100.0 |

However, in subsequent regression analyses, poverty was no longer a significant predictor of children's popularity, after controlling for factors such as their earlier SDQ scores and maternal mental health (Table 2.4; Table D.11).

Table 2.4 The role of poverty within hierarchical regression analysis predicting whether the child is liked by others^a (Parent report, $N = 8,682$)

| Poverty | Standardised (β) values of poverty by model ^{b, c} | | | | | | R ² by model | |
|-------------------|---|--------------------|--------------------|-------------------|-----------------|-----------------|-------------------------|------|
| | 1 | 2 | 3 | 4 | 5 | 6 | 1 | 6 |
| Some | -.045*** (.011) | -.042*** (.011) | -.035*** (.012) | -.027** (.014) | -.012 (.013) | -.018 (.014) | .008 | .056 |
| Persistent | -.091*** (.017) | -.094*** (.018) | -.074*** (.020) | -.059** (.024) | -.031 (.023) | -.040 (.024) | | |

^a Coded 1 (not true) to 3 (certainly)

^b Standard errors in parentheses; * $p < .10$, ** $p < .05$, *** $p < .01$.

^c Covariates introduced at each model:

2: Gender, age, birth parity, ethnicity, SEN, BMI

3: Number of brothers, number of sisters, family structure, family transitions

4: Parental education, working hours and parental conflict (use of force)

5: Early parenting, maternal mental health, child cognitive ability, SDQ scores

6: Country, neighbourhood deprivation, urban/rural location, overcrowding

In this case, a broad range of child, family and environmental factors played a part. Children were **less** likely to be considered popular by their parents if they:

- Had **SEN** ($p < .01$)
- Had higher **BMI**s ($p < .01$)
- Had more **internalising** and **externalising** symptoms ($p < .01$)
- Were **first born** children in the family ($p < .01$)
- Had more **brothers and sisters** (both $p < .01$)
- Had mothers with higher levels of **mental health symptoms** ($p < .01$).

They were **more** likely to be deemed popular by their parents if they:

- Were **older** (in months) ($p < .01$)
- Were from **Pakistani/Bangladeshi**, not White backgrounds ($p < .01$)
- Lived in **more crowded homes** (with more people per room) ($p < .05$)
- Lived in **Northern Ireland** rather than England ($p < .01$).

2.2 Time spent with friends and playing alone

Time spent with friends

Children and parents were asked to state how often they spent time with friends, outside school, on similar response scales. Poverty was significantly associated with the frequency of interaction. However, the relationship was not simply linear; compared to other children, those with experience of poverty were more likely to see friends 'most days' - but also more likely to 'never' see them outside school. This pattern was clear in responses from parents (Table 2.5) and children (Table 2.6).

Table 2.5 Time spent with friends, outside school (Parent report, $N = 10,252$)

| | Every day or almost | Several times a week | Once or twice a week | Once or twice a month | Less often | Not at all | Total |
|-------------------|---------------------|----------------------|----------------------|-----------------------|------------|------------|-------|
| Poverty | (%) | (%) | (%) | (%) | (%) | (%) | (%) |
| None | 18.8 | 30.3 | 34.5 | 11.6 | 3.1 | 1.7 | 100.0 |
| Some | 28.7 | 24.3 | 27.6 | 10.9 | 4.3 | 4.2 | 100.0 |
| Persistent | 34.9 | 20.7 | 24.1 | 7.9 | 5.2 | 7.2 | 100.0 |
| Total | 24.6 | 26.9 | 30.6 | 10.7 | 3.8 | 3.4 | 100.0 |

Table 2.6 Time spent with friends, outside school ($N = 10,042$)

| | Most days | At least once a week | At least once a month | Less often | Never | Total |
|-------------------|-----------|----------------------|-----------------------|------------|-------|-------|
| Poverty | (%) | (%) | (%) | (%) | (%) | (%) |
| None | 34.9 | 37.1 | 16.5 | 8.0 | 3.5 | 100.0 |
| Some | 44.1 | 28.2 | 11.6 | 10.0 | 6.1 | 100.0 |
| Persistent | 49.8 | 22.5 | 8.4 | 8.3 | 11.1 | 100.0 |
| Total | 40.2 | 31.9 | 13.6 | 8.7 | 5.6 | 100.0 |

After controlling for all other factors, *persistent* poverty remained a significant predictor of time spent with friends ($p < .01$) as reported by parents, with a weaker, marginal effect apparent for *less persistent* poverty (Table 2.7; Table D.2) and for poverty in relation to interaction reported by children ($p < .10$; Table 2.8; Table D.1). As before, poverty predicted more frequent interaction.

Table 2.7 The role of poverty within hierarchical regression analysis predicting time spent with friends outside school (Parent report, $N = 8,682$)

| Poverty | Standardised (β) values of poverty by model ^b | | | | | | R ² by model | |
|-------------------|--|--------------------|--------------------|--------------------|--------------------|---------------------|-------------------------|------|
| | 1 | 2 | 3 | 4 | 5 | 6 | 1 | 6 |
| Some | -.110*** (.036) | -.170*** (.032) | -.160*** (.033) | -.091*** (.035) | -.096*** (.035) | -.058* (.035) | | |
| Persistent | -.200*** (.067) | -.430*** (.048) | -.430*** (.053) | -.290*** (.063) | -.300*** (.065) | -.240*** (.066*) | .004 | .113 |

^a Coded 0 (every day/ almost) to 4 (less than once a month);

^b Standard errors in parentheses; * $p < .10$, ** $p < .05$, *** $p < .01$.

^c Covariates introduced at each model:

2: Gender, age, birth parity, ethnicity, SEN, BMI

3: Number of brothers, number of sisters, family structure, family transitions

4: Parental education, working hours and parental conflict (use of force)

5: Early parenting, maternal mental health, child cognitive ability, SDQ scores

6: Country, neighbourhood deprivation, urban/rural location, overcrowding

Table 2.8 The role of poverty within hierarchical regression analysis predicting time spent with friends outside school ($N = 8,682$)

| Poverty | Standardised (β) values of poverty by model ^b | | | | | | R ² by model | |
|-------------------|--|--------------------|--------------------|-------------------|-------------------|------------------|-------------------------|------|
| | 1 | 2 | 3 | 4 | 5 | 6 | 1 | 6 |
| Some | -.055 (.033) | -.100*** (.032) | -.110*** (.033) | -.073** (.035) | -.079** (.036) | -.064* (.037) | | |
| Persistent | -.049 (.057) | -.200*** (.052) | -.220*** (.060) | -.140** (.064) | -.160** (.065) | -.130* (.069) | .001 | .053 |

^a Coded 0 (most days) to 4 (never)

^b Standard errors in parentheses; * $p < .10$, ** $p < .05$, *** $p < .01$.

^c Covariates introduced at each model:

2: Gender, age, birth parity, ethnicity, SEN, BMI

3: Number of brothers, number of sisters, family structure, family transitions

4: Parental education, working hours and parental conflict (use of force)

5: Early parenting, maternal mental health, child cognitive ability, SDQ scores

6: Country, neighbourhood deprivation, urban/rural location, overcrowding

In the final models, other factors which independently predicted significantly **higher** levels of interaction with friends (on child and/or parent reports) were:

- Being **male** rather than female (on parent reports only) ($p < .01$)
- Being **older** ($p < .01$)
- **Externalising** behaviour ($p < .05$ on child report; $p < .01$ on parent report)
- Being from **White** rather than other ethnic backgrounds (at least $p < .05$)
- Living with **a single parent** ($p < .01$, on parent reports)
- Prior **parental engagement** ($p < .01$, on parent reports)
- **Area deprivation** ($p < .05$, on parent reports).

The following – also a mix of child, family and environmental factors - predicted **lower** levels of interaction with friends:

- **SEN** ($p < .01$)
- Higher **BMI scores** ($p < .05$ on child and $p < .01$ on parent reports)
- **Internalising** symptoms ($p < .01$)
- **Higher cognitive ability** (on parent reports) ($p < .05$)
- Having more **sisters** ($p < .01$) and **brothers** ($p < .05$) (on parent reports)
- Having **more educated parents** ($p < .01$)
- **Maternal mental health symptoms** ($p < .05$)
- Living in **England**, compared to Wales ($p < .01$), Scotland ($p < .01$) and Northern Ireland ($p < .05$).

Being solitary or playing alone

As highlighted above, children with experience of poverty appeared to be overrepresented among those who 'never' saw friends as well as among those who saw them frequently. Poverty was also associated with parents' perceptions of children as solitary, or tending to play alone. More than a third of parents whose children experienced persistent poverty felt their child fitted this description, at least to some extent, compared to just over a quarter of those never in poverty (Table 2.9).

Table 2.9 Whether their child is 'solitary, plays alone' (Parent report, $N = 9,984$)

| | Not true | Somewhat true | Certainly true | Total |
|-------------------|----------|---------------|----------------|-------|
| | (%) | (%) | (%) | (%) |
| Poverty | | | | |
| None | 73.7 | 22.2 | 4.0 | 100.0 |
| Some | 66.9 | 26.0 | 7.1 | 100.0 |
| Persistent | 64.3 | 27.9 | 7.8 | 100.0 |
| Total | 70.2 | 24.3 | 5.6 | 100.0 |

In line with findings on children's popularity (see Tables 2.1 and 2.3), this suggests that temperament and other child characteristics may partly explain why children who experienced poverty were more likely to 'never' see friends outside school, compared to other children. Indeed, in subsequent regression analyses, poverty was initially a significant predictor of solitary play, but was non-significant by Step 4 of the model (Table 2.10; Table D.9). For this outcome, there were just a few significant multivariate predictors, most relating to child characteristics. Controlling for other factors, children were **less** likely to be considered solitary if they had more **brothers** ($p < .01$), and **more** likely to be solitary if they:

- Were **male** rather than female ($p < .01$)
- Had **SEN** ($p < .01$)
- Had higher **BMI**s ($p < .01$)
- Had higher levels of **internalising symptoms** ($p < .01$)
- Had mothers with higher levels of **mental health symptoms** ($p < .01$).

Table 2.10 The role of poverty within hierarchical regression analysis predicting whether the child is solitary ^a (Parent report, $N = 8,682$)

| Poverty | Standardised (β) values of poverty by model ^{b, c} | | | | | | R ² by model | |
|-------------------|---|-------------------|-------------------|-----------------|-----------------|-----------------|-------------------------|------|
| | 1 | 2 | 3 | 4 | 5 | 6 | 1 | 6 |
| Some | .081*** (.018) | .070*** (.017) | .056*** (.018) | .033* (.019) | -.008 (.019) | .005 (.019) | | |
| Persistent | .130*** (.022) | .11*** (.024) | .097*** (.025) | .047 (.032) | -.007 (.032) | -.012 (.033) | .008 | .073 |

^a Coded 1 (not true) to 3 (certainly)

^b Standard errors in parentheses; * $p < .10$, ** $p < .05$, *** $p < .01$.

^c Covariates introduced at each model:

2: Gender, age, birth parity, ethnicity, SEN, BMI

3: Number of brothers, number of sisters, family structure, family transitions

4: Parental education, working hours and parental conflict (use of force)

5: Early parenting, maternal mental health, child cognitive ability, SDQ scores

6: Country, neighbourhood deprivation, urban/rural location, overcrowding

2.3 Happiness with friendships

Children's overall satisfaction with their friendships was gauged using ratings of happiness, on a scale of 1 to 7. Poverty was **not** significantly associated with levels of satisfaction; the majority of children in each group were 'completely happy' with their friends (Table 2.11).

Table 2.11 Children's feelings about their friends ($N = 10,037$)

| | Completely happy | | | | | Not at all happy | | Total (%) |
|----------------|------------------|-------|-------|-------|-------|------------------|-------|-----------|
| | 1 (%) | 2 (%) | 3 (%) | 4 (%) | 5 (%) | 6 (%) | 7 (%) | |
| Poverty | | | | | | | | |
| None | 55.1 | 26.6 | 9.1 | 3.7 | 2.1 | 1.9 | 1.6 | 100.0 |
| Some | 57.3 | 22.4 | 8.5 | 5.3 | 2.2 | 1.7 | 2.6 | 100.0 |
| Persistent | 57.6 | 23.0 | 7.9 | 4.7 | 2.0 | 2.3 | 2.5 | 100.0 |
| Total | 56.2 | 24.7 | 8.7 | 4.4 | 2.1 | 1.9 | 2.1 | 100.0 |

As expected, given the lack of any significant bivariate link, poverty was not a significant multivariate predictor of happiness with friendships⁹ (Table 2.12; Table D.6; Table D.7).

Table 2.12 The role of poverty within hierarchical regression analysis predicting children's happiness with their friends^a ($N = 8,682$)

| Poverty | Standardised (β) values of poverty by model ^{b, c} | | | | | | R ² by model | |
|-------------------|---|-----------------|-----------------|-----------------|-----------------|-----------------|-------------------------|------|
| | 1 | 2 | 3 | 4 | 5 | 6 | 1 | 6 |
| Some | -.020* (.011) | -.017 (.012) | -.008 (.012) | -.006 (.013) | -.001 (.013) | -.005 (.014) | | |
| Persistent | -.006 (.015) | -.011 (.016) | .010 (.017) | .017 (.020) | .026 (.021) | .021 (.021) | .000 | .017 |

^a Coded 1 (1 or 2 out of 7) or 0 (less happy)

^b Standard errors in parentheses; * $p < .10$, ** $p < .05$, *** $p < .01$.

^c Covariates introduced at each model:

2: Gender, age, birth parity, ethnicity, SEN, BMI

3: Number of brothers, number of sisters, family structure, family transitions

4: Parental education, working hours and parental conflict (use of force)

5: Early parenting, maternal mental health, child cognitive ability, SDQ scores

6: Country, neighbourhood deprivation, urban/rural location, overcrowding

Among the other factors included in the final regression model, two child factors predicted **lower** levels of happiness with friendships: having **SEN** ($p < .01$) and **externalising** behaviour ($p < .01$).

In addition, the following child, family and environmental factors predicted **higher** levels of happiness:

- Being a **boy**, rather than girl ($p < .01$)
- Being **older** (in months) ($p < .05$)
- **Higher cognitive ability** ($p < .05$)
- A **Pakistani/ Bangladeshi** rather than White ethnic background ($p < .01$)
- A **fuller household** (with a higher ratio of people to rooms) ($p < .01$)
- Living in **Northern Ireland**, rather than England ($p < .01$).

⁹ This was the case regardless of whether happiness was considered as a continuous or dichotomous measure (as shown here).

2.4 Confiding in friends

Compared to other children, those with experience of family poverty were significantly less likely to report confiding in friends about worries. Just 34.1 per cent of those with experience of 'persistent' poverty reported doing so, compared to 42.5 per cent of those with no experience of poverty (Table 2.13).

Table 2.13 Confiding in friends about worries ($N = 9,876$)

| | No | Yes | Total |
|------------|------|------|-------|
| Poverty | (%) | (%) | (%) |
| None | 57.5 | 42.5 | 100.0 |
| Some | 60.7 | 39.3 | 100.0 |
| Persistent | 65.9 | 34.1 | 100.0 |
| Total | 59.9 | 40.1 | 100.0 |

However, poverty did not play an independent role in predicting confiding after controlling for other factors (Table 2.14; Table D.8).

In the final model, **SEN** were associated with **lower** rates of confiding in friends, whereas the following child and environmental factors were associated with **higher** rates of confiding:

- Being **female** rather than male ($p < .01$)
- Higher **cognitive ability** ($p < .01$)
- Being from **Black/Black British** rather than White backgrounds ($p < .05$)
- Living in **England**, rather than Wales ($p < .05$), Scotland or NI ($p < .01$).

Table 2.14 The role of poverty within hierarchical regression analysis predicting whether children tell a friend if worried ^a ($N = 8,682$)

| Poverty | Standardised (β) values of poverty by model ^{b, c} | | | | | | R ² by model | |
|------------|---|--------------------|--------------------|------------------|-----------------|-----------------|-------------------------|------|
| | 1 | 2 | 3 | 4 | 5 | 6 | 1 | 6 |
| Some | -.026* (.014) | -.029** (.014) | -.020 (.014) | -.010 (.015) | -.004 (.015) | -.005 (.016) | | |
| Persistent | -.082*** (.020) | -.089*** (.021) | -.074*** (.022) | -.050* (.028) | -.039 (.028) | -.024 (.028) | .003 | .030 |

^a Coded (1 (yes) or 0 (no));

^b Standard errors in parentheses; * $p < .10$, ** $p < .05$, *** $p < .01$.

^c Covariates introduced at each model:

2: Gender, age, birth parity, ethnicity, SEN, BMI

3: Number of brothers, number of sisters, family structure, family transitions

4: Parental education, working hours and parental conflict (use of force)

5: Early parenting, maternal mental health, child cognitive ability, SDQ scores

6: Country, neighbourhood deprivation, urban/rural location, overcrowding

2.5 Falling out with friends

Overall, children with experience of poverty reported falling out with friends more frequently than other children; 9.0 per cent of those in persistent poverty said they did so 'most days', compared to 2.6 per cent of the never poor.

However, this was another area where there was not simply a straightforward linear relationship between poverty and outcomes; poor children were also more likely than others to say they 'never' fell out with friends (33.0 per cent of those in persistent poverty compared with 23.6 per cent of never poor children said this was the case) (Table 2.15).

Table 2.15 Frequency with which children fall out with friends ($N = 10,022$)

| | Most days | At least once a week | At least once a month | Less often | Never | Total |
|------------|-----------|----------------------|-----------------------|------------|-------|-------|
| Poverty | (%) | (%) | (%) | (%) | (%) | (%) |
| None | 2.6 | 8.6 | 20.4 | 44.8 | 23.6 | 100.0 |
| Some | 5.6 | 11.3 | 20.4 | 35.9 | 26.8 | 100.0 |
| Persistent | 9.0 | 12.6 | 17.3 | 28.0 | 33.0 | 100.0 |
| Total | 4.6 | 10.1 | 19.9 | 39.3 | 26.2 | 100.0 |

As shown in Table 2.16 (and Table D.3), when included in regression analyses alongside other factors, poverty was no longer a significant predictor by Step 5. In the final model, child characteristics, parenting and environmental factors all independently predicted the frequency with which children fell out with their friends.

Specifically, the following were all associated with **more** frequent disputes:

- Being **female** rather than male ($p < .01$)
- **Externalising** behaviour ($p < .01$)
- Being **White**, rather than from Pakistani/Bangladeshi ($p < .01$) Black ($p < .01$) or Other ($p < .05$) ethnic backgrounds
- Higher levels of **parental engagement** (early years) ($p < .05$)
- Higher levels of **maternal mental health symptoms** ($p < .01$)
- Living in **England**, rather than Scotland or Northern Ireland (both $p < .01$).

Table 2.16 The role of poverty within hierarchical regression analysis predicting the frequency with which children fall out with friends^a ($N = 8,682$)

| Poverty | Standardised (β) values of poverty by model ^{b, c} | | | | | | R ² by model | |
|------------|---|--------------------|--------------------|--------------------|-----------------|-----------------|-------------------------|------|
| | 1 | 2 | 3 | 4 | 5 | 6 | 1 | 6 |
| Some | -.120*** (.031) | -.130*** (.031) | -.100*** (.032) | -.077** (.034) | -.053 (.033) | -.055 (.034) | | |
| Persistent | -.160*** (.054) | -.220*** (.052) | -.19*** (.054) | -.140*** (.060) | -.093 (.061) | -.094 (.063) | .004 | .038 |

^a Coded 0 (most days) to 4 (never)

^b Standard errors in parentheses; * $p < .10$, ** $p < .05$, *** $p < .01$.

^c Covariates introduced at each model:

2: Gender, age, birth parity, ethnicity, SEN, BMI

3: Number of brothers, number of sisters, family structure, family transitions

4: Parental education, working hours and parental conflict (use of force)

5: Early parenting, maternal mental health, child cognitive ability, SDQ scores

6: Country, neighbourhood deprivation, urban/rural location, overcrowding

2.6 Victimisation by peers

On the basis of data from parents, there was a significant association between poverty and bullying by peers, such that those with experience of poverty, especially persistent poverty, were more likely to be victimised. On the SDQ measure, more than a third of parents in persistent poverty (33.7 per cent) were either 'certainly' or 'somewhat' sure that their children were bullied, compared to 21.0 per cent of those never recorded as poor (Table 2.17).

Table 2.17 Whether or not their child is bullied by peers (Parent report, $N = 9,870$)

| | Not true | Somewhat true | Certainly true | Total |
|-------------------|-----------------|----------------------|-----------------------|--------------|
| Poverty | (%) | (%) | (%) | (%) |
| None | 79.1 | 17.8 | 3.2 | 100.0 |
| Some | 71.3 | 23.1 | 5.6 | 100.0 |
| Persistent | 66.3 | 25.0 | 8.7 | 100.0 |
| Total | 74.7 | 20.6 | 4.8 | 100.0 |

This picture was reinforced to some extent by data from children (Table 2.18). Those with experience of poverty – particularly persistent poverty – were significantly more likely to report being hurt or picked on 'most days', compared to other children (11.6 per cent versus 4.6 per cent). However, they were also slightly more likely to report 'never' being picked on and the overall linear association was not significant. As in some other cases, mentioned previously, those with experience of poverty described relationships at both 'extremes' of the response spectrum.

Table 2.18 Frequency of being hurt or picked on by peers ($N = 9,994$)

| | Most days | About once a week | About once a month | Every few months | Less often | Never | Total |
|-------------------|------------------|--------------------------|---------------------------|-------------------------|-------------------|--------------|--------------|
| Poverty | (%) | (%) | (%) | (%) | (%) | (%) | (%) |
| None | 4.6 | 8.9 | 8.2 | 8.4 | 29.5 | 40.5 | 100.0 |
| Some | 7.4 | 9.9 | 7.7 | 6.2 | 26.6 | 42.3 | 100.0 |
| Persistent | 11.6 | 8.6 | 4.7 | 7.6 | 23.7 | 43.8 | 100.0 |
| Total | 6.7 | 9.1 | 7.4 | 7.6 | 27.7 | 41.6 | 100.0 |

Subsequent regression analyses demonstrated that, after controlling for other factors, poverty was not a significant predictor of peer victimisation on either parent or child report data (Tables 2.19; Table D.12 and Table 2.20; Table D.4), although it remained a significant predictor of parent-reported victimisation until step 5, when factors such as child SDQ scores and maternal mental health symptoms were introduced into the model.

Table 2.19 The role of poverty within hierarchical regression analysis predicting whether the child is bullied by peers (Parent report, $N = 8,682$)

| Poverty | Standardised (β) values of poverty by model ^{b, c} | | | | | | R ² by model | |
|-------------------|---|-------------------|-------------------|-------------------|----------------|----------------|-------------------------|------|
| | 1 | 2 | 3 | 4 | 5 | 6 | 1 | 6 |
| Some | .080*** (.013) | .077*** (.013) | .063*** (.014) | .040*** (.015) | .019 (.014) | .018 (.015) | | |
| Persistent | .110*** (.019) | .130*** (.019) | .098*** (.021) | .053** (.024) | .010 (.024) | .009 (.025) | .012 | .085 |

^a Coded 0 (not true) or 1 (at least somewhat true)

^b Standard errors in parentheses; * $p < .10$, ** $p < .05$, *** $p < .01$.

^c Covariates introduced at each model:

2: Gender, age, birth parity, ethnicity, SEN, BMI

3: Number of brothers, number of sisters, family structure, family transitions

4: Parental education, working hours and parental conflict (use of force)

5: Early parenting, maternal mental health, child cognitive ability, SDQ scores

6: Country, neighbourhood deprivation, urban/rural location, overcrowding

In the final regression model, factors which predicted peer victimisation (as reported by parents) included the following child and parental characteristics:

- **SEN** ($p < .01$)
- Higher **BMI** ($p < .01$)
- Being **younger**, relative to peers ($p < .01$)
- **Internalising** and **externalising** symptoms (both $p < .01$)
- Lower levels of **cognitive skills** ($p < .05$)
- Being a **first born** child ($p < .01$)
- A **White**, rather than Pakistani/Bangladeshi or Black background ($p < .01$)
- **Interparental conflict** (involving physical force) ($p < .01$)
- Higher levels of **maternal mental health symptoms** ($p < .01$).

With the exception of parental conflict and children's (earlier) cognitive scores, these factors were also significant multivariate predictors (or at least marginally so) of children's own reports of being bullied (Table 2.20).

Table 2.20 The role of poverty within hierarchical regression analysis predicting whether children are hurt or picked on by peers ^a ($N = 8,682$)

| Poverty | Standardised (β) values of poverty by model ^{b, c} | | | | | | R ² by model | |
|-------------------|---|-------------------|----------------|----------------|----------------|----------------|-------------------------|------|
| | 1 | 2 | 3 | 4 | 5 | 6 | 1 | 6 |
| Some | .014 (.016) | .024 (.016) | .008 (.160) | .016 (.015) | .005 (.015) | .009 (.016) | | |
| Persistent | .028 (.021) | .059*** (.021) | .020 (.023) | .037 (.028) | .017 (.027) | .023 (.028) | .000 | .037 |

^a Coded 1 (at least every few months) or 0 (less often)

^b Standard errors in parentheses; * $p < .10$, ** $p < .05$, *** $p < .01$.

^c Covariates introduced at each model:

2: Gender, age, birth parity, ethnicity, SEN, BMI

3: Number of brothers, number of sisters, family structure, family transitions

4: Parental education, working hours and parental conflict (use of force)

5: Early parenting, maternal mental health, child cognitive ability, SDQ scores

6: Country, neighbourhood deprivation, urban/rural location, overcrowding

2.7 Bullying of peers

Data from children and parents showed that those with experience of poverty were more likely to hurt or pick on their peers. Among parents in persistent poverty, 16.4 per cent considered it at least 'somewhat true' that their child fought or bullied others, compared to just 3.8 per cent of those never poor (Table 2.21). On child report data, only *persistent* poverty was associated with significantly higher rates of bullying (Table 2.22).

Table 2.21 Whether the child fights or bullies others (Parent report, $N = 9,972$)

| | Not true (%) | Somewhat true (%) | Certainly true (%) | Total (%) |
|-------------------|-----------------|----------------------|-----------------------|--------------|
| Poverty | | | | |
| None | 96.2 | 3.3 | 0.5 | 100.0 |
| Some | 91.5 | 7.0 | 1.6 | 100.0 |
| Persistent | 83.6 | 12.5 | 3.9 | 100.0 |
| Total | 92.7 | 6.0 | 1.4 | 100.0 |

Table 2.22 Frequency with which children hurt or pick on peers ($N = 10,003$)

| | Most days (%) | About once a week (%) | About once a month (%) | Every few months (%) | Less often (%) | Never (%) | Total (%) |
|-------------------|------------------|--------------------------|---------------------------|-------------------------|-------------------|--------------|--------------|
| Poverty | | | | | | | |
| None | 0.4 | 1.7 | 2.9 | 3.1 | 20.0 | 72.0 | 100.0 |
| Some | 1.1 | 2.3 | 2.8 | 3.8 | 19.0 | 71.0 | 100.0 |
| Persistent | 1.8 | 3.5 | 3.0 | 3.5 | 21.7 | 66.6 | 100.0 |
| Total | 0.9 | 2.2 | 2.8 | 3.4 | 20.0 | 70.8 | 100.0 |

Controlling for other factors, persistent poverty was only a significant predictor of *parent* reports of bullying ($p < .05$) (See Tables 2.23, 2.24, D.13 and D.5).

Table 2.23 The role of poverty within hierarchical regression analysis predicting whether the child fights or bullies others (Parent report, $N = 8,682$)

| Poverty | Standardised (β) values of poverty by model ^b | | | | | | R ² by model | |
|-------------------|--|-------------------|-------------------|-------------------|-------------------|------------------|-------------------------|------|
| | 1 | 2 | 3 | 4 | 5 | 6 | 1 | 6 |
| Some | .039*** (.008) | .041*** (.007) | .026*** (.008) | .014* (.008) | .006 (.008) | .006 (.008) | | |
| Persistent | .110*** (.015) | .120*** (.016) | .087*** (.016) | .062*** (.017) | .047*** (.017) | .046** (.018) | .025 | .073 |

^a Coded 0 (not true) or 1 (at least somewhat true)

^b Standard errors in parentheses; * $p < .10$, ** $p < .05$, *** $p < .01$.

^c Covariates introduced at each model:

2: Gender, age, birth parity, ethnicity, SEN, BMI

3: Number of brothers, number of sisters, family structure, family transitions

4: Parental education, working hours and parental conflict (use of force)

5: Early parenting, maternal mental health, child cognitive ability, SDQ scores

6: Country, neighbourhood deprivation, urban/rural location, overcrowding

Table 2.24 The role of poverty within hierarchical regression analysis predicting the frequency with which children hurt or pick on peers ($N = 8,682$)

| Poverty | Standardised (β) values of poverty by model ^a | | | | | | R ² by model | |
|-------------------|--|-------------------|-----------------|----------------|-----------------|-----------------|-------------------------|------|
| | 1 | 2 | 3 | 4 | 5 | 6 | 1 | 6 |
| Some | .074 (.012) | .011 (.012) | -.003 (.012) | .004 (.012) | -.001 (.012) | .009 (.013) | | |
| Persistent | .058* (.020) | .063*** (.022) | .020 (.023) | .037 (.026) | .031 (.025) | .046* (.026) | .002 | .041 |

^a Coded (1 (sometimes) or 0 (never));

^b Standard errors in parentheses; * $p < .10$, ** $p < .05$, *** $p < .01$.

^c Covariates introduced at each model:

2: Gender, age, birth parity, ethnicity, SEN, BMI

3: Number of brothers, number of sisters, family structure, family transitions

4: Parental education, working hours and parental conflict (use of force)

5: Early parenting, maternal mental health, child cognitive ability, SDQ scores

6: Country, neighbourhood deprivation, urban/rural location, overcrowding

Other significant predictors of parent-reported bullying, in the final model, included child, family and environmental factors, as follows:

- Being **male** rather than female ($p < .01$)
- Being **younger**, relative to peers ($p < .01$)
- **SEN** ($p < .05$)
- **Externalising** behaviour ($p < .01$)
- Being from **White**, rather than Mixed ($p < .01$), Pakistani/Bangladeshi ($p < .01$) or Other backgrounds ($p < .01$)
- Having more **sisters** ($p < .01$) and **brothers** ($p < .05$)
- Living with **single parents** rather than both biological parents ($p < .05$)
- Higher levels of **maternal mental health symptoms** ($p < .01$)
- **Lower levels of overcrowding** at home, with higher numbers of people per room associated with children being *less* likely to bully peers ($p < .01$).

Many of the factors which predicted parent reports of children's bullying were also significant (or marginally significant) predictors on the child report measure (gender, age, ethnicity, sibship size, externalising behaviour, maternal mental health). In addition, controlling for other factors, children were also **less** likely to report bullying their peers, if they:

- Had higher levels of **internalising** behaviour ($p < .01$)
- Had experienced **more family transitions** ($p < .05$)
- Lived in **Wales** ($p < .01$), **Scotland** ($p < .05$) and **Northern Ireland** ($p < .01$), as opposed to England.

2.8 Summary

Overall, children were generally very positive about relationships with their peers, though around one in six reported being hurt or picked on weekly. Parents tended to reinforce this picture. For the most part, prior to controlling for other factors, poverty – especially persistent poverty – was associated with more problematic relationships.

Specifically, compared to other children, those with experience of poverty were:

- More likely to frequently fall out with friends
- More likely to fight with or bully other children
- More likely to be (frequently) bullied
- More likely to play on their own
- Less likely to have a good friend
- Less likely to be liked by other children
- Less likely to talk to their friends about their worries.

However, those with experience of poverty were just as likely as other children to be happy with their friends, and overall, they spent more time with them outside school. Notably, on this question and in relation to being bullied, they were more likely than their peers to select response options at both 'extremes' (i.e. 'most days' and 'never'), reinforcing that children in poverty are not a homogenous group, and that other factors will influence their relationships.

Subsequent regression analyses demonstrated that, after taking many other factors into account, (persistent) poverty remained a significant predictor of just two peer relationship outcomes: more frequent interaction with friends outside school, and more frequent fights with, or bullying of, peers.

Among other predictors of peer relationship outcomes, the following commonly played a part in predicting **less positive**, or more problematic relationships:

- Special educational needs
- Externalising behaviour
- Internalising symptoms
- Higher body mass index (BMI)
- Age (being younger than peers)
- Having more brothers (and sometimes more sisters)
- Maternal mental health symptoms
- White, rather than BME backgrounds.

Other factors which emerged as significant in several cases were:

- Gender (with boys more likely to be solitary and less likely to fall out with, or confide in, friends – but more likely to bully other children)
- Cognitive skills (with lower skills scores associated with victimisation by peers, less interaction and lower levels of confiding with friends)
- Parental engagement (in the early years; associated with higher levels of interaction with friends and more frequent fallings out).

Finally, after taking other factors into account, children (and sometimes their parents) tended to report more positive peer relationship outcomes if they lived in Wales, Scotland or Northern Ireland, rather than England – although rates of confiding in friends were higher among children in England than elsewhere.

3. Findings part 2: Family relationships

This chapter reports findings on parent-child and sibling relationships. As with Chapter 2, for each outcome measure, two sets of results are presented: the 'raw' associations with poverty and then findings from regression analyses which take other relevant factors into account. Unless otherwise stated, relationship measures are based on children's self-report data. Associations described as 'significant' are significant at $p < .05$. For regression analyses, key findings are presented in the text (with p values for poverty and other coefficients, to better illustrate the impact of introducing controls), with full details of the regression models set out in Appendices E and F.

The following aspects of family relationships are covered, in turn:

- Children's happiness with their families
- Closeness in the parent-child relationship
- Parent-child communication and confiding
- Parent-child conflict
- Sibling victimisation and bullying.

3.1 Children's happiness with their families

Children's happiness with their families was unrelated to poverty, with the vast majority in each group claiming to be completely happy (or almost) (Table 3.1).

Table 3.1 Child's feelings about their family (level of happiness) ($N = 10,247$)

| | Completely happy | | | | | Not at all happy | | Total (%) |
|-------------------|------------------|-------|-------|-------|-------|------------------|-------|-----------|
| | 1 (%) | 2 (%) | 3 (%) | 4 (%) | 5 (%) | 6 (%) | 7 (%) | |
| Poverty | | | | | | | | |
| None | 73.0 | 16.2 | 4.2 | 1.8 | 1.3 | 1.0 | 2.5 | 100.0 |
| Some | 73.8 | 13.1 | 4.9 | 2.4 | 1.7 | 1.4 | 2.7 | 100.0 |
| Persistent | 76.6 | 11.4 | 4.2 | 2.0 | 1.7 | 1.4 | 2.8 | 100.0 |
| Total | 73.9 | 14.4 | 4.4 | 2.0 | 1.5 | 1.2 | 2.6 | 100.0 |

Unexpectedly, however, after controlling for other factors (notably family size and structure), persistent poverty predicted *greater* happiness (Table 3.2; Tables E.1 and E.2).

As might be expected, factors which independently predicted **lower** levels of happiness with families related to siblings and parents, specifically:

- Living with **single parents** rather than both biological parents ($p < .01$)
- Having **more sisters** ($p < .01$) and **more brothers** ($p < .05$)
- Having main **carers who worked fewer hours** ($p < .01$)
- **Parental conflict**, involving use of force ($p < .01$)
- **Harsh parental discipline** ($p < .01$)
- Higher levels of **maternal mental health symptoms** ($p < .01$).

Table 3.2 The role of poverty within hierarchical regression analysis predicting children's happiness with their family ^a (*N* = 8,682)

| Poverty | Standardised (β) values of poverty by model ^{b, c} | | | | | | R ² by model | |
|-------------------|---|------------------|-------------------|-------------------|-------------------|-------------------|-------------------------|------|
| | 1 | 2 | 3 | 4 | 5 | 6 | 1 | 6 |
| Some | -.018* (.010) | -.018* (.010) | .009 (.010) | .012 (.010) | .015 (.010) | .011 (.011) | | |
| Persistent | -.009 (.013) | -.010 (.014) | .046*** (.015) | .053*** (.016) | .057*** (.016) | .052*** (.017) | .001 | .027 |

^a Coded 1 (1 or 2 out of 7) or 0 (less happy)

^b Standard errors in parentheses; * $p < .10$, ** $p < .05$, *** $p < .01$.

^c Covariates introduced at each model:

2: Gender, age, birth parity, ethnicity, SEN, BMI

3: Number of brothers, number of sisters, family structure, family transitions

4: Parental education, working hours and parental conflict (use of force)

5: Early parenting, maternal mental health, child cognitive ability, SDQ scores

6: Country, neighbourhood deprivation, urban/rural location, overcrowding

3.2 Parent-child closeness

Persistent poverty was associated with slightly lower levels of closeness in the parent-child relationship, based on data from main carers. Although the majority of parents in each group reported being 'extremely' close to their child, this was the case for 59.2 per cent of those who were 'never poor' compared to 54.4 per cent of the persistently poor (Table 3.3).

Table 3.3 Closeness of the parent-child relationship (Parent report, *N* = 9,797)

| | Not very close | Fairly close | Very close | Extremely close | Total |
|-------------------|----------------|--------------|------------|-----------------|-------|
| Poverty | (%) | (%) | (%) | (%) | (%) |
| None | 0.1 | 4.5 | 36.2 | 59.2 | 100.0 |
| Some | 0.4 | 7.8 | 31.7 | 60.0 | 100.0 |
| Persistent | 0.3 | 9.3 | 36.1 | 54.4 | 100.0 |
| Total | 0.2 | 6.3 | 34.8 | 58.7 | 100.0 |

Not surprisingly, given this weak bivariate relationship, even persistent poverty failed to play a significant role in predicting parent-child closeness after controlling for other factors (Table 3.4; Table E.3).

Factors which *did* emerge as significant predictors of **greater** closeness in the final model included the following child, family and environmental factors:

- Being **female**, rather than male ($p < .05$)
- Having a **higher BMI** ($p < .01$)
- Living with **single parents** rather than both biological parents ($p < .01$)
- Greater **parental engagement** (in the early years) ($p < .01$)
- Living in **urban** rather than rural areas ($p < .05$)

A similar spread of factors predicted **lower** levels of relationship closeness:

- **Externalising** behaviour ($p < .01$)
- Being **first born** ($p < .01$)
- Having **more sisters** ($p < .01$) and **more brothers** ($p < .01$)
- Being from '**other**' **ethnic groups** (including Chinese) rather than White backgrounds ($p < .05$)
- Higher levels of **parental education** ($p < .01$)
- **Harsh discipline** ($p < .01$)
- **Maternal mental health symptoms** ($p < .01$)
- **Overcrowding** at home (more people per room) ($p < .05$).

Table 3.4 The role of poverty within hierarchical regression analysis predicting closeness of the parent-child relationship ^a (Parent report, $N = 8,682$)

| Poverty | Standardised (β) values of poverty by model ^{b, c} | | | | | | R ² by model | |
|-------------------|---|--------------------|-----------------|------------------|-----------------|-----------------|-------------------------|------|
| | 1 | 2 | 3 | 4 | 5 | 6 | 1 | 6 |
| Some | -.017 (.018) | -.020 (.018) | -.010 (.019) | -.023 (.020) | -.009 (.019) | -.003 (.020) | | |
| Persistent | -.091*** (.026) | -.083*** (.026) | -.031 (.029) | -.058* (.033) | -.038 (.033) | -.032 (.034) | .003 | .066 |

^a Coded 0 (not very or fairly) to 2 (extremely close)

^b Standard errors in parentheses; * $p < .10$, ** $p < .05$, *** $p < .01$.

^c Covariates introduced at each model:

2: Gender, age, birth parity, ethnicity, SEN, BMI

3: Number of brothers, number of sisters, family structure, family transitions

4: Parental education, working hours and parental conflict (use of force)

5: Early parenting, maternal mental health, child cognitive ability, SDQ scores

6: Country, neighbourhood deprivation, urban/rural location, overcrowding

3.3 Parent-child communication

Talking about children's priorities

Based on parent reports, poverty (especially persistent poverty), was associated with less frequent communication with children about topics important to them. More than two thirds (67.3 per cent) of those with no experience of poverty reported these conversations taking place (almost) every day, compared to 57.5 per cent of those in persistent poverty (Table 3.5).

Table 3.5 Parent-child talk about the child's priorities (Parent report, $N = 10,247$)

| Poverty | Every day or almost | Several times a week | Once or twice a week | Once or twice a month | Less often | Not at all | Total |
|-------------------|---------------------|----------------------|----------------------|-----------------------|------------|------------|-------|
| | (%) | (%) | (%) | (%) | (%) | (%) | (%) |
| None | 67.3 | 21.4 | 8.9 | 1.9 | 0.4 | 0.1 | 100.0 |
| Some | 64.3 | 22.8 | 9.7 | 2.3 | 0.7 | 0.3 | 100.0 |
| Persistent | 57.5 | 25.3 | 12.3 | 3.1 | 1.0 | 0.8 | 100.0 |
| Total | 64.7 | 22.5 | 9.7 | 2.3 | 0.6 | 0.3 | 100.0 |

Focusing on results of regression analyses, (persistent) poverty was no longer a significant predictor of parent-child talk by Step 4 of the model, after controlling for variables such as parental education (Table 3.6; Table E.4).

Table 3.6 The role of poverty within hierarchical regression analysis predicting parent-child talk about child's priorities^a (Parent report, $N = 8,682$)

| Poverty | Standardised (β) values of poverty by model | | | | | | R ² by model | |
|-------------------|---|--------------------|-------------------|-----------------|-----------------|-----------------|-------------------------|------|
| | 1 | 2 | 3 | 4 | 5 | 6 | 1 | 6 |
| Some | -.049** (.020) | -.055*** (.020) | -.025 (.021) | .011 (.023) | .016 (.023) | .032 (.023) | | |
| Persistent | -.140*** (.030) | -.015*** (.031) | -.079** (.035) | -.001 (.041) | -.004 (.041) | -.027 (.042) | .005 | .034 |

^a Coded 0 (< once a month) to 2 (at least several times a week)

^b Standard errors in parentheses; * $p < .10$, ** $p < .05$, *** $p < .01$.

^c Covariates introduced at each model:

2: Gender, age, birth parity, ethnicity, SEN, BMI

3: Number of brothers, number of sisters, family structure, family transitions

4: Parental education, working hours and parental conflict (use of force)

5: Early parenting, maternal mental health, child cognitive ability, SDQ scores

6: Country, neighbourhood deprivation, urban/rural location, overcrowding

Holding all other factors constant, each of the following predicted **more frequent** parent-child communication:

- **SEN** ($p < .01$)
- Being from **Black (British)** backgrounds, rather than White ($p < .01$)
- Higher levels of **parental education** ($p < .01$)
- **Parental engagement** in the early years ($p < .01$).

Conversely, five family and environmental factors predicted **less** frequent talk:

- Living with **single parents** rather than both biological parents ($p < .01$)
- Having more **sisters** ($p < .01$) and more **brothers** ($p < .05$)
- **Harsh discipline** ($p < .01$)
- **Area deprivation** ($p < .05$)
- **Overcrowding** at home (more people per room) ($p < .05$).

Confiding about worries

The picture of communication painted by parents was reinforced by children, with those in poverty less likely to report sharing worries with 'someone at home'. Almost three-quarters of those never in poverty (73.8 per cent) said that they would do so, compared with two thirds of those with some (66.7 per cent) or persistent (66.8 per cent) experience of poverty (Table 3.7).

Table 3.7 Confiding in someone at home ($N = 9,876$)

| | No | Yes | Total |
|------------|------|------|-------|
| Poverty | (%) | (%) | (%) |
| None | 26.3 | 73.8 | 100.0 |
| Some | 33.3 | 66.7 | 100.0 |
| Persistent | 33.2 | 66.8 | 100.0 |
| Total | 29.5 | 70.5 | 100.0 |

Regression analysis showed that persistent poverty was no longer a significant predictor of confiding at home, after controlling for family structure. However, the association with *less* persistent poverty remained, even after other factors were included in the model (Table 3.8; Table E.5). This anomalous finding, contrasting with others showing linear relationships between poverty and outcomes, may be due to chance. It is possible, however, that *change* in family income is independently associated with difficulty confiding.

Among other significant independent predictors, being **first born** was positively associated with confiding ($p < .01$), as was living in **England**, rather than Wales ($p < .05$) or Scotland. Conversely, three factors were negatively associated with confiding:

- Living with **single parents**, rather than both biological parents ($p < .01$)
- **Harsh parental discipline** ($p < .01$)
- **Externalising** behaviour ($p < .01$).

Table 3.8 The role of poverty within hierarchical regression analysis predicting whether children tell someone at home about worries ^a ($N = 8,682$)

| Poverty | Standardised (β) values of poverty by model ^{b,c} | | | | | | R ² by model | |
|-------------------|--|--------------------|--------------------|--------------------|--------------------|--------------------|-------------------------|------|
| | 1 | 2 | 3 | 4 | 5 | 6 | 1 | 6 |
| Some | -.064*** (.014) | -.061*** (.014) | -.045*** (.014) | -.046*** (.015) | -.041*** (.014) | -.041*** (.015) | .005 | .020 |
| Persistent | -.058*** (.017) | -.056*** (.019) | -.026 (.021) | -.034 (.025) | -.025 (.025) | -.024 (.026) | | |

^a Coded (1 (yes) or 0 (no))

^b Standard errors in parentheses; * $p < .10$, ** $p < .05$, *** $p < .01$.

^c Covariates introduced at each model:

2: Gender, age, birth parity, ethnicity, SEN, BMI

3: Number of brothers, number of sisters, family structure, family transitions

4: Parental education, working hours and parental conflict (use of force)

5: Early parenting, maternal mental health, child cognitive ability, SDQ scores

6: Country, neighbourhood deprivation, urban/rural location, overcrowding

3.4 Parent-child conflict

On parent reports, experience of family poverty (persistent or otherwise) was associated with *slightly* higher rates of parent-child conflict. Around 31.0 per cent of parents with experience of poverty reported 'frequent battles of will' with their child; four per cent more than those never in poverty (Table 3.9).

Table 3.9 Whether the parent has frequent battles of will with their child
(Parent report, $N = 9,530$)

| | Yes | No | Total |
|-------------------|------------|-----------|--------------|
| Poverty | (%) | (%) | (%) |
| None | 27.6 | 72.4 | 100.0 |
| Some | 31.4 | 68.6 | 100.0 |
| Persistent | 31.3 | 68.7 | 100.0 |
| Total | 29.3 | 70.7 | 100.0 |

In subsequent regression analyses (with a smaller sample due to missing data), (persistent) poverty was only a significant multivariate predictor at Step 2; that is, after controlling for some child characteristics such as gender and ethnicity, but before taking account of other factors (Table 3.10; Table E.6).

Table 3.10 The role of poverty within hierarchical regression analysis predicting frequent parent-child battles of will (Parent report, $N = 8,682$)

| Poverty | Standardised (β) values of poverty by model | | | | | | R² by model | |
|-------------------|---|-------------------|-----------------|-----------------|----------------|-----------------|-------------------------------|------|
| | 1 | 2 | 3 | 4 | 5 | 6 | 1 | 6 |
| Some | -.019 (.014) | -.025* (.014) | -.012 (.015) | -.004 (.016) | .016 (.015) | .014 (.015) | | |
| Persistent | -.015 (.054) | -.040** (.019) | -.017 (.021) | .005 (.025) | .038 (.025) | -.036 (.025) | .000 | .104 |

^a Coded (1 (yes) or 0 (no))

^b Standard errors in parentheses; * $p < .10$, ** $p < .05$, *** $p < .01$.

^c Covariates introduced at each model:

2: Gender, age, birth parity, ethnicity, SEN, BMI

3: Number of brothers, number of sisters, family structure, family transitions

4: Parental education, working hours and parental conflict (use of force)

5: Early parenting, maternal mental health, child cognitive ability, SDQ scores

6: Country, neighbourhood deprivation, urban/rural location, overcrowding

Within the final regression model, significant multivariate predictors of **greater** parent-child conflict included child, family and environmental factors:

- Being **male** rather than female ($p < .01$)
- Being from **Indian** ($p < .05$), **Pakistani/Bangladeshi** ($p < .01$) and **Black/** Black British backgrounds ($p < .01$), rather than White backgrounds
- Longer **parental working hours**, for main carers and partners ($p < .05$).

Conversely, **less** frequent parent-child conflict was associated with:

- **SEN** ($p < .01$)
- Higher **BMI** ($p < .01$)
- **Externalising** behaviour ($p < .01$)
- Being **first born** ($p < .01$)
- Higher levels of **parental education** ($p < .05$)
- **Harsh discipline** ($p < .01$)
- Higher levels of **maternal mental health symptoms** ($p < .01$)
- Living in **Wales**, rather than England ($p < .05$).

3.5 Sibling victimisation and bullying

MCS5 included two self-report questions on children's relationships with their siblings, focusing on bullying and victimisation.

As with victimisation by *peers*, children with experience of poverty (especially persistent poverty) were somewhat more likely than others to select response options at both 'extremes'. Compared to other children, they were:

- More likely to be hurt or picked on by siblings 'most days' - but also more likely to say this never happened (Table 3.12), and
- More likely to hurt or pick on siblings 'most days' - but also more likely to say they 'never' behaved this way (Table 3.13).

Table 3.12 Frequency with which siblings hurt or pick on the child ($N = 9,237$)

| | Most days | About once a week | About once a month | Every few months | Less often | Never | Total |
|-------------------|------------------|--------------------------|---------------------------|-------------------------|-------------------|--------------|--------------|
| Poverty | (%) | (%) | (%) | (%) | (%) | (%) | (%) |
| None | 19.7 | 24.4 | 8.9 | 6.4 | 20.4 | 20.3 | 100.0 |
| Some | 24.1 | 18.9 | 6.6 | 6.4 | 19.2 | 24.9 | 100.0 |
| Persistent | 26.8 | 14.3 | 5.5 | 5.6 | 22.1 | 25.7 | 100.0 |
| Total | 22.3 | 20.9 | 7.6 | 6.2 | 20.4 | 22.6 | 100.0 |

Table 3.13 Frequency with which the child hurts or picks on siblings ($N = 9,264$)

| | Most days | About once a week | About once a month | Every few months | Less often | Never | Total |
|-------------------|------------------|--------------------------|---------------------------|-------------------------|-------------------|--------------|--------------|
| Poverty | (%) | (%) | (%) | (%) | (%) | (%) | (%) |
| None | 10.2 | 22.4 | 11.0 | 8.2 | 25.3 | 23.0 | 100.0 |
| Some | 12.9 | 18.9 | 7.8 | 7.2 | 23.5 | 29.7 | 100.0 |
| Persistent | 15.5 | 14.9 | 4.3 | 5.8 | 29.6 | 29.9 | 100.0 |
| Total | 12.0 | 20.0 | 8.8 | 7.5 | 25.6 | 26.2 | 100.0 |

As occasionally hurting or picking on siblings was very common, subsequent regression analyses focused on frequent bullying (that which happened 'most days').

As shown in Table 3.14 (Table F.1) and Table 3.15 (Table F.2), poverty (persistent or otherwise) was initially a significant predictor of frequent sibling bullying. However, after controlling for all other factors, it was no longer a significant predictor of either victimisation by, or bullying of, siblings, though in both cases a non-significant association with *less* persistent poverty was still apparent ($p < .10$).

Table 3.14 The role of poverty within hierarchical regression analysis predicting frequent victimisation by siblings^a (N = 9,186)

| Poverty | Standardised (β) values of poverty by model ^b | | | | | | R ² by model | |
|-------------------|--|-------------------|------------------|-------------------|------------------|-----------------|-------------------------|------|
| | 1 | 2 | 3 | 4 | 5 | 6 | 1 | 6 |
| Some | .046*** (.011) | .047*** (.012) | .031** (.012) | .035*** (.013) | .027** (.013) | .026* (.013) | | |
| Persistent | .072*** (.017) | .085*** (.017) | .045** (.020) | .057** (.024) | .043* (.024) | .041 (.025) | .005 | .032 |

^a Coded 1 (most days) or 0 (not)

^b Standard errors in parentheses; * $p < .10$, ** $p < .05$, *** $p < .01$.

^c Covariates introduced at each model:

2: Gender, age, birth parity, ethnicity, SEN, BMI

3: Number of brothers, number of sisters, family structure, family transitions

4: Parental education, working hours and parental conflict (use of force)

5: Early parenting, maternal mental health, child cognitive ability, SDQ scores

6: Country, neighbourhood deprivation, urban/rural location, overcrowding

Table 3.15 The role of poverty within hierarchical regression analysis predicting frequent bullying of siblings^a (N = 9,186)

| Poverty | Standardised (β) values of poverty by model ^{b, c} | | | | | | R ² by model | |
|-------------------|---|-------------------|-------------------|------------------|-----------------|-----------------|-------------------------|------|
| | 1 | 2 | 3 | 4 | 5 | 6 | 1 | 6 |
| Some | .028*** (.009) | .033*** (.009) | .028*** (.009) | .022** (.010) | .017* (.010) | .016* (.010) | | |
| Persistent | .055*** (.013) | .063*** (.014) | .046*** (.016) | .034* (.019) | .024 (.019) | .023 (.019) | .004 | .026 |

^a Coded 1 (most days) or 0 (not)

^b Standard errors in parentheses; * $p < .10$, ** $p < .05$, *** $p < .01$.

^c Covariates introduced at each model:

2: Gender, age, birth parity, ethnicity, SEN, BMI

3: Number of brothers, number of sisters, family structure, family transitions

4: Parental education, working hours and parental conflict (use of force)

5: Early parenting, maternal mental health, child cognitive ability, SDQ scores

6: Country, neighbourhood deprivation, urban/rural location, overcrowding

Many child and family factors helped to predict bullying by siblings. Of all the factors included in the final model, significant predictors of victimisation were:

- Having a higher **BMI** ($p < .05$)
- **Externalising** behaviour ($p < .01$)
- Lower **cognitive ability** ($p < .01$).
- Being **younger** (relative to peers) ($p < .01$)
- Being **White**, rather than from Black or 'Other' backgrounds ($p < .01$)
- Being a **first born** child ($p < .05$)
- Having more **brothers** ($p < .01$)
- **Living with a single parent**, rather than in a stepfamily ($p < .05$) or (marginally) living with both biological parents ($p < .10$)
- Having more highly **educated parents** ($p < .05$)
- **Parental conflict** (involving use of force) ($p < .01$)
- Harsh parental **discipline** ($p < .01$)
- **Lower levels of parental engagement** in the early years ($p < .05$).

Just three factors positively predicted children's reports of their own hurtful behaviour, with frequent bullying of siblings more common among those who were **first born** ($p < .01$); had **more brothers** ($p < .01$); and displayed more **externalising** behaviour ($p < .01$). No other variables made significant contributions to the final model.

3.6 Summary

Overall, as with peer relationships, discussed previously, the findings set out in this chapter present a positive picture of family relationships. Sibling bullying was relatively common, but this was not unexpected, being in line with previous research (Wolke and Skew 2012).

There were significant (bivariate) associations between poverty and a range of parent-child relationship outcomes, such that, compared to other children, those with experience of poverty were:

- Less likely to talk to their family about their worries and with their mothers about things they cared about
- More likely to have conflictual relationships with their mothers
- Less likely to be close to their mothers.

However, those with experience of poverty were just as likely as their peers to report being happy with their families.

In relation to siblings, there were clear non-linear patterns, such that children with experience of poverty (and especially persistent poverty) were more likely than their peers to select response options at both 'extremes'. In other words, they were significantly more likely to bully, and be bullied by, siblings 'most days' - but also more likely to report this 'never' happening.

Turning to regression analyses, which took account of a broad range of other factors, persistent poverty was a significant multivariate predictor in relation to just one measure of family relationships, being associated with *higher* levels of happiness with families. This relationship was not apparent in bivariate analyses. In addition, after taking other factors into account, *less* persistent poverty was associated with lower levels of confiding in 'someone at home', although *persistent* poverty was no longer a significant predictor, after taking account of family structure and other factors.

Factors which were independently predictive of **less positive** parent-child relationship outcomes included:

- Externalising behaviour
- Higher numbers of siblings
- Maternal mental health symptoms
- Interparental conflict
- Harsh discipline
- Overcrowding at home.

Additional multivariate predictors of parent-child relationships (on more than one, mainly parent-report measure) included:

- **Gender**, with mothers reporting closer and less conflictual relationships with daughters than with sons
- **Family structure**, with living with single parents rather than both biological parents associated with lower levels of happiness among children and lower levels of communication, yet higher levels of closeness
- **BMI scores**, with higher BMI associated with closer and less conflictual relationships
- **Parental educational attainment**, with higher attainment predicting less close, but more communicative, parent-child relationships
- Greater parental **engagement** in the early years, which predicted closer and more communicative parent-child relationships.

As might be expected, there was substantial overlap between the factors linked with more problematic parent-child and sibling relationships. However, some predictors were unique to individual outcomes, and there were also differences in the nature of the associations. Higher BMI scores, for example, were associated with greater victimisation by siblings despite (as noted above) being linked to more positive parent-child relationships on a number of measures.

4. Conclusions and recommendations

This chapter draws together key findings from chapters two and three and considers their implications for policy, practice and further research. Where relevant, the discussion draws on findings from previous studies, and on the views of the Young Research Advisors (see Appendix G for further detail).

4.1 Overview

This research was designed to address the following question, using data from the first five waves of the Millennium Cohort Study:

What role, if any, does low income play in shaping the quality of children's relationships with parents, peers and siblings?

Bivariate analyses demonstrated that poverty had significant and largely negative associations with a broad range of relationship outcomes. In addition a gradient was observed, such that associations between persistent poverty and relationships were generally stronger than those with less persistent ('some') poverty. Multivariate regression analyses controlling for confounding factors showed that, with a few notable exceptions, relating to (greater) time spent with friends and fighting with peers, these associations were no longer significant after controlling for other pertinent factors. Those found to be most important include parental factors (education, working hours, parental conflict) and factors measured in early childhood (early parenting style, maternal mental health, child cognitive ability, and child socio-emotional skills). This echoes findings from smaller-scale studies which have taken other family and child factors into account alongside income or social class (Dunn *et al.* 2000; O'Connor *et al.* 2006; Sweeting and West 2001).

This should not be taken to imply that the apparent links between poverty and heightened risk of adverse relationship outcomes are illusory. Rather, it reinforces that, as found in previous quantitative and qualitative research, children living in poverty are also more likely to be affected by a broad range of stressors and constraints which influence their development and social relationships (Adelman *et al.* 2003; Attree 2004; Attree 2006; Conger *et al.* 2010; Griggs and Walker 2008; Ridge 2011). Findings from this study suggest that some of these risk factors mediate associations between poverty and relationship outcomes – consistent with existing evidence that maternal mental health problems and adverse parenting practices may themselves be directly influenced by poverty (Cooper and Stewart 2013).

This research had a number of key strengths, including a large, longitudinal sample and self-report data from children and parents on peer and family relationships. It builds on existing knowledge about the associations between poverty over time and children's relationships, while taking account of important mediating factors. The research was not designed to disentangle the causal chains connecting experience of poverty and relationship outcomes. That said, the study used a uniquely rich data set, containing background characteristics measured prospectively from infancy making it more likely that the parameters estimated are indicative of causal effects.

4.2 Poverty and children's relationships

In this section, key findings are highlighted and discussed in turn.

The role of poverty

Overall, children with experience of poverty were just as happy with their friendships and families as were other children. However, bivariate analyses showed that family poverty – especially persistent poverty – was significantly associated with less positive or more problematic relationships on most of the selected measures, concerning:

- Being solitary, unpopular and lacking close friends
- Falling out with friends
- Fighting or bullying other children
- Victimization by peers
- Lower levels of communication and confiding in friends and family
- Less close, and more conflictual, relationships with their mothers¹⁰.

However, the independent role played by poverty was generally limited. Prior to adjusting for other background variables, poverty typically explained less than 2% of the variance in each outcome. Much of this variance was explained by potential confounders, particularly child socio-emotional skills, parental education, and measures of parenting and maternal mental health in early childhood. This reinforces that children in poverty are by no means a homogenous group, and suggests that these other factors play an important role in mediating associations between low income and relationships.

Overall, therefore, findings showed that **experience of family poverty played a limited independent role in influencing relationship outcomes** at age 11, as in there was little direct association between poverty and relationship outcomes, once related factors were taken into account.

Nevertheless, poverty was a significant multivariate predictor of three relationship outcomes. Specifically, after controlling for other factors, *persistent poverty* was weakly associated with:

- More frequent interaction with friends outside school
- Greater propensity to fight with or bully peers
- *Higher* levels of self-reported happiness with families.

The first finding, around interaction with friends, may have positive and negative implications. Children may spend more free time with friends because of restrictions on parents' ability to fund trips or structured activities (Adelman, Middleton and Ashworth 2003), but this time may still be viewed positively in itself, and reflect as well as help develop strong, valued peer relationships (Jones, Gutman and Platt 2013). However, higher rates of fighting or bullying among children from poor families may also stem, in part, from them spending

¹⁰ As many hypotheses were tested, it was likely that at least one significant association would emerge, simply by chance. However, a similar picture emerged across most aspects of children's relationships, suggesting that the findings are robust.

more time together. Moreover, some may target their peers in order to defend themselves against the stressors and threats to self-esteem which previous research has associated with life on a low income (Attree 2006; Ridge 2011).

The finding that, after controlling for other factors, *persistent* poverty was associated with slightly *more* happiness with families was surprising, particularly given the lack of any such bivariate relationship. Any interpretations are speculative and require further investigation, but it may be that, in the absence of other family risk factors, or where home life provides a haven from external stressors, *stable* life on a low income is associated with particular appreciation of family relationships. As noted by others, in some cases a lack of money can bring families together (Ridge 2011).

In drawing conclusions about the role of poverty in children's relationships, it is important to recognise the limitations of the indicators involved. While the measure of poverty employed in this study allowed distinguishing those with more persistent experience of low income, it did not capture the severity of poverty within the defined poverty groups, and therefore may have underestimated its role. Likewise, not all aspects of relationships were explored in MCS5. In some cases, analyses were reliant on data from main carers, as fewer questions were posed to children. Of course, even self-report survey measures are unlikely to fully capture the nuances of children's relationships, reinforcing the importance of using in-depth, qualitative work to better understand the issues involved.

The role of other factors

Factors which appeared to mediate associations between poverty and relationship outcomes included parental factors (low levels of educational attainment, fewer working hours, parental conflict, maternal mental health problems) and others measured in early childhood (early parenting style, child behavioural problems and low cognitive ability). More broadly, the apparent influences on peer and family relationship outcomes differed, although there were some common factors:

- Externalising behaviour, having more siblings (especially brothers) and maternal mental health problems predicted more problematic peer, parent-child and sibling relationships.
- Gender also played a part; compared to girls, boys were more solitary, less likely to fall out with friends or to confide in them, and had less close, and more conflictual, relationships with their mothers.

Additional factors which predicted less positive peer relationships on several measures (even after controlling for other factors) included:

- Special educational needs (SEN)
- Internalising symptoms
- Higher body mass index (BMI)
- Age (being younger, relative to peers)
- Lower cognitive skill scores.

These findings echo those of previous studies (McArdle *et al.* 2000; Sweeting and West 2001; Smith 2004; Lambert *et al.* 2008).

Interestingly, after controlling for other factors, children also reported more positive peer relationships on a range of measures if they were from certain BME backgrounds, and if they lived in Wales, Scotland and/or Northern Ireland, rather than England (though levels of confiding in friends *and* family were higher in England than elsewhere).

Consistent with previous findings (for example, Dunn *et al.* 2000; Harold *et al.* 2004), other factors which independently predicted less positive sibling and parent relationship outcomes included:

- Harsh discipline (in early childhood)
- Lower levels of parental engagement (in early childhood)
- Parental conflict (use of force at any point)
- Living with single parents (at wave 5, when relationship outcomes were measured. While this was linked to *closer* parent-child relationships, it predicted more sibling victimisation, lower levels of happiness with families and lower levels of parent-child communication).

Notably, certain factors were associated with peer and family relationships in contrasting ways. For example, fuller households (with a higher ratio of people to rooms) independently predicted less communicative, and less close, parent-child relationships on parent-report measures – in line with previous research (Evans, 2006). In contrast, after controlling for other factors, having a fuller household actually predicted more positive peer relationship outcomes: not only greater popularity and lower levels of bullying behaviour on parent reports, but also higher levels of self-reported happiness with friendships. This may reflect that children actively seek to spend time with, and form closer relationships with peers, in part to compensate for lack of space or attention at home. Conversely, higher BMI predicted closer and less conflictual parent-child relationships (on parent reports) – but typically increased the risk of negative outcomes in terms of both peer and sibling relationships.

Evidently, a broad range of factors have a role to play in shaping children's relationships. However, the extensive list included in this study explained no more than 11 per cent of the variance in outcomes, suggesting that factors other than those included in the models are important. These are likely to include more proximate measures of child characteristics and parenting, spillover effects of other relationships, stressors and school factors.

4.3 Implications for policy and further research

This research has demonstrated that poverty is significantly associated with less positive, or more problematic, relationships for children, on a broad range of measures. However, it is by no means the sole determinant of their experiences, and children from poor families are typically no less happy with their friends and family than those from more advantaged backgrounds.

Issues such as bullying, falling out with friends, and difficulty confiding in others affect those in affluent, as well as low income, homes. However, children living in poverty – particularly persistent poverty – are more likely to experience many of these problems. To some extent, this is explained by their exposure to other, related, risk factors. Nonetheless, for some aspects of relationships explored in

this study, poverty predicted outcomes even *after* controlling for other factors. Most notably, persistent poverty was still associated with spending more time with friends, and with greater propensity to fight with, or bully peers.

These findings have a number of implications for policy and further research. Two key messages arise for policy and practice.

- **Firstly, the results underline the continuing importance of ending child poverty, adding to the existing evidence of the risks of growing up poor.** Not only do children in low income homes have the odds stacked against them in relation to education, health and wellbeing, but they are also more likely to experience problematic relationships – and at a key stage of their development, on the cusp of the transition to secondary school.
- **Secondly, children from *all* backgrounds need to be provided with the skills and support they need to develop and maintain positive relationships.** One in six children reported being hurt or picked on by peers, on a weekly basis. This research highlighted several related risk factors; including externalising behaviour in early childhood, having more siblings, and a history of maternal mental health problems, which predicted more problematic peer, parent-child *and* sibling relationships. In addition, special educational needs (SEN), internalising symptoms, being overweight (higher BMI) and being younger relative to peers all predicted difficulties with friendships. Both universal and targeted support should be provided. There is an important role for teaching and other school-based activities which help to develop socio-emotional and relationship skills, for example through Personal, Social, Health and Economic education or pastoral tutorial time, alongside accessible advice and support for parents around helping children with these issues.

Focusing on future research, at least six areas require further exploration.

1. **Firstly, there is a need to better understand the 'causal' role of poverty and its interactions with other factors.** One strength of this piece of research was the use of a measure of poverty which drew on family income reported at each of the five waves of MCS, rather than a snapshot picture from one point in time. Making use of background characteristics measured prospectively from infancy made it more likely that the parameters estimated provide insights into causal effects. However, measures of relationship outcomes necessarily came from Wave 5 of the study; the first time that such questions were posed to children. Future research could usefully explore *changes* in relationships and how – and through which mechanisms - they might relate to changes in family income. By estimating changes over time, the case for estimating a causal parameter is even stronger.
2. **Findings from this study might usefully be compared with others using a more nuanced measure of income.** This would improve understanding of the extent to which the effects of poverty are underestimated by grouping families using a single cut-off point.

3. **Thirdly**, this research identified some recurring differences in peer relationships linked to ethnic background and country, with BME children and those living outside England (in Wales, Scotland and/or Northern Ireland) reporting less problematic relationships on various measures, after controlling for other factors. **Additional exploration of these differences – and their interactions with poverty - is needed to better understand any cultural and structural influences at play.**
4. **Further research could also explore the (mixed) implications of children in poverty spending more time with their friends;** whether this is linked to spending *less* time with families, in structured activities and/or alone, compared to other children; and any risks and/or benefits concerning the nature and quality of their relationships and wellbeing.
5. While it was not possible to explore children's relationships with fathers (or partners to main carers) within the present study, **future studies might usefully consider the role of poverty in relationships with fathers, teachers, and romantic partners** as children move through adolescence. Data from the next wave of MCS will also allow exploring the role of poverty in the friendship trajectories of secondary school pupils, for whom peer relationships assume a particularly important role.
6. **Finally, MCS data might also be explored to investigate the impact of the nature and quality of children's relationships** on outcomes such as academic success, mental health and wellbeing.

References

Adelman, L., Middleton, S. and Ashworth, K. (2003) *Britain's Poorest Children. Severe and persistent poverty and social exclusion*. London: Save the Children.

Attree, P. (2004) Growing up in disadvantage: A systematic review of the qualitative evidence. *Child: Care, Health and Development*, 30(6), 679-689.

Attree, P. (2006) The social costs of child poverty: A systematic review of the qualitative evidence. *Children & Society*, 20(1), 54-66.

Browne, J., Hood, A., and Joyce, R. (2013) *Child and working age poverty in Northern Ireland from 2010-2020, IFS Report R78*. London: Institute for Fiscal Studies.

Conger, R. D., Conger, K. J., & Martin, M. J. (2010) Socioeconomic status, family processes, and individual development. *Journal of Marriage and Family*, 72(3), 685-704.

Cooper, K. and Stewart, K. (2013) *Does money affect children's outcomes? A systematic review*. York: Joseph Rowntree Foundation.

Department for Work and Pensions (2015) *Households Below Average Income*. London: Department for Work and Pensions.

Dunn, J., Davies, L. C., O'Connor, T. G., and Sturgess, W. (2000) Parents' and partners' life course and family experiences: Links with parent-child relationships in different family settings. *Journal of Child Psychology and Psychiatry*, 41(8), 955-968.

Dunn, J. and Deater-Deckard, K. (2001) *Children's views of their changing families*. York: Joseph Rowntree Foundation.

Dunn, J. (2004) *Children's Friendships: The Beginnings of Intimacy*. London: Blackwell.

Evans, G. (2006) Child Development and the Physical Environment. *Annual Review of Psychology*, 57, 423-451.

Goodman, R. (1997) The Strengths and Difficulties Questionnaire: A Research Note. *Journal of Child Psychology and Psychiatry*, 38, 581-586.

Griggs, J. and Walker, R. (2008) *The costs of child poverty for individuals and society. A literature review*. York: Joseph Rowntree Foundation.

Harold, G. T., Shelton, K. H., Goeke-Morey, M. C., and Cummings, E. M. (2004) Marital conflict, child emotional security about family relationships and child adjustment. *Social Development*, 13(3), 350-376.

HM Treasury (2008) *Ending Child Poverty: Everybody's Business*. London: Crown.

- Katz, I., Corlyon, J., La Placa, V. and Hunter, S. (2007) *The relationship between parenting and poverty*. York: Joseph Rowntree Foundation.
- Lambert, P., Scourfield, J., Smalley, N. and Jones, R. (2008) The social context of school bullying: Evidence from a survey of children in South Wales. *Research Papers in Education*, 23(3), 269-291.
- McArdle, P., O'Brien, G., Macmillan, A., and Kolvin, I. (2000) The peer relations of disruptive children with reference to hyperactivity and conduct disorder. *European Child & Adolescent Psychiatry*, 9(2), 91-99.
- HM Treasury (2008) *Ending Child Poverty: Everybody's Business*. London: Crown.
- O'Connor, T. G., Dunn, J., Jenkins, J. M., and Rasbash, J. (2006) Predictors of between-family and within-family variation in parent-child relationships. *Journal of Child Psychology and Psychiatry*, 47(5), 498-510.
- Pope, L., Rodrigues, L, and Royston, S. (2013) *Through Young Eyes: The Children's Commission on Poverty*. London: The Children's Society.
- Ridge, T. (2002) *Childhood Poverty and Social Exclusion: From a child's perspective*. Bristol: Policy Press.
- Ridge, T. (2009) *Living with Poverty: A Review of the Literature on Children's and Families' Experiences of Poverty*. Department for Work and Pensions Research Report No 594. Norwich: HMSO.
- Ridge, T. (2011) The Everyday Costs of Poverty in Childhood: A Review of Qualitative Research Exploring the Lives and Experiences of Low-Income Children in the UK. *Children & Society*, 25, 73-84.
- Smith, P. K. (2004) Bullying: Recent developments. *Child and Adolescent Mental Health*, 9(3), 98-103.
- Sweeting, H. and West, P. (2001). Being different: Correlates of the experience of teasing and bullying at age 11. *Research Papers in Education*, 16(3), 225-246.
- Wolke, D. and Skew, A.J. (2012). Bullying among siblings. *International Journal of Adolescent Medicine and Health*, 24(1), 17-25.

Appendices

Appendix A. Relationship outcome variables

Below are listed the **19 outcome variables**, concerning relationships with siblings, peers and parents, which were included in both bivariate and multivariate analyses. All of these are taken from the fifth sweep of the MCS, and they were judged the most relevant and useful of those available from children and parents. Parent data came from interviews with children's main carers, who in the vast majority of cases were their mothers.

Those variables considered lower priority, and therefore omitted from analyses, were either (a) teacher-ratings which were available from a smaller sample and (b) proxy ratings from main carers on the child's relationship with a second parent, as opposed to ratings from either the child or the relevant parent.

Peer relationships

Peer outcomes cover the frequency and quality of interaction with peers, the child's level of happiness regarding their friends, and social support from friends (and others). They are a mixture of child and parent report variables, focusing on:

- Frequency of interaction with friends outside school (parent and child report: 2 variables) (every day or almost.... not at all; never...most days)
- How often the child argues / falls out with friends (child report) (never...most days)
- How often the child is bullied by peers (child report) (never...most days)
- How often the child bullies peers (child report) (never...most days)
- How the child feels about their friends (child report) (completely...not at all happy)
- Who the child talks to if worried about something (child report) (multiple choice, focusing on one option: 'a friend')
- Child's peer relationship problems (parent report) (one of five subscales of the Strengths and Difficulties Questionnaire (SDQ)) (5 variables)

Parent-child relationships

These outcomes cover communication, closeness and conflict within the parent-child relationship, and the child's overall happiness with their family.

- How the child feels about their family (child report) (completely... not at all happy)
- How often the parent talks to the child about things important to him/her (parent report) (every day or almost every day... not at all)
- Who the child talks to if worried about something (child report) (multiple choice, focusing on one option: 'someone at home')

- Overall, how close the parent is to the child (parent report) (not very... extremely close)
- Whether the parent has frequent battles of will with the child (parent report) (yes or no).

Sibling relationships

Two relevant sibling relationship variables were available, both child-report measures, focusing on:

- How often the child's brothers or sisters hurt or pick on them on purpose (never...most days)
- How often the child hurts or picks on their brothers or sisters on purpose (never...most days).

Appendix B. Control variables

Table B.1 Details of control variables (Part 1)

| Variable | Wave | Type | Details |
|----------------------------------|------|-------------|--|
| Gender | 1 | Binary | Female or male |
| Age | 5 | Continuous | Age in months at interview |
| Birth parity | 1 | Binary | First born or later born |
| Ethnicity | 1 | Categorical | White Mixed Indian Pakistani/ Bangladeshi Black or Black British Other ethnic group (inc. Chinese, other) |
| Child SEN | 4 | Binary | SEN as recognised by child's school (yes/no) |
| Body Mass Index (BMI) | 5 | Continuous | BMI score |
| Siblings | 5 | Continuous | (Two variables) Number of sisters Number of brothers |
| Family structure | 5 | Categorical | Two biological parents Single parent Stepfamily |
| Experience of family transition | 1-5 | Continuous | Number of family transitions based on changes in marital status from Waves 1 to 5. |
| Parental educational attainment | 4 | Ordinal | Highest educational qualification achieved by the main carer or partner |
| Parental working hours | 5 | Continuous | (Two variables) Main carer working hours (per week) Partner working hours (per week) |
| Parental conflict (use of force) | 1-5 | Binary | Whether or not the partner used force on the main respondent at any point from Wave 1 to Wave 5. |
| Parenting | 2 | Continuous | (Two composite variables) Harsh discipline (5 items) Parental engagement (5 items) |
| Maternal mental health | 2-4 | Continuous | Kessler Psychological Distress Scale (K10) ¹¹ (Mean Kessler scale score from waves 2, 3 and 4) |

¹¹ Kessler, R.C., Andrews, G., Colpe *et al.* (2002) Short screening scales to monitor population prevalences and trends in non-specific psychological distress. *Psychological Medicine*, 32, 959-956.

Table B.1 Details of control variables (Part 2)

| Control variables | Wave | Type | Details |
|---|-------|-------------|--|
| Child cognitive ability | 2 / 3 | Continuous | Composite variable derived from the Bracken school readiness assessment score ¹² (Wave 2) and three scores from wave 3 (1- naming vocabulary T-score; 2- Picture similarity T-score; 3- Pattern construction T-score) |
| Internalising symptoms | 2 | Continuous | Strengths and Difficulties Questionnaire (SDQ) Internalising problems (10 items) ¹³ |
| Externalising symptoms | 2 | Continuous | Strengths and Difficulties Questionnaire (SDQ) Externalising problems (10 items) |
| Country | 5 | Categorical | England, Wales, Scotland, Northern Ireland |
| Neighbourhood deprivation | 4 | Ordinal | Indices of Multiple Deprivation (IMD) scores |
| Urban/ rural location | 4 | Binary | Urban (1), Rural (0) |
| Ratio of people to rooms (overcrowding) | 5 | Continuous | Number of people per room living in the household. |

¹² Bracken, B. A. (2002) Bracken School Readiness Assessment. San Antonio: The Psychological Corporation.

¹³ Goodman, R. (2001) Psychometric properties of the Strengths and Difficulties Questionnaire (SDQ). *Journal of the American Academy of Child and Adolescent Psychiatry*, 40, 1337-1345.

Appendix C. Relationships between poverty and control variables

Relationships between poverty and covariates included in regression models are set out below. As expected, chi-square tests and analyses of variance demonstrated that poverty showed significant associations with many of these factors (in these cases, effect sizes are included in the text for reference). The strongest relationships were between poverty and parental education, area deprivation and parental working hours, but there were also substantive associations with family (sibship) size, family structure, ethnicity, child SDQ scores and cognitive ability, and maternal mental health symptoms.

Child sex

There was no significant association between poverty and child sex ($\chi^2 (2) = 3.27, p = .20$).

Table C.1 Poverty and child sex ($N = 12011$)

| | Girl | Boy | Total |
|------------|-------|-------|-------|
| Poverty | (%) | (%) | (%) |
| None | 52.0 | 53.5 | 52.8 |
| Some | 30.3 | 29.0 | 29.6 |
| Persistent | 17.7 | 17.5 | 17.6 |
| Total | 100.0 | 100.0 | 100.0 |

Child age

Poverty was significantly, but very weakly, related to child age ($F = 11.59 (2, 12008), p < .001, \eta^2 < .001$). Never poor children were significantly younger than either those with some ($p = .02$) or persistent ($p < .001$) experience of poverty, but the age gaps amounted to just a few days (six or twelve respectively).

Table C.2 Poverty and child age in months ($N = 12011$)

| Poverty | Mean | SD |
|------------|-------|------|
| None | 133.8 | 3.94 |
| Some | 134.0 | 4.01 |
| Persistent | 134.2 | 4.06 |
| Total | 133.9 | 3.99 |

Child birth order

Poverty was significantly, but weakly associated with child birth order, reflecting the greater prevalence of poverty in larger families ($\chi^2 (2) = 116.02, \text{Cramér's } V = .10, p < .001$).

Table C.3 Poverty and child birth order ($N = 12011$)

| | First born | Later born | Total |
|-------------------|-------------------|-------------------|--------------|
| Poverty | (%) | (%) | (%) |
| None | 58.4 | 49.0 | 52.8 |
| Some | 27.4 | 31.2 | 29.6 |
| Persistent | 14.2 | 19.9 | 17.6 |
| Total | 100.0 | 100.0 | 100.0 |

Ethnicity

Poverty was significantly associated with ethnicity ($\chi^2 (10) = 1419.78$, Cramér's $V = .24$, $p < .001$). Compared to those from White backgrounds, children from all other groups, particularly Pakistani/Bangladeshi and Black families, were more likely to be in poverty.

Table C.4 Poverty and ethnicity ($N = 12010$)

| | White | Mixed | Indian | Pakistani / Bangladeshi | Black | Other | Total |
|-------------------|--------------|--------------|---------------|--------------------------------|--------------|--------------|--------------|
| Poverty | (%) | (%) | (%) | (%) | (%) | (%) | (%) |
| None | 56.8 | 36.3 | 51.1 | 7.3 | 26.9 | 27.8 | 52.8 |
| Some | 29.4 | 37.7 | 36.6 | 22.7 | 27.5 | 42.4 | 29.6 |
| Persistent | 13.7 | 26.1 | 12.3 | 69.9 | 45.6 | 29.8 | 17.6 |
| Total | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

Special educational needs

Poverty was associated with significantly higher incidence of special educational needs (SEN) among children, although the relationship was weak ($\chi^2 (2) = 46.25$, Cramér's $V = .06$, $p < .001$).

Table C.5 Poverty and child SEN ($N = 12011$)

| | Child has SEN | | Total |
|-------------------|----------------------|------------|--------------|
| | No | Yes | |
| Poverty | (%) | (%) | (%) |
| None | 53.7 | 42.6 | 52.8 |
| Some | 29.2 | 34.9 | 29.6 |
| Persistent | 17.1 | 22.5 | 17.6 |
| Total | 100.0 | 100.0 | 100.0 |

Child body mass index (BMI)

Poverty was significantly but weakly related to child BMI ($F = 41.65$ (2, 12008), $p < .001$, $\eta^2 < .001$). Never poor children had significantly lower BMIs than those with some ($p < .001$) or persistent ($p < .001$) experience of poverty.

Table C.6 Poverty and child BMI ($N = 12011$)

| Poverty | Mean | SD |
|------------|-------|------|
| None | 18.89 | 3.35 |
| Some | 19.54 | 3.71 |
| Persistent | 19.39 | 3.98 |
| Total | 19.17 | 3.59 |

Numbers of siblings

Poverty was moderately associated with numbers of brothers ($F = 385.62$ (2, 12008), $p < .001$, $\eta^2 = .06$) and sisters ($F = 444.16$ (2, 12008), $p < .001$, $\eta^2 = .07$). All group differences were significant, such that those in persistent poverty had significantly higher numbers of siblings than those with some experience of poverty; they in turn had more siblings than never poor children.

Table C.7 Poverty and number of siblings ($N = 12011$)

| Poverty | Brothers | | Sisters | |
|------------|----------|-------|---------|-------|
| | Mean | SD | Mean | SD |
| None | .71 | .750 | .67 | .725 |
| Some | .93 | .904 | .84 | .883 |
| Persistent | 1.32 | 1.161 | 1.32 | 1.148 |
| Total | .88 | .909 | .84 | .891 |

Family structure

Poverty was significantly associated with family structure (χ^2 (4) = 1731.02, Cramér's $V = .268$, $p < .001$). Compared to children living with both parents, those in single parent or stepfamily homes were more likely to be poor.

Table C.8 Poverty and family structure ($N = 12011$)

| | Single parent | Two biological parents | Stepfamily | Total |
|------------|---------------|------------------------|------------|-------|
| Poverty | (%) | (%) | (%) | (%) |
| None | 26.9 | 65.2 | 27.1 | 52.8 |
| Some | 38.4 | 24.5 | 44.9 | 29.6 |
| Persistent | 34.6 | 10.3 | 28.0 | 17.6 |
| Total | 100.0 | 100.0 | 100.0 | 100.0 |

Family transitions

Poverty was significantly, but not strongly, related to the number of family transitions (changes of marital status) recorded between waves 1 and 5 ($F = 164.25$ (2, 12008), $p < .001$, $\eta^2 = .03$). Never poor children had experienced significantly fewer transitions than either those with some ($p < .001$) or persistent ($p < .001$) experience of poverty.

Table C.9 Poverty and number of family transitions experienced ($N = 12011$)

| Poverty | Mean | SD |
|------------|------|-----|
| None | .45 | .78 |
| Some | .75 | .98 |
| Persistent | .71 | .97 |
| Total | .58 | .89 |

Parental education

Poverty was significantly and strongly associated with lower levels of parental education (χ^2 (10) = 4605.34, Cramér's $V = .44$, $p < .001$).

Table C.10 Poverty and parental educational qualifications ($N = 12012$)

| | None/ overseas (%) | NVQ level 1 (%) | NVQ level 2 (%) | NVQ level 3 (%) | NVQ level 4 (%) | NVQ level 5 (%) | Total (%) |
|------------|--------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|--------------|
| Poverty | | | | | | | |
| None | 6.3 | 13.4 | 37.4 | 50.8 | 77.8 | 89.2 | 52.8 |
| Some | 29.0 | 42.3 | 40.6 | 38.8 | 19.4 | 10.0 | 29.6 |
| Persistent | 64.7 | 44.4 | 22.0 | 10.4 | 2.9 | 0.8 | 17.6 |
| Total | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

Parental working hours

Poverty was significantly and strongly related to the number of hours worked by the main carer ($F = 1047.50$ (2, 12008), $p < .001$, $\eta^2 = .15$) and partner ($F = 1703.08$ (2, 12008), $p < .001$, $\eta^2 = .22$). Parents of never poor children worked significantly longer hours than either those with some ($p < .001$) or persistent ($p < .001$) experience of poverty, and those in persistent poverty also worked significantly fewer hours than those in less persistent poverty ($p < .001$).

Table C.11 Poverty and parental working hours ($N = 12011$)

| Poverty | Main carer working hours | | Partner working hours | |
|------------|-----------------------------|-------|--------------------------|-------|
| | Mean | SD | Mean | SD |
| None | 19.55 | 14.39 | 35.46 | 19.06 |
| Some | 14.27 | 14.75 | 22.84 | 23.03 |
| Persistent | 3.80 | 9.49 | 7.26 | 15.73 |
| Total | 15.22 | 14.92 | 26.77 | 22.45 |

Parental conflict involving use of force

Poverty was significantly, but weakly, associated with main carers reporting their partners having used force against them ($\chi^2(2) = 46.06$, Cramér's $V = .06$, $p < .001$). (The highest incidence of conflict involving force was among those with *some* experience of poverty, with 12 per cent reporting use of force, compared to 8 per cent of never poor children and 9 per cent of those with persistent experience of poverty).

Table C.12 Poverty and use of force in parental conflict ($N = 12012$)

| | Partner has used force with main carer | | |
|-------------------|--|---------|-----------|
| | No (%) | Yes (%) | Total (%) |
| Poverty | | | |
| None | 53.5 | 45.5 | 52.8 |
| Some | 28.7 | 38.4 | 29.6 |
| Persistent | 17.7 | 16.1 | 17.6 |
| Total | 100.0 | 100.0 | 100.0 |

Harsh discipline

Use of harsh discipline did not differ by poverty ($F = .485(2, 12008)$, $p = .62$).

Table C.13 Poverty and level of harsh discipline ($N = 12011$)

| Poverty | Mean | SD |
|-------------------|-------|------|
| None | 14.94 | 3.44 |
| Some | 15.00 | 3.80 |
| Persistent | 15.00 | 3.78 |
| Total | 14.97 | 3.61 |

Parental engagement

Levels of parental engagement with children in the early years differed significantly, but not greatly, by poverty ($F = 25.33(2, 12008)$, $p < .001$, $\eta^2 < .01$). Those with persistent experience of poverty scored slightly lower on measures of engagement activity than those with some ($p < .001$) or no experience of poverty ($p < .001$), and those with some experience of poverty scored slightly lower than those with none ($p < .003$).

Table C.14 Poverty and parental engagement scores ($N = 12011$)

| Poverty | Mean | SD |
|-------------------|-------|------|
| None | 25.11 | 5.26 |
| Some | 24.75 | 5.32 |
| Persistent | 24.17 | 5.65 |
| Total | 24.84 | 5.36 |

Internalising symptoms

There were significant and moderate, associations between poverty and levels of child internalising symptoms ($F = 379.81$ (2, 12008), $p < .001$, $\eta^2 = .06$). All group differences were significant at $p < .001$, with greater experience of poverty associated with higher levels of symptoms.

Table C.15 Poverty and child internalising symptoms ($N = 12011$)

| Poverty | Mean | SD |
|------------|------|------|
| None | 2.35 | 2.09 |
| Some | 3.10 | 2.42 |
| Persistent | 3.88 | 2.71 |
| Total | 2.84 | 2.39 |

Externalising symptoms

There were significant, moderate, associations between poverty and levels of child externalising symptoms ($F = 428.49$ (2, 12008), $p < .001$, $\eta^2 = .07$). All group differences were significant at $p < .001$, with greater experience of poverty associated with higher levels of symptoms.

Table C.16 Poverty and child externalising behaviour ($N = 12011$)

| Poverty | Mean | SD |
|------------|------|------|
| None | 5.79 | 3.56 |
| Some | 7.24 | 3.97 |
| Persistent | 8.38 | 4.03 |
| Total | 6.67 | 3.90 |

Cognitive ability

There were significant, moderate, associations between poverty and children's cognitive ability scores ($F = 664.91$ (2, 12008), $p < .001$, $\eta^2 = .10$). All group differences were significant at $p < .001$, with greater experience of poverty associated with lower cognitive ability.

Table C.17 Poverty and child cognitive ability scores ($N = 12011$)

| Poverty | Mean | SD |
|------------|-------|------|
| None | 55.74 | 6.91 |
| Some | 52.87 | 7.45 |
| Persistent | 49.36 | 7.56 |
| Total | 53.77 | 7.58 |

Maternal mental health

There were significant and moderate associations between poverty and maternal mental health (Kessler) scores ($F = 423.79$ (2, 12008), $p < .001$, $\eta^2 = .07$). All group differences were significant at $p < .001$, with greater experience of poverty associated with more mental health symptoms.

Table C.18 Poverty and maternal mental health (Kessler) scores ($N = 12011$)

| Poverty | Mean | SD |
|------------|------|------|
| None | 2.60 | 2.56 |
| Some | 3.73 | 3.61 |
| Persistent | 4.69 | 4.21 |
| Total | 3.25 | 3.34 |

Area deprivation

There were strong associations between poverty and area deprivation scores ($F = 2261.07$ (2, 12008), $p < .001$, $\eta^2 = .27$). All group differences were significant at $p < .001$, with greater experience of poverty associated with higher levels of deprivation (on the IMD scale on which higher scores indicate lower deprivation).

Table C.19 Poverty and area deprivation scores (higher scores indicate lower levels of deprivation) ($N = 12011$)

| Poverty | Mean | SD |
|------------|------|------|
| None | 6.92 | 2.51 |
| Some | 4.82 | 2.63 |
| Persistent | 2.94 | 2.19 |
| Total | 5.60 | 2.92 |

Urban / rural location

Poverty was significantly, but weakly, associated with living in urban rather than rural areas (χ^2 (2) = 265.23, Cramér's $V = .149$, $p < .001$).

Table C.20 Poverty and urban/ rural location ($N = 12012$)

| Poverty | Rural (%) | Urban (%) | Total (%) |
|------------|-----------|-----------|-----------|
| None | 65.0 | 49.6 | 52.8 |
| Some | 27.1 | 30.3 | 29.6 |
| Persistent | 7.9 | 20.1 | 17.6 |
| Total | 100.0 | 100.0 | 100.0 |

Ratio of people to rooms

There were significant, and moderate, associations between poverty and the ratio of people to rooms ($F = 612.70$ (2, 12008), $p < .001$, $r^2 = .09$). All group differences were significant (at $p < .001$), with greater experience of poverty associated with higher ratios, indicating fuller or more crowded homes.

Table C.21 Poverty and ratio of people to rooms ($N = 12011$)

| Poverty | Mean | SD |
|------------|------|-----|
| None | .84 | .41 |
| Some | 1.03 | .49 |
| Persistent | 1.26 | .70 |
| Total | .97 | .52 |

Country

Poverty was significantly associated with country of residence (χ^2 (2) = 39.97, Cramér's $V = .041$, $p < .001$). (Compared to those in England, children in Northern Ireland were more likely to have *some* experience of poverty, those in Wales were more likely to have *persistent* experience of poverty and those in Scotland were *less* likely to have experience of persistent poverty).

Table C.22 Poverty and country of residence ($N = 12012$)

| | England | Wales | Scotland | Northern Ireland | Total |
|------------|---------|-------|----------|---------------------|-------|
| Poverty | (%) | (%) | (%) | (%) | (%) |
| None | 53.2 | 48.8 | 55.9 | 42.8 | 52.8 |
| Some | 29.2 | 29.7 | 29.8 | 38.4 | 29.6 |
| Persistent | 17.6 | 21.6 | 14.3 | 18.8 | 17.6 |
| Total | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

Appendix D. Models: Peer relationships

Table D.1 Hierarchical multiple regression: Frequency of interaction with friends outside school ¹

| | Model 1 | Model 2 | Model 3 | Model 4 | Model 5 | Model 6 |
|---------------------------|---------------|---------------|---------------|---------------|---------------|---------------|
| No poverty | .00 (.) | .0 (.) | .0 (.) | .0 (.) | .0 (.) | 0 (.) |
| Some poverty | -.06 (.03) | -.10*** (.03) | -.11*** (.03) | -.07** (.04) | -.08** (.04) | -.06* (.04) |
| Persistent pov. | -.05 (.06) | -.20*** (.05) | -.22*** (.06) | -.14** (.06) | -.16** (.07) | -.13* (.07) |
| Sex: female | | .0 (.) | .0 (.) | .0 (.) | .0 (.) | .0 (.) |
| Sex: male | | -.06* (.03) | -.06* (.03) | -.06* (.03) | -.05 (.03) | -.05 (.03) |
| Child age | | -.02*** (.00) | -.02*** (.00) | -.02*** (.00) | -.02*** (.00) | -.02*** (.00) |
| Firstborn: no | | .0 (.) | .0 (.) | .0 (.) | .0 (.) | .0 (.) |
| Firstborn: yes | | -.07** (.03) | -.05 (.03) | -.05 (.03) | -.06* (.03) | -.06* (.03) |
| White | | .0 (.) | .0 (.) | .0 (.) | .0 (.) | .0 (.) |
| Mixed | | .26** (.10) | .28*** (.10) | .26** (.10) | .25** (.10) | .22** (.10) |
| Indian | | .90*** (.12) | .90*** (.12) | .88*** (.13) | .87*** (.12) | .83*** (.12) |
| Pakistani/Bang. | | .86*** (.12) | .85*** (.12) | .86*** (.12) | .84*** (.12) | .80*** (.12) |
| Black | | .60*** (.08) | .60*** (.08) | .58*** (.08) | .58*** (.09) | .54*** (.09) |
| Other ethnicity | | .64*** (.18) | .65*** (.18) | .64*** (.18) | .64*** (.18) | .61*** (.18) |
| SEN: no | | .0 (.) | .0 (.) | .0 (.) | .0 (.) | .0 (.) |
| SEN: yes | | .19*** (.07) | .19*** (.07) | .20*** (.07) | .20*** (.07) | .20*** (.07) |
| BMI | | .01* (.01) | .01* (.01) | .01** (.01) | .01** (.00) | .01** (.01) |
| No. sisters | | | .02 (.02) | .03 (.02) | .02 (.02) | .03 (.02) |
| No. brothers | | | .03 (.02) | .03 (.02) | .03* (.02) | .04* (.02) |
| Single parent | | | .0 (.) | .0 (.) | .0 (.) | .0 (.) |
| Both parents | | | .03 (.04) | .03 (.04) | .02 (.04) | .03 (.04) |
| Stepfamily | | | .05 (.06) | .05 (.06) | .05 (.06) | .05 (.06) |
| Transitions | | | .01 (.02) | .01 (.02) | .00 (.02) | -.00 (.02) |
| Parental education | | | | .04*** (.01) | .04*** (.01) | .04*** (.01) |
| Hours worked (main carer) | | | | .00 (.00) | .00 (.00) | .00 (.00) |
| Hours worked (partner) | | | | -.00 (.00) | -.00 (.00) | -.00 (.00) |
| Parental conflict (no) | | | | .0 (.) | .0 (.) | .0 (.) |
| Parental conflict (yes) | | | | .03 (.05) | .03 (.05) | .02 (.05) |
| Harsh discipline | | | | | -.01 (.00) | -.01 (.00) |
| Parental engagement | | | | | .01* (.00) | .00* (.00) |
| Internalising | | | | | .03*** (.01) | .03*** (.01) |
| Externalising | | | | | -.01* (.01) | -.01** (.00) |
| Cognitive scores | | | | | .00 (.00) | .00 (.00) |
| Kessler scores | | | | | .00 (.01) | .00 (.00) |
| IMD scores | | | | | | .00 (.01) |
| Rural | | | | | | .0 (.) |
| Urban | | | | | | -.00 (.04) |
| Overcrowding | | | | | | -.00 (.04) |
| England | | | | | | .0 (.) |
| Wales | | | | | | -.14*** (.05) |
| Scotland | | | | | | -.27*** (.04) |
| NI | | | | | | -.15** (.07) |
| Constant | 2.08*** (.02) | 4.31*** (.51) | 4.24*** (.51) | 4.08*** (.51) | 3.89*** (.56) | 3.69*** (.58) |
| N | 8682 | 8682 | 8682 | 8682 | 8682 | 8682 |
| R ² | .001 | .040 | .041 | .042 | .048 | .053 |

Standard errors in parentheses, * $p < .10$, ** $p < .05$, *** $p < .01$

¹ Coded 0 (most days) to 4 (never)

Table D.2 Hierarchical multiple regression: Interaction with friends outside school (parent report)¹

| | Model 1 | Model 2 | Model 3 | Model 4 | Model 5 | Model 6 |
|---------------------------|---------------|---------------|---------------|---------------|---------------|---------------|
| No poverty | .0 (.) | .0 (.) | .0 (.) | .0 (.) | .0 (.) | .0 (.) |
| Some poverty | -.11*** (.04) | -.17*** (.03) | -.16*** (.03) | -.09*** (.04) | -.10*** (.04) | -.06* (.04) |
| Persistent pov. | -.20*** (.07) | -.43*** (.05) | -.43*** (.05) | -.29*** (.06) | -.30*** (.07) | -.24*** (.07) |
| Sex: female | | .0 (.) | .0 (.) | .0 (.) | .0 (.) | .0 (.) |
| Sex: male | | -.12*** (.03) | -.12*** (.03) | -.12*** (.03) | -.12*** (.03) | -.12*** (.03) |
| Child age | | -.02*** (.00) | -.02*** (.00) | -.02*** (.00) | -.02*** (.00) | -.02*** (.00) |
| Firstborn: no | | .0 (.) | .0 (.) | .0 (.) | .0 (.) | .0 (.) |
| Firstborn: yes | | -.04 (.03) | .02 (.03) | .01 (.03) | .00 (.03) | .01 (.03) |
| White | | .0 (.) | .0 (.) | .0 (.) | .0 (.) | .0 (.) |
| Mixed | | .33*** (.09) | .34*** (.09) | .32*** (.09) | .31*** (.08) | .28*** (.09) |
| Indian | | 1.15*** (.14) | 1.13*** (.14) | 1.10*** (.14) | 1.10*** (.14) | 1.06*** (.14) |
| Pakistani/Bang. | | 1.29*** (.15) | 1.24*** (.15) | 1.25*** (.15) | 1.22*** (.15) | 1.18*** (.15) |
| Black | | 1.00*** (.09) | .99*** (.09) | .96*** (.09) | .95*** (.09) | .93*** (.09) |
| Other ethnicity | | 1.04*** (.09) | 1.02*** (.09) | 1.02*** (.10) | 1.00*** (.09) | .98*** (.09) |
| SEN: no | | .0 (.) | .0 (.) | .0 (.) | .0 (.) | .0 (.) |
| SEN: yes | | .33*** (.07) | .34*** (.07) | .35*** (.07) | .36*** (.07) | .36*** (.07) |
| BMI | | .01** (.00) | .01** (.00) | .01*** (.00) | .01*** (.00) | .01*** (.00) |
| No. sisters | | | .07*** (.02) | .07*** (.02) | .07*** (.02) | .07*** (.02) |
| No. brothers | | | .04** (.02) | .04** (.02) | .04** (.02) | .05** (.02) |
| Single parent | | | .0 (.) | .0 (.) | .0 (.) | .0 (.) |
| Both parents | | | .11*** (.04) | .10** (.04) | .10** (.04) | .11*** (.04) |
| Stepfamily | | | .03 (.06) | .04 (.06) | .04 (.06) | .05 (.06) |
| Transitions | | | -.01 (.02) | -.01 (.02) | -.02 (.02) | -.02 (.02) |
| Parental education | | | | .09*** (.01) | .08*** (.01) | .08*** (.01) |
| Hours worked (main carer) | | | | -.00 (.00) | -.00 (.00) | -.00 (.00) |
| Hours worked (partner) | | | | -.00 (.00) | -.00 (.00) | -.00 (.00) |
| Parental conflict (no) | | | | .0 (.) | .0 (.) | .0 (.) |
| Parental conflict (yes) | | | | .03 (.04) | .02 (.05) | .01 (.05) |
| Harsh discipline | | | | | .00 (.00) | -.00 (.00) |
| Parental engagement | | | | | -.01*** (.00) | -.01*** (.00) |
| Internalising | | | | | .03*** (.01) | .04*** (.01) |
| Externalising | | | | | -.01*** (.02) | -.01*** (.00) |
| Cognitive scores | | | | | .01** (.00) | .00** (.00) |
| Kessler scores | | | | | .01* (.01) | .01** (.01) |
| IMD scores | | | | | | .02** (.01) |
| Rural | | | | | | .0 (.) |
| Urban | | | | | | -.03 (.04) |
| Overcrowding | | | | | | -.04 (.03) |
| England | | | | | | .0 (.) |
| Wales | | | | | | -.24*** (.05) |
| Scotland | | | | | | -.34*** (.04) |
| NI | | | | | | -.17*** (.06) |
| Constant | 2.52*** (.02) | 4.71*** (.54) | 4.49*** (.54) | 4.19*** (.54) | 4.01*** (.57) | 3.73*** (.58) |
| N | 8682 | 8682 | 8682 | 8682 | 8682 | 8682 |
| R ² | .004 | .084 | .088 | .095 | .102 | .113 |

Standard errors in parentheses, * $p < .10$, ** $p < .05$, *** $p < .01$ ¹ Coded 0 (every day/ almost) to 4 (less than once a month)

Table D.3 Hierarchical multiple regression: Frequency with which children fall out with friends¹

| | Model 1 | Model 2 | Model 3 | Model 4 | Model 5 | Model 6 |
|---------------------------|---------------|---------------|---------------|---------------|---------------|---------------|
| No poverty | .0 (.) | .0 (.) | .0 (.) | .0 (.) | .0 (.) | .0 (.) |
| Some poverty | -.12*** (.03) | -.13*** (.03) | -.10*** (.03) | -.08** (.03) | -.05 (.03) | -.06 (.03) |
| Persistent pov. | -.16*** (.05) | -.22*** (.05) | -.19*** (.05) | -.14** (.06) | -.09 (.06) | -.09 (.06) |
| Sex: female | | .0 (.) | .0 (.) | .0 (.) | .0 (.) | .0 (.) |
| Sex: male | | .20*** (.03) | .20*** (.03) | .20*** (.03) | .21*** (.03) | .21*** (.03) |
| Child age | | .00 (.00) | .00 (.00) | .00 (.00) | .00 (.00) | .00 (.00) |
| Firstborn: no | | .0 (.) | .0 (.) | .0 (.) | .0 (.) | .0 (.) |
| Firstborn: yes | | -.04 (.03) | -.03 (.03) | -.03 (.03) | -.03 (.03) | -.03 (.03) |
| White | | .0 (.) | .0 (.) | .0 (.) | .0 (.) | .0 (.) |
| Mixed | | .13 (.09) | .14* (.09) | .14* (.09) | .15* (.09) | .17* (.09) |
| Indian | | .18 (.11) | .16 (.12) | .16 (.12) | .16 (.12) | .19 (.12) |
| Pakistani/Bang. | | .44*** (.07) | .40*** (.07) | .41*** (.07) | .41*** (.07) | .44*** (.07) |
| Black | | .31*** (.09) | .32*** (.09) | .32*** (.09) | .29*** (.09) | .32*** (.09) |
| Other ethnicity | | .29** (.12) | .27** (.12) | .28** (.12) | .27** (.12) | .29** (.12) |
| SEN: no | | .0 (.) | .0 (.) | .0 (.) | .0 (.) | .0 (.) |
| SEN: yes | | -.16** (.07) | -.15** (.07) | -.15** (.07) | -.10 (.07) | -.10 (.07) |
| BMI | | -.01 (.00) | -.01 (.00) | -.01 (.00) | -.00 (.00) | -.00 (.00) |
| No. sisters | | | .02 (.02) | .02 (.02) | .01 (.02) | .01 (.02) |
| No. brothers | | | .01 (.02) | .02 (.02) | .01 (.02) | .01 (.02) |
| Single parent | | | .0 (.) | .0 (.) | .0 (.) | .0 (.) |
| Both parents | | | .10** (.04) | .09* (.04) | .06 (.04) | .05 (.04) |
| Stepfamily | | | .02 (.05) | .02 (.06) | .03 (.05) | .03 (.06) |
| Transitions | | | -.01 (.02) | -.01 (.02) | -.01 (.02) | -.00 (.02) |
| Parental education | | | | .02 (.01) | .01 (.01) | .01 (.01) |
| Hours worked (main carer) | | | | .00 (.00) | -.00 (.00) | -.00 (.00) |
| Hours worked (partner) | | | | .00 (.00) | .00 (.00) | .00 (.00) |
| Parental conflict (no) | | | | .0 (.) | .0 (.) | .0 (.) |
| Parental conflict (yes) | | | | -.09* (.05) | -.05 (.05) | -.05 (.05) |
| Harsh discipline | | | | | -.00 (.00) | -.00 (.00) |
| Parental engagement | | | | | -.01** (.00) | -.01** (.00) |
| Internalising | | | | | .01* (.01) | .01* (.01) |
| Externalising | | | | | -.03*** (.00) | -.03*** (.00) |
| Cognitive scores | | | | | .00 (.00) | .00 (.00) |
| Kessler scores | | | | | -.02*** (.01) | -.02*** (.01) |
| IMD scores | | | | | | .01 (.01) |
| Rural | | | | | | .0 (.) |
| Urban | | | | | | .03 (.04) |
| Overcrowding | | | | | | .02 (.04) |
| England | | | | | | .0 (.) |
| Wales | | | | | | .01 (.04) |
| Scotland | | | | | | .14*** (.04) |
| NI | | | | | | .21*** (.04) |
| Constant | 3.80*** (.02) | 3.80*** (.50) | 3.64*** (.51) | 3.57*** (.51) | 3.83*** (.55) | 3.80*** (.56) |
| N | 8682 | 8682 | 8682 | 8682 | 8682 | 8682 |
| R ² | .004 | .021 | .023 | .024 | .036 | .038 |

Standard errors in parentheses, * $p < .10$, ** $p < .05$, *** $p < .01$

¹ Coded 0 (most days) to 4 (never)

Table D.4 Hierarchical multiple regression: Whether children are hurt or picked on by peers¹

| | Model 1 | Model 2 | Model 3 | Model 4 | Model 5 | Model 6 |
|---------------------------|--------------|---------------|---------------|---------------|---------------|---------------|
| No poverty | .0 (.) | .0 (.) | .0 (.) | .0 (.) | .0 (.) | .0 (.) |
| Some poverty | .01 (.02) | .02 (.02) | .01 (.02) | .02 (.02) | .01 (.02) | .01 (.02) |
| Persistent pov. | .03 (.02) | .06*** (.02) | .02 (.02) | .04 (.03) | .02 (.03) | .02 (.03) |
| Sex: female | | .0 (.) | .0 (.) | .0 (.) | .0 (.) | .0 (.) |
| Sex: male | | .05*** (.01) | .05*** (.01) | .05*** (.01) | .04*** (.01) | .04*** (.01) |
| Child age | | -.01*** (.00) | -.01*** (.00) | -.01*** (.00) | -.01*** (.00) | -.01*** (.00) |
| Firstborn: no | | .0 (.) | .0 (.) | .0 (.) | .0 (.) | .0 (.) |
| Firstborn: yes | | .04*** (.01) | .06*** (.01) | .06*** (.01) | .06*** (.01) | .06*** (.01) |
| White | | .0 (.) | .0 (.) | .0 (.) | .0 (.) | .0 (.) |
| Mixed | | -.11*** (.03) | -.11*** (.03) | -.11*** (.03) | -.11*** (.03) | -.12*** (.03) |
| Indian | | -.14*** (.04) | -.13*** (.04) | -.13*** (.04) | -.14*** (.04) | -.15*** (.04) |
| Pakistani/Bang. | | -.17*** (.03) | -.17*** (.03) | -.17*** (.03) | -.17*** (.03) | -.19*** (.03) |
| Black | | -.14*** (.03) | -.15*** (.03) | -.15*** (.03) | -.14*** (.03) | -.15*** (.03) |
| Other ethnicity | | -.17*** (.04) | -.16*** (.04) | -.16*** (.04) | -.16*** (.05) | -.17*** (.05) |
| SEN: no | | .0 (.) | .0 (.) | .0 (.) | .0 (.) | .0 (.) |
| SEN: yes | | .07*** (.02) | .07*** (.02) | .07*** (.02) | .05** (.02) | .05** (.02) |
| BMI | | .00*** (.00) | .01*** (.00) | .01*** (.00) | .00** (.00) | .00** (.00) |
| No. sisters | | | .03*** (.01) | .02*** (.01) | .03*** (.01) | .03*** (.01) |
| No. brothers | | | .02*** (.01) | .02** (.01) | .02** (.01) | .02** (.01) |
| Single parent | | | .0 (.) | .0 (.) | .0 (.) | .0 (.) |
| Both parents | | | -.03* (.02) | -.03** (.02) | -.03 (.02) | -.02 (.02) |
| Stepfamily | | | .02 (.03) | .01 (.03) | .01 (.03) | .01 (.03) |
| Transitions | | | -.00 (.01) | -.00 (.01) | -.00 (.01) | -.01 (.01) |
| Parental education | | | | .01** (.01) | .02*** (.01) | .02*** (.01) |
| Hours worked (main carer) | | | | -.00* (.00) | -.00 (.00) | -.00 (.00) |
| Hours worked (partner) | | | | .00 (.00) | .00 (.00) | .00 (.00) |
| Parental conflict (no) | | | | .0 (.) | .0 (.) | .0 (.) |
| Parental conflict (yes) | | | | .04** (.02) | .03 (.02) | .03 (.02) |
| Harsh discipline | | | | | -.00 (.00) | -.00 (.00) |
| Parental engagement | | | | | .00 (.00) | .00 (.00) |
| Internalising | | | | | -.01* (.00) | -.01* (.00) |
| Externalising | | | | | .01*** (.00) | .01*** (.00) |
| Cognitive scores | | | | | -.00 (.00) | -.00 (.00) |
| Kessler scores | | | | | .01*** (.00) | .01*** (.00) |
| IMD scores | | | | | | -.00 (.00) |
| Rural | | | | | | .0 (.) |
| Urban | | | | | | .01 (.02) |
| Overcrowding | | | | | | .00 (.02) |
| England | | | | | | .0 (.) |
| Wales | | | | | | -.05*** (.02) |
| Scotland | | | | | | -.04** (.02) |
| NI | | | | | | -.10*** (.02) |
| Constant | .30*** (.01) | 1.05*** (.20) | 1.06*** (.21) | 1.01*** (.21) | 1.02*** (.22) | .99*** (.22) |
| N | 8682 | 8682 | 8682 | 8682 | 8682 | 8682 |
| R ² | .000 | .020 | .023 | .025 | .034 | .037 |

Standard errors in parentheses, * $p < .10$, ** $p < .05$, *** $p < .01$

¹ Coded 1 (at least every few months) or 0 (less often)

Table D.5 Hierarchical multiple regression: Whether the child hurts or picks on other children¹

| | Model 1 | Model 2 | Model 3 | Model 4 | Model 5 | Model 6 |
|---------------------------|--------------|--------------|--------------|--------------|---------------|---------------|
| No poverty | .0 (.) | .0 (.) | .0 (.) | .0 (.) | .0 (.) | .0 (.) |
| Some poverty | .01 (.01) | .01 (.01) | -.00 (.01) | .00 (.01) | -.00 (.01) | .01 (.01) |
| Persistent pov. | .06*** (.02) | .06*** (.02) | .02 (.02) | .04 (.03) | .03 (.03) | .05* (.03) |
| Sex: female | | .0 (.) | .0 (.) | .0 (.) | .0 (.) | .0 (.) |
| Sex: male | | .12*** (.01) | .12*** (.01) | .12*** (.01) | .12*** (.01) | .12*** (.01) |
| Child age | | -.00 (.00) | -.00 (.00) | -.00 (.00) | -.00 (.00) | -.00 (.00) |
| Firstborn: no | | .0 (.) | .0 (.) | .0 (.) | .0 (.) | .0 (.) |
| Firstborn: yes | | -.01 (.01) | .01 (.01) | .01 (.01) | .01 (.01) | .01 (.01) |
| White | | .0 (.) | .0 (.) | .0 (.) | .0 (.) | .0 (.) |
| Mixed | | -.07* (.04) | -.07* (.04) | -.07** (.04) | -.07* (.04) | -.07** (.03) |
| Indian | | -.03 (.05) | -.02 (.05) | -.03 (.05) | -.02 (.05) | -.03 (.05) |
| Pakistani/Bang. | | -.06** (.03) | -.05* (.03) | -.05* (.03) | -.05* (.03) | -.06* (.03) |
| Black | | .06* (.03) | .06 (.03) | .05 (.03) | .06* (.03) | .06* (.03) |
| Other ethnicity | | -.10* (.05) | -.09* (.05) | -.09* (.05) | -.09 (.05) | -.09 (.06) |
| SEN: no | | .0 (.) | .0 (.) | .0 (.) | .0 (.) | .0 (.) |
| SEN: yes | | .03 (.02) | .04 (.02) | .04 (.02) | .02 (.02) | .02 (.02) |
| BMI | | -.00 (.00) | -.00 (.00) | -.00 (.00) | -.00 (.00) | -.00 (.00) |
| No. sisters | | | .03*** (.01) | .03*** (.01) | .03*** (.01) | .03*** (.01) |
| No. brothers | | | .03*** (.01) | .03*** (.01) | .03*** (.01) | .03*** (.01) |
| Single parent | | | .0 (.) | .0 (.) | .0 (.) | .0 (.) |
| Both parents | | | -.03* (.02) | -.03* (.02) | -.02 (.02) | -.02 (.02) |
| Stepfamily | | | .01 (.03) | .01 (.03) | .01 (.03) | .01 (.03) |
| Transitions | | | -.02* (.01) | -.02* (.01) | -.02* (.01) | -.02** (.01) |
| Parental education | | | | .01* (.01) | .01** (.01) | .01* (.01) |
| Hours worked (main carer) | | | | -.00 (.00) | .00 (.00) | .00 (.00) |
| Hours worked (partner) | | | | .00 (.00) | .00 (.00) | -.00 (.00) |
| Parental conflict (no) | | | | .0 (.) | .0 (.) | .0 (.) |
| Parental conflict (yes) | | | | .05** (.02) | .04** (.02) | .03* (.02) |
| Harsh discipline | | | | | .00* (.00) | .00 (.00) |
| Parental engagement | | | | | -.00 (.00) | -.00 (.00) |
| Internalising | | | | | -.01*** (.00) | -.01*** (.00) |
| Externalising | | | | | .01*** (.00) | .01*** (.00) |
| Cognitive scores | | | | | .00 (.00) | .00 (.00) |
| Kessler scores | | | | | .00 (.00) | .00* (.00) |
| IMD scores | | | | | | .00 (.00) |
| Rural | | | | | | .0 (.) |
| Urban | | | | | | -.02 (.02) |
| Overcrowding | | | | | | -.02* (.01) |
| England | | | | | | .0 (.) |
| Wales | | | | | | -.07*** (.02) |
| Scotland | | | | | | -.04** (.02) |
| NI | | | | | | -.08*** (.02) |
| Constant | .28*** (.01) | .46** (.20) | .46** (.20) | .42** (.20) | .32 (.21) | .32 (.21) |
| N | 8682 | 8682 | 8682 | 8682 | 8682 | 8682 |
| R ² | .002 | .024 | .029 | .030 | .038 | .041 |

Standard errors in parentheses, * $p < .10$, ** $p < .05$, *** $p < .01$

¹ Coded (1 (sometimes) or 0 (never))

Table D.6 Hierarchical multiple regression: The child's level of happiness with their friends¹

| | Model 1 | | Model 2 | | Model 3 | | Model 4 | | Model 5 | | Model 6 | |
|---------------------------|---------|-------|---------|-------|---------|-------|---------|-------|---------|-------|---------|-------|
| No poverty | .0 | (.) | .0 | (.) | .0 | (.) | .0 | (.) | .0 | (.) | .0 | (.) |
| Some poverty | .04 | (.04) | .04 | (.04) | .01 | (.04) | -.01 | (.05) | -.03 | (.05) | -.02 | (.05) |
| Persistent pov. | .03 | (.06) | .07 | (.06) | .00 | (.06) | -.06 | (.07) | -.10 | (.08) | -.08 | (.07) |
| Sex: female | | | .0 | (.) | .0 | (.) | .0 | (.) | .0 | (.) | .0 | (.) |
| Sex: male | | | -.14*** | (.03) | -.14*** | (.03) | -.14*** | (.03) | -.15*** | (.03) | -.15*** | (.03) |
| Child age | | | -.01** | (.01) | -.01** | (.01) | -.01** | (.00) | -.01** | (.00) | -.01** | (.01) |
| Firstborn: no | | | .0 | (.) | .0 | (.) | .0 | (.) | .0 | (.) | .0 | (.) |
| Firstborn: yes | | | .00 | (.04) | -.00 | (.04) | -.01 | (.04) | -.01 | (.04) | .00 | (.04) |
| White | | | .0 | (.) | .0 | (.) | .0 | (.) | .0 | (.) | .0 | (.) |
| Mixed | | | -.02 | (.09) | -.03 | (.09) | -.03 | (.09) | -.03 | (.09) | -.05 | (.09) |
| Indian | | | -.03 | (.12) | -.01 | (.12) | -.00 | (.12) | -.02 | (.11) | -.05 | (.11) |
| Pakistani/Bang. | | | -.31*** | (.08) | -.26*** | (.08) | -.27*** | (.08) | -.31*** | (.08) | -.35*** | (.08) |
| Black | | | -.10 | (.16) | -.11 | (.16) | -.11 | (.15) | -.11 | (.15) | -.12 | (.16) |
| Other ethnicity | | | -.26 | (.18) | -.24 | (.19) | -.24 | (.19) | -.25 | (.19) | -.25 | (.19) |
| SEN: no | | | .0 | (.) | .0 | (.) | .0 | (.) | .0 | (.) | .0 | (.) |
| SEN: yes | | | .22*** | (.08) | .22*** | (.08) | .21*** | (.08) | .15* | (.08) | .15* | (.08) |
| BMI | | | .00 | (.01) | .00 | (.01) | .00 | (.01) | -.00 | (.01) | .00 | (.01) |
| No. sisters | | | | | -.00 | (.02) | -.01 | (.02) | -.01 | (.02) | .01 | (.02) |
| No. brothers | | | | | .01 | (.02) | .01 | (.02) | .00 | (.02) | .02 | (.02) |
| Single parent | | | | | .0 | (.) | .0 | (.) | .0 | (.) | .0 | (.) |
| Both parents | | | | | -.12** | (.05) | -.09 | (.05) | -.07 | (.05) | -.05 | (.05) |
| Stepfamily | | | | | -.00 | (.08) | .01 | (.08) | .01 | (.08) | .02 | (.08) |
| Transitions | | | | | -.01 | (.03) | -.01 | (.03) | -.01 | (.03) | -.01 | (.03) |
| Parental education | | | | | | | .01 | (.02) | .02 | (.02) | .02 | (.02) |
| Hours worked (main carer) | | | | | | | -.00** | (.00) | -.00** | (.00) | -.00* | (.00) |
| Hours worked (partner) | | | | | | | -.00** | (.00) | -.00* | (.00) | -.00** | (.00) |
| Parental conflict (no) | | | | | | | .0 | (.) | .0 | (.) | .0 | (.) |
| Parental conflict (yes) | | | | | | | .10 | (.07) | .07 | (.07) | .06 | (.07) |
| Harsh discipline | | | | | | | | | .01* | (.01) | .01* | (.01) |
| Parental engagement | | | | | | | | | .00 | (.00) | .00 | (.00) |
| Internalising | | | | | | | | | -.01 | (.01) | -.01 | (.01) |
| Externalising | | | | | | | | | .01** | (.01) | .01** | (.01) |
| Cognitive scores | | | | | | | | | -.01*** | (.00) | -.01*** | (.00) |
| Kessler scores | | | | | | | | | .01* | (.01) | .01* | (.01) |
| IMD scores | | | | | | | | | | | -.01 | (.01) |
| Rural | | | | | | | | | | | .0 | (.) |
| Urban | | | | | | | | | | | .03 | (.04) |
| Overcrowding | | | | | | | | | | | -.12*** | (.03) |
| England | | | | | | | | | | | .0 | (.) |
| Wales | | | | | | | | | | | -.09** | (.04) |
| Scotland | | | | | | | | | | | -.07 | (.05) |
| NI | | | | | | | | | | | -.23*** | (.05) |
| Constant | 1.82*** | (.02) | 3.08*** | (.60) | 3.23*** | (.60) | 3.24*** | (.60) | 3.49*** | (.63) | 3.57*** | (.63) |
| N | 8682 | | 8682 | | 8682 | | 8682 | | 8682 | | 8682 | |
| R ² | .000 | | .007 | | .008 | | .010 | | .016 | | .019 | |

Standard errors in parentheses, * $p < .10$, ** $p < .05$, *** $p < .01$

¹ Coded (1 (completely happy) to 7 (not at all happy))

Table D.7 Hierarchical multiple regression: The child's level of happiness with their friends (binary)¹

| | Model 1 | | Model 2 | | Model 3 | | Model 4 | | Model 5 | | Model 6 | |
|---------------------------|---------|-------|---------|-------|---------|-------|---------|-------|---------|-------|---------|-------|
| No poverty | .0 | (.) | .0 | (.) | .0 | (.) | .0 | (.) | .0 | (.) | .0 | (.) |
| Some poverty | -.02* | (.01) | -.02 | (.01) | -.01 | (.01) | -.01 | (.01) | -.00 | (.01) | -.01 | (.01) |
| Persistent pov. | -.01 | (.02) | -.01 | (.02) | .01 | (.02) | .02 | (.02) | .03 | (.02) | .02 | (.02) |
| Sex: female | | | .0 | (.) | .0 | (.) | .0 | (.) | .0 | (.) | .0 | (.) |
| Sex: male | | | .04*** | (.01) | .05*** | (.01) | .04*** | (.01) | .05*** | (.01) | .05*** | (.01) |
| Child age | | | .00* | (.00) | .00** | (.00) | .00* | (.00) | .00** | (.00) | .00** | (.00) |
| Firstborn: no | | | .0 | (.) | .0 | (.) | .0 | (.) | .0 | (.) | .0 | (.) |
| Firstborn: yes | | | -.00 | (.01) | -.01 | (.01) | -.00 | (.01) | -.00 | (.01) | -.01 | (.01) |
| White | | | .0 | (.) | .0 | (.) | .0 | (.) | .0 | (.) | .0 | (.) |
| Mixed | | | -.03 | (.04) | -.02 | (.04) | -.02 | (.04) | -.02 | (.04) | -.02 | (.04) |
| Indian | | | -.02 | (.04) | -.03 | (.04) | -.03 | (.04) | -.03 | (.04) | -.02 | (.04) |
| Pakistani/Bang. | | | .07*** | (.03) | .06** | (.03) | .06** | (.03) | .07*** | (.03) | .08*** | (.03) |
| Black | | | .02 | (.04) | .02 | (.04) | .02 | (.04) | .02 | (.04) | .03 | (.04) |
| Other ethnicity | | | .03 | (.07) | .02 | (.07) | .02 | (.07) | .03 | (.07) | .03 | (.07) |
| SEN: no | | | .0 | (.) | .0 | (.) | .0 | (.) | .0 | (.) | .0 | (.) |
| SEN: yes | | | -.09*** | (.02) | -.09*** | (.02) | -.09*** | (.02) | -.08*** | (.03) | -.08*** | (.03) |
| BMI | | | -.00 | (.00) | -.00 | (.00) | -.00 | (.00) | -.00 | (.00) | -.00 | (.00) |
| No. sisters | | | | | -.01 | (.01) | -.00 | (.01) | -.00 | (.01) | -.01 | (.01) |
| No. brothers | | | | | -.00 | (.01) | -.00 | (.01) | -.00 | (.01) | -.01 | (.01) |
| Single parent | | | | | .0 | (.) | .0 | (.) | .0 | (.) | .0 | (.) |
| Both parents | | | | | .03** | (.02) | .03* | (.02) | .03 | (.02) | .02 | (.02) |
| Stepfamily | | | | | .00 | (.02) | .00 | (.02) | .00 | (.02) | -.00 | (.02) |
| Transitions | | | | | .00 | (.01) | .00 | (.01) | .01 | (.01) | .01 | (.01) |
| Parental education | | | | | | | -.00 | (.01) | -.01 | (.01) | -.01 | (.01) |
| Hours worked (main carer) | | | | | | | .00* | (.00) | .00 | (.00) | .00 | (.00) |
| Hours worked (partner) | | | | | | | .00 | (.00) | .00 | (.00) | .00 | (.00) |
| Parental conflict (no) | | | | | | | .0 | (.) | .0 | (.) | .0 | (.) |
| Parental conflict (yes) | | | | | | | -.02 | (.02) | -.01 | (.02) | -.01 | (.02) |
| Harsh discipline | | | | | | | | | -.00 | (.00) | -.00 | (.00) |
| Parental engagement | | | | | | | | | -.00 | (.00) | -.00 | (.00) |
| Internalising | | | | | | | | | .00 | (.00) | .00 | (.00) |
| Externalising | | | | | | | | | -.00*** | (.00) | -.00*** | (.00) |
| Cognitive scores | | | | | | | | | .00** | (.00) | .00** | (.00) |
| Kessler scores | | | | | | | | | -.00 | (.00) | -.00 | (.00) |
| IMD scores | | | | | | | | | | | .00 | (.00) |
| Rural | | | | | | | | | | | .0 | (.) |
| Urban | | | | | | | | | | | -.02 | (.01) |
| Overcrowding | | | | | | | | | | | .04*** | (.01) |
| England | | | | | | | | | | | .0 | (.) |
| Wales | | | | | | | | | | | .02 | (.01) |
| Scotland | | | | | | | | | | | .02 | (.01) |
| NI | | | | | | | | | | | .05*** | (.01) |
| Constant | .82*** | (.01) | .49*** | (.18) | .45** | (.18) | .46** | (.18) | .39** | (.19) | .38** | (.19) |
| N | 8682 | | 8682 | | 8682 | | 8682 | | 8682 | | 8682 | |
| R ² | .000 | | .009 | | .010 | | .011 | | .015 | | .017 | |

Standard errors in parentheses, * $p < .10$, ** $p < .05$, *** $p < .01$

¹ Coded 1 (1 or 2 out of 7) or 0 (less happy)

Table D.8 Hierarchical multiple regression: Whether children tell a friend if worried ¹

| | Model 1 | Model 2 | Model 3 | Model 4 | Model 5 | Model 6 |
|---------------------------|---------------|---------------|---------------|---------------|---------------|---------------|
| No poverty | .0 (.) | .0 (.) | .0 (.) | .0 (.) | .0 (.) | .0 (.) |
| Some poverty | -.03* (.01) | -.03** (.01) | -.02 (.01) | -.01 (.02) | -.00 (.02) | .01 (.02) |
| Persistent pov. | -.08*** (.00) | -.09*** (.01) | -.07*** (.02) | -.05* (.03) | -.04 (.03) | -.02 (.03) |
| Sex: female | | .0 (.) | .0 (.) | .0 (.) | .0 (.) | .0 (.) |
| Sex: male | | -.11*** (.01) | -.11*** (.01) | -.11*** (.01) | -.10*** (.01) | -.10*** (.01) |
| Child age | | .00 (.00) | .00 (.00) | .00 (.00) | .00* (.00) | .00* (.00) |
| Firstborn: no | | .0 (.) | .0 (.) | .0 (.) | .0 (.) | .0 (.) |
| Firstborn: yes | | -.00 (.01) | -.01 (.01) | -.01 (.01) | -.01 (.01) | -.01 (.01) |
| White | | .0 (.) | .0 (.) | .0 (.) | .0 (.) | .0 (.) |
| Mixed | | .01 (.04) | .01 (.04) | .00 (.04) | -.00 (.04) | -.01 (.04) |
| Indian | | -.02 (.05) | -.03 (.05) | -.03 (.05) | -.02 (.05) | -.03 (.05) |
| Pakistani/Bang. | | .04 (.04) | .04 (.04) | .04 (.04) | .06* (.04) | .05 (.04) |
| Black | | .09** (.04) | .10** (.04) | .09** (.04) | .10** (.04) | .09** (.04) |
| Other ethnicity | | -.01 (.07) | -.02 (.07) | -.02 (.07) | -.01 (.07) | -.02 (.07) |
| SEN: no | | .0 (.) | .0 (.) | .0 (.) | .0 (.) | .0 (.) |
| SEN: yes | | -.10*** (.03) | -.09*** (.02) | -.09*** (.03) | -.07*** (.03) | -.07*** (.03) |
| BMI | | .00 (.00) | .00 (.00) | .00 (.00) | .00 (.00) | .00 (.00) |
| No. sisters | | | -.00 (.01) | -.00 (.01) | .00 (.01) | .00 (.01) |
| No. brothers | | | -.01 (.01) | -.01 (.01) | -.01 (.01) | -.01 (.01) |
| Single parent | | | .0 (.) | .0 (.) | .0 (.) | .0 (.) |
| Both parents | | | .01 (.02) | .01 (.02) | .01 (.02) | .01 (.02) |
| Stepfamily | | | -.00 (.02) | -.00 (.02) | -.00 (.02) | -.00 (.02) |
| Transitions | | | -.01 (.01) | -.01 (.01) | -.01 (.01) | -.01* (.01) |
| Parental education | | | | .01* (.01) | .00 (.01) | .00 (.01) |
| Hours worked (main carer) | | | | .00 (.00) | .00 (.00) | .00 (.00) |
| Hours worked (partner) | | | | .00 (.00) | -.00 (.00) | -.00 (.00) |
| Parental conflict (no) | | | | .0 (.) | .0 (.) | .0 (.) |
| Parental conflict (yes) | | | | .02 (.02) | .02 (.02) | .02 (.02) |
| Harsh discipline | | | | | -.00 (.00) | -.00* (.00) |
| Parental engagement | | | | | .00 (.00) | .00 (.00) |
| Internalising | | | | | -.00 (.00) | .00 (.00) |
| Externalising | | | | | -.00 (.00) | -.00 (.00) |
| Cognitive scores | | | | | .01*** (.00) | .01*** (.00) |
| Kessler scores | | | | | .00 (.00) | .00 (.00) |
| IMD scores | | | | | | .00 (.00) |
| Rural | | | | | | .0 (.) |
| Urban | | | | | | -.01 (.02) |
| Overcrowding | | | | | | .00 (.01) |
| England | | | | | | .0 (.) |
| Wales | | | | | | -.05** (.02) |
| Scotland | | | | | | -.05*** (.02) |
| NI | | | | | | -.07*** (.02) |
| Constant | .43*** (.01) | .24 (.21) | .23 (.21) | .19 (.21) | -.14 (.22) | -.18 (.22) |
| N | 8682 | 8682 | 8682 | 8682 | 8682 | 8682 |
| R ² | .003 | .021 | .022 | .022 | .028 | .030 |

Standard errors in parentheses, * $p < .10$, ** $p < .05$, *** $p < .01$

¹ Coded 1 (yes) or 0 (no)

Table D.9 Hierarchical multiple regression: Whether the child is solitary ¹

| | Model 1 | Model 2 | Model 3 | Model 4 | Model 5 | Model 6 |
|---------------------------|---------------|---------------|---------------|---------------|---------------|---------------|
| No poverty | .0 (.) | .0 (.) | .0 (.) | .0 (.) | .0 (.) | .0 (.) |
| Some poverty | .08*** (.02) | .07*** (.02) | .06*** (.02) | .03* (.02) | .01 (.02) | .01 (.02) |
| Persistent pov. | .13*** (.02) | .11*** (.02) | .10*** (.03) | .05 (.03) | -.01 (.03) | -.01 (.03) |
| Sex: female | | .0 (.) | .0 (.) | .0 (.) | .0 (.) | .0 (.) |
| Sex: male | | .05*** (.02) | .05*** (.02) | .05*** (.02) | .04*** (.02) | .04*** (.02) |
| Child age | | -.0 (.00) | -.00 (.00) | -.00 (.00) | -.00 (.00) | -.00 (.00) |
| Firstborn: no | | .0 (.) | .0 (.) | .0 (.) | .0 (.) | .0 (.) |
| Firstborn: yes | | .01 (.02) | -.00 (.02) | -.00 (.02) | -.01 (.02) | -.02 (.02) |
| White | | .0 (.) | .0 (.) | .0 (.) | .0 (.) | .0 (.) |
| Mixed | | .05 (.05) | .04 (.05) | .04 (.05) | .03 (.05) | .03 (.05) |
| Indian | | .01 (.06) | .02 (.06) | .03 (.06) | .00 (.06) | -.00 (.06) |
| Pakistani/Bang. | | -.04 (.04) | -.01 (.04) | -.02 (.04) | -.07* (.04) | -.08* (.04) |
| Black | | .02 (.06) | .02 (.06) | .03 (.06) | .03 (.06) | .02 (.06) |
| Other ethnicity | | .07 (.10) | .08 (.10) | .07 (.10) | .07 (.10) | .06 (.10) |
| SEN: no | | .0 (.) | .0 (.) | .0 (.) | .0 (.) | .0 (.) |
| SEN: yes | | .29*** (.04) | .29*** (.04) | .28*** (.04) | .25*** (.04) | .25*** (.04) |
| BMI | | .01*** (.00) | .01*** (.00) | .01*** (.00) | .01*** (.00) | .01*** (.00) |
| No. sisters | | | -.01 (.01) | -.01 (.01) | -.01 (.01) | -.01 (.01) |
| No. brothers | | | -.02** (.01) | -.02*** (.01) | -.02*** (.01) | -.03*** (.01) |
| Single parent | | | .0 (.) | .0 (.) | .0 (.) | .0 (.) |
| Both parents | | | -.04* (.02) | -.02 (.02) | -.02 (.02) | -.02 (.02) |
| Stepfamily | | | .06* (.03) | .06* (.03) | .05* (.03) | .05 (.03) |
| Transitions | | | .01 (.01) | .00 (.01) | -.00 (.01) | -.00 (.01) |
| Parental education | | | | -.02** (.01) | -.00 (.01) | -.00 (.01) |
| Hours worked (main carer) | | | | -.00 (.00) | -.00 (.00) | -.00 (.00) |
| Hours worked (partner) | | | | -.00* (.00) | -.00 (.00) | -.00 (.00) |
| Parental conflict (no) | | | | .0 (.) | .0 (.) | .0 (.) |
| Parental conflict (yes) | | | | .04* (.03) | .03 (.02) | .03 (.02) |
| Harsh discipline | | | | | -.00* (.00) | -.00* (.00) |
| Parental engagement | | | | | -.00 (.00) | -.00 (.00) |
| Internalising | | | | | .04*** (.00) | .04*** (.00) |
| Externalising | | | | | .00 (.00) | .00 (.00) |
| Cognitive scores | | | | | -.00 (.00) | -.00 (.00) |
| Kessler scores | | | | | .01*** (.00) | .01*** (.00) |
| IMD scores | | | | | | -.00 (.00) |
| Rural | | | | | | .0 (.) |
| Urban | | | | | | .01 (.02) |
| Overcrowding | | | | | | .01 (.02) |
| England | | | | | | .0 (.) |
| Wales | | | | | | -.02 (.02) |
| Scotland | | | | | | -.02 (.02) |
| NI | | | | | | .02 (.03) |
| Constant | 1.28*** (.01) | 1.11*** (.25) | 1.21*** (.25) | 1.28*** (.25) | 1.33*** (.26) | 1.30*** (.27) |
| N | 8682 | 8682 | 8682 | 8682 | 8682 | 8682 |
| R ² | .008 | .031 | .035 | .038 | .073 | .073 |

Standard errors in parentheses, * $p < .10$, ** $p < .05$, *** $p < .01$

¹ Coded 1 (not true) to 3 (certainly)

Table D.10 Hierarchical multiple regression: Whether the child has a good friend ¹

| | Model 1 | Model 2 | Model 3 | Model 4 | Model 5 | Model 6 |
|---------------------------|---------------|---------------|---------------|---------------|---------------|---------------|
| No poverty | .0 (.) | .0 (.) | .0 (.) | .0 (.) | .0 (.) | .0 (.) |
| Some poverty | -.05*** (.01) | -.04*** (.01) | -.03*** (.01) | -.02 (.01) | -.01 (.01) | -.00 (.01) |
| Persistent pov. | -.09*** (.02) | -.07*** (.02) | -.06*** (.02) | -.02 (.02) | .00 (.02) | .00 (.02) |
| Sex: female | | .0 (.) | .0 (.) | .0 (.) | .0 (.) | .0 (.) |
| Sex: male | | -.01 (.01) | -.01 (.01) | -.01 (.01) | -.01 (.01) | -.01 (.01) |
| Child age | | -.00 (.00) | .00 (.00) | .00 (.00) | .00 (.00) | .00 (.00) |
| Firstborn: no | | .0 (.) | .0 (.) | .0 (.) | .0 (.) | .0 (.) |
| Firstborn: yes | | .00 (.01) | -.01 (.01) | -.02 (.01) | -.01 (.01) | -.01 (.01) |
| White | | .0 (.) | .0 (.) | .0 (.) | .0 (.) | .0 (.) |
| Mixed | | -.01 (.03) | -.02 (.03) | -.02 (.03) | -.01 (.03) | -.01 (.03) |
| Indian | | -.01 (.04) | -.01 (.04) | -.01 (.04) | .00 (.04) | .00 (.04) |
| Pakistani/Bang. | | -.06 (.04) | -.06 (.04) | -.05 (.04) | -.03 (.04) | -.03 (.04) |
| Black | | -.11 (.07) | -.11 (.07) | -.11* (.06) | -.11* (.07) | -.11 (.07) |
| Other ethnicity | | -.15 (.10) | -.15 (.10) | -.14 (.10) | -.14 (.10) | -.14 (.10) |
| SEN: no | | .0 (.) | .0 (.) | .0 (.) | .0 (.) | .0 (.) |
| SEN: yes | | -.15*** (.03) | -.15*** (.03) | -.14*** (.03) | -.12*** (.03) | -.12*** (.03) |
| BMI | | -.00*** (.00) | -.00*** (.00) | -.00*** (.00) | -.00** (.00) | -.00** (.00) |
| No. sisters | | | -.02** (.01) | -.02** (.01) | -.01* (.01) | -.01* (.01) |
| No. brothers | | | -.02** (.01) | -.02** (.01) | -.02** (.01) | -.02** (.01) |
| Single parent | | | .0 (.) | .0 (.) | .0 (.) | .0 (.) |
| Both parents | | | -.01 (.01) | -.02 (.02) | -.03* (.01) | -.03* (.01) |
| Stepfamily | | | -.03 (.02) | -.02 (.02) | -.02 (.02) | -.02 (.02) |
| Transitions | | | .00 (.01) | .00 (.01) | .00 (.01) | .00 (.01) |
| Parental education | | | | .01** (.01) | .01 (.01) | .01 (.01) |
| Hours worked (main carer) | | | | .00 (.00) | -.00 (.00) | -.00 (.00) |
| Hours worked (partner) | | | | .00 (.00) | .00 (.00) | .00 (.00) |
| Parental conflict (no) | | | | .0 (.) | .0 (.) | .0 (.) |
| Parental conflict (yes) | | | | -.05** (.02) | -.04* (.02) | -.04* (.02) |
| Harsh discipline | | | | | .00 (.00) | .00 (.00) |
| Parental engagement | | | | | .00** (.00) | .00** (.00) |
| Internalising | | | | | -.01*** (.00) | -.01*** (.00) |
| Externalising | | | | | -.00** (.00) | -.00** (.00) |
| Cognitive scores | | | | | .00 (.00) | .00 (.00) |
| Kessler scores | | | | | -.01*** (.00) | -.01*** (.00) |
| IMD scores | | | | | | .00 (.00) |
| Rural | | | | | | .0 (.) |
| Urban | | | | | | .00 (.01) |
| Overcrowding | | | | | | .00 (.01) |
| England | | | | | | .0 (.) |
| Wales | | | | | | .02 (.01) |
| Scotland | | | | | | -.00 (.01) |
| NI | | | | | | .01 (.01) |
| Constant | 2.91*** (.01) | 3.01*** (.18) | 3.04*** (.18) | 2.99*** (.18) | 2.87*** (.18) | 2.87*** (.18) |
| N | 8682 | 8682 | 8682 | 8682 | 8682 | 8682 |
| R ² | .008 | .024 | .026 | .029 | .043 | .043 |

Standard errors in parentheses, * $p < .10$, ** $p < .05$, *** $p < .01$

¹ Coded 1 (not true) to 3 (certainly)

Table D.11 Hierarchical multiple regression: Whether the child is generally liked by other children ¹

| | Model 1 | Model 2 | Model 3 | Model 4 | Model 5 | Model 6 |
|---------------------------|---------------|---------------|---------------|---------------|---------------|---------------|
| No poverty | .0 (.) | .0 (.) | .0 (.) | .0 (.) | .0 (.) | .0 (.) |
| Some poverty | -.05*** (.01) | -.04*** (.01) | -.04*** (.01) | -.03** (.01) | -.01 (.01) | -.02 (.01) |
| Persistent pov. | -.09*** (.02) | -.09*** (.02) | -.07*** (.02) | -.06** (.02) | -.03 (.02) | -.04 (.02) |
| Sex: female | | .0 (.) | .0 (.) | .0 (.) | .0 (.) | .0 (.) |
| Sex: male | | -.02** (.01) | -.02** (.01) | -.02** (.01) | -.01 (.01) | -.01 (.01) |
| Child age | | .00** (.00) | .00*** (.00) | .00*** (.00) | .00*** (.00) | .00*** (.00) |
| Firstborn: no | | .0 (.) | .0 (.) | .0 (.) | .0 (.) | .0 (.) |
| Firstborn: yes | | -.02*** (.01) | -.04*** (.01) | -.04*** (.01) | -.03*** (.01) | -.04*** (.01) |
| White | | .0 (.) | .0 (.) | .0 (.) | .0 (.) | .0 (.) |
| Mixed | | -.02 (.03) | -.02 (.03) | -.02 (.03) | -.02 (.03) | -.01 (.03) |
| Indian | | -.01 (.03) | -.01 (.03) | -.01 (.03) | -.01 (.03) | -.00 (.03) |
| Pakistani/Bang. | | .07*** (.03) | .07*** (.03) | .07*** (.03) | .09*** (.03) | .09*** (.03) |
| Black | | .03 (.03) | .04 (.03) | .03 (.03) | .02 (.03) | .02 (.03) |
| Other ethnicity | | .02 (.05) | .01 (.05) | .02 (.04) | .01 (.05) | .01 (.05) |
| SEN: no | | .0 (.) | .0 (.) | .0 (.) | .0 (.) | .0 (.) |
| SEN: yes | | -.14*** (.03) | -.14*** (.03) | -.14*** (.03) | -.11*** (.03) | -.11*** (.03) |
| BMI | | -.01*** (.00) | -.01*** (.00) | -.01*** (.00) | -.01*** (.00) | -.01*** (.00) |
| No. sisters | | | -.02** (.01) | -.01** (.01) | -.01** (.01) | -.02*** (.01) |
| No. brothers | | | -.02** (.01) | -.02** (.01) | -.02** (.01) | -.02*** (.01) |
| Single parent | | | .0 (.) | .0 (.) | .0 (.) | .0 (.) |
| Both parents | | | -.00 (.01) | -.07 (.01) | -.02 (.01) | -.02 (.02) |
| Stepfamily | | | -.03 (.02) | -.03 (.02) | -.02 (.02) | -.03 (.02) |
| Transitions | | | -.00 (.01) | -.00 (.01) | .00 (.01) | .00 (.01) |
| Parental education | | | | .01 (.01) | -.00 (.01) | .00 (.01) |
| Hours worked (main carer) | | | | .00 (.00) | -.00 (.00) | -.00 (.00) |
| Hours worked (partner) | | | | .00 (.00) | .00 (.00) | .00 (.00) |
| Parental conflict (no) | | | | .0 (.) | .0 (.) | .0 (.) |
| Parental conflict (yes) | | | | -.03 (.02) | -.01 (.02) | -.01 (.02) |
| Harsh discipline | | | | | -.00* (.00) | -.00* (.00) |
| Parental engagement | | | | | .00 (.00) | .00 (.00) |
| Internalising | | | | | -.01*** (.00) | -.01*** (.00) |
| Externalising | | | | | -.01*** (.00) | -.01*** (.00) |
| Cognitive scores | | | | | .00 (.00) | .00 (.00) |
| Kessler scores | | | | | -.01*** (.00) | -.01*** (.00) |
| IMD scores | | | | | | -.00 (.00) |
| Rural | | | | | | .0 (.) |
| Urban | | | | | | -.00 (.01) |
| Overcrowding | | | | | | .02** (.01) |
| England | | | | | | .0 (.) |
| Wales | | | | | | .01 (.01) |
| Scotland | | | | | | .01 (.02) |
| NI | | | | | | .05*** (.02) |
| Constant | 2.89*** (.01) | 2.58*** (.18) | 2.60*** (.18) | 2.57*** (.18) | 2.69*** (.20) | 2.68*** (.20) |
| N | 8682 | 8682 | 8682 | 8682 | 8682 | 8682 |
| R ² | .008 | .025 | .028 | .029 | .055 | .056 |

Standard errors in parentheses, * $p < .10$, ** $p < .05$, *** $p < .01$

¹ Coded 1 (not true) to 3 (certainly)

Table D.12 Hierarchical multiple regression: Whether the child is picked on by others (parent report) ¹

| | Model 1 | Model 2 | Model 3 | Model 4 | Model 5 | Model 6 |
|---------------------------|--------------|---------------|---------------|---------------|---------------|---------------|
| No poverty | .0 (.) | .0 (.) | .0 (.) | .0 (.) | .0 (.) | .0 (.) |
| Some poverty | .08*** (.01) | .08*** (.01) | .06*** (.01) | .04*** (.02) | .02 (.01) | .02 (.02) |
| Persistent pov. | .11*** (.02) | .13*** (.02) | .10*** (.02) | .05** (.02) | .01 (.02) | .01 (.03) |
| Sex: female | | .0 (.) | .0 (.) | .0 (.) | .0 (.) | .0 (.) |
| Sex: male | | .01 (.01) | .01 (.01) | .01 (.01) | -.00 (.01) | -.00 (.01) |
| Child age | | -.00*** (.00) | -.00*** (.00) | -.00*** (.00) | -.01*** (.00) | -.01*** (.00) |
| Firstborn: no | | .0 (.) | .0 (.) | .0 (.) | .0 (.) | .0 (.) |
| Firstborn: yes | | .04*** (.01) | .05*** (.01) | .05*** (.01) | .05*** (.01) | .05*** (.01) |
| White | | .0 (.) | .0 (.) | .0 (.) | .0 (.) | .0 (.) |
| Mixed | | -.04 (.03) | -.05 (.03) | -.05 (.03) | -.05 (.03) | -.05 (.03) |
| Indian | | -.03 (.03) | -.02 (.03) | -.01 (.03) | -.03 (.03) | -.03 (.03) |
| Pakistani/Bang. | | -.16*** (.03) | -.15*** (.03) | -.15*** (.03) | -.19*** (.03) | -.19*** (.03) |
| Black | | -.16*** (.04) | -.17*** (.04) | -.16*** (.04) | -.16*** (.04) | -.16*** (.04) |
| Other ethnicity | | -.05 (.06) | -.04 (.06) | -.05 (.06) | -.05 (.06) | -.05 (.06) |
| SEN: no | | .0 (.) | .0 (.) | .0 (.) | .0 (.) | .0 (.) |
| SEN: yes | | .19*** (.03) | .19*** (.03) | .18*** (.03) | .14*** (.03) | .14*** (.03) |
| BMI | | .01*** (.00) | .01*** (.00) | .01*** (.00) | .01*** (.00) | .01*** (.00) |
| No. sisters | | | .02** (.01) | .01* (.01) | .01* (.01) | .01* (.01) |
| No. brothers | | | .00 (.01) | -.00 (.01) | -.00 (.01) | -.00 (.01) |
| Single parent | | | .0 (.) | .0 (.) | .0 (.) | .0 (.) |
| Both parents | | | -.05*** (.02) | -.04** (.02) | -.03* (.02) | -.03* (.02) |
| Stepfamily | | | -.03 (.02) | -.03 (.02) | -.04 (.02) | -.03 (.02) |
| Transitions | | | .00 (.01) | -.00 (.01) | -.00 (.01) | -.01 (.01) |
| Parental education | | | | -.02*** (.01) | -.01 (.01) | -.01 (.01) |
| Hours worked (main carer) | | | | -.00 (.00) | .00 (.00) | .00 (.00) |
| Hours worked (partner) | | | | -.00 (.00) | -.00 (.00) | -.00 (.00) |
| Parental conflict (no) | | | | .0 (.) | .0 (.) | .0 (.) |
| Parental conflict (yes) | | | | .09*** (.02) | .06*** (.02) | .06*** (.02) |
| Harsh discipline | | | | | -.00 (.00) | -.00 (.00) |
| Parental engagement | | | | | .00 (.00) | .00 (.00) |
| Internalising | | | | | .01*** (.00) | .01*** (.00) |
| Externalising | | | | | .01*** (.00) | .01*** (.00) |
| Cognitive scores | | | | | -.00** (.00) | -.00** (.00) |
| Kessler scores | | | | | .01*** (.00) | .01*** (.00) |
| IMD scores | | | | | | -.00 (.00) |
| Rural | | | | | | .0 (.) |
| Urban | | | | | | -.01 (.01) |
| Overcrowding | | | | | | -.01 (.02) |
| England | | | | | | .0 (.) |
| Wales | | | | | | -.01 (.01) |
| Scotland | | | | | | -.01 (.02) |
| NI | | | | | | -.01 (.02) |
| Constant | .20*** (.01) | .45** (.19) | .50*** (.19) | .57*** (.18) | .63*** (.202) | .66*** (.20) |
| N | 8682 | 8682 | 8682 | 8682 | 8682 | 8682 |
| R ² | .012 | .046 | .049 | .054 | .085 | .085 |

Standard errors in parentheses, * $p < .10$, ** $p < .05$, *** $p < .01$ ¹ Coded 0 (not true) or 1 (at least somewhat true)

Table D.13 Hierarchical multiple regression: Whether the child hurts/ picks on others (parent report) ¹

| | Model 1 | Model 2 | Model 3 | Model 4 | Model 5 | Model 6 |
|---------------------------|--------------|---------------|---------------|---------------|---------------|---------------|
| No poverty | .0 (.) | .0 (.) | .0 (.) | .0 (.) | .0 (.) | .0 (.) |
| Some poverty | .04*** (.01) | .04*** (.01) | .03*** (.01) | .01* (.01) | .01 (.01) | .01 (.01) |
| Persistent pov. | .11*** (.02) | .12*** (.02) | .09*** (.02) | .06*** (.02) | .05*** (.02) | .05** (.02) |
| Sex: female | | .0 (.) | .0 (.) | .0 (.) | .0 (.) | .0 (.) |
| Sex: male | | .03*** (.01) | .03*** (.01) | .03*** (.01) | .03*** (.01) | .03*** (.01) |
| Child age | | -.00* (.00) | -.00** (.00) | -.00** (.00) | -.00** (.00) | -.00** (.00) |
| Firstborn: no | | .0 (.) | .0 (.) | .0 (.) | .0 (.) | .0 (.) |
| Firstborn: yes | | .00 (.01) | .01* (.01) | .01* (.01) | .01 (.01) | .01 (.01) |
| White | | .0 (.) | .0 (.) | .0 (.) | .0 (.) | .0 (.) |
| Mixed | | -.05*** (.01) | -.05*** (.01) | -.05*** (.01) | -.05*** (.01) | -.05*** (.01) |
| Indian | | -.03 (.02) | -.02 (.02) | -.01 (.02) | -.02 (.02) | -.02 (.02) |
| Pakistani/Bang. | | -.07*** (.02) | -.05*** (.02) | -.06*** (.02) | -.07*** (.02) | -.07*** (.02) |
| Black | | -.04** (.02) | -.05*** (.02) | -.03** (.02) | -.04* (.02) | -.04* (.02) |
| Other ethnicity | | -.06*** (.01) | -.05*** (.02) | -.05*** (.02) | -.05*** (.02) | -.05*** (.02) |
| SEN: no | | .0 (.) | .0 (.) | .0 (.) | .0 (.) | .0 (.) |
| SEN: yes | | .06*** (.02) | .06*** (.02) | .05*** (.02) | .04** (.02) | .04** (.02) |
| BMI | | .00 (.00) | .00 (.00) | .00 (.00) | .00 (.00) | .00 (.00) |
| No. sisters | | | .02*** (.01) | .02*** (.01) | .02*** (.01) | .02*** (.01) |
| No. brothers | | | .01** (.01) | .01* (.01) | .01* (.01) | .01** (.01) |
| Single parent | | | .0 (.) | .0 (.) | .0 (.) | .0 (.) |
| Both parents | | | -.04*** (.01) | -.04*** (.01) | -.03*** (.01) | -.03** (.01) |
| Stepfamily | | | -.01 (.02) | -.01 (.02) | -.02 (.02) | -.01 (.02) |
| Transitions | | | .00 (.01) | .00 (.01) | .00 (.00) | .00 (.00) |
| Parental education | | | | -.01*** (.00) | -.01* (.00) | -.01* (.00) |
| Hours worked (main carer) | | | | -.00** (.00) | -.00 (.00) | -.00 (.00) |
| Hours worked (partner) | | | | -.00 (.00) | .00 (.00) | .00 (.00) |
| Parental conflict (no) | | | | .0 (.) | .0 (.) | .0 (.) |
| Parental conflict (yes) | | | | .03** (.01) | .02* (.01) | .02* (.01) |
| Harsh discipline | | | | | .00*** (.00) | .00*** (.00) |
| Parental engagement | | | | | .00 (.00) | .00 (.00) |
| Internalising | | | | | .00 (.00) | .00 (.00) |
| Externalising | | | | | .01*** (.00) | .01*** (.00) |
| Cognitive scores | | | | | -.00* (.00) | -.00* (.00) |
| Kessler scores | | | | | .00*** (.00) | .00*** (.00) |
| IMD scores | | | | | | -.00 (.00) |
| Rural | | | | | | .0 (.) |
| Urban | | | | | | -.00 (.01) |
| Overcrowding | | | | | | -.02*** (.01) |
| England | | | | | | .0 (.) |
| Wales | | | | | | -.01 (.01) |
| Scotland | | | | | | .02 (.01) |
| NI | | | | | | -.01 (.01) |
| Constant | .04*** (.00) | .25* (.13) | .28** (.13) | .32** (.13) | .28* (.15) | .32** (.15) |
| N | 8682 | 8682 | 8682 | 8682 | 8682 | 8682 |
| R ² | .025 | .040 | .046 | .050 | .071 | .073 |

Standard errors in parentheses, * $p < .10$, ** $p < .05$, *** $p < .01$
Coded 0 (not true) or 1 (at least somewhat true)

Appendix E. Models: Parent-child relationships

Table E.1(a) Hierarchical multiple regression: Children's happiness with their family ¹

| | Model 1 | | Model 2 | | Model 3 | | Model 4 | | Model 5 | | Model 6 | |
|---------------------------|---------|-------|---------|-------|---------|-------|---------|-------|---------|-------|---------|-------|
| No poverty | .0 | (.) | .0 | (.) | .0 | (.) | .0 | (.) | .0 | (.) | .0 | (.) |
| Some poverty | .04 | (.04) | .04 | (.04) | -.05 | (.04) | -.06 | (.04) | -.07* | (.04) | -.06 | (.04) |
| Persistent pov. | -.02 | (.05) | .01 | (.06) | -.18*** | (.06) | -.21*** | (.07) | -.23*** | (.07) | -.20*** | (.07) |
| Sex: female | | | .0 | (.) | .0 | (.) | .0 | (.) | .0 | (.) | .0 | (.) |
| Sex: male | | | .00 | (.03) | .00 | (.03) | .01 | (.03) | -.01 | (.03) | -.01 | (.03) |
| Child age | | | -.00 | (.00) | -.00 | (.00) | -.00 | (.00) | -.00 | (.00) | -.00 | (.00) |
| Firstborn: no | | α | .0 | (.) | .0 | (.) | .0 | (.) | .0 | (.) | .0 | (.) |
| Firstborn: yes | | | .01 | (.03) | .02 | (.04) | .02 | (.03) | .02 | (.03) | .02 | (.03) |
| White | | | .0 | (.) | .0 | (.) | .0 | (.) | .0 | (.) | .0 | (.) |
| Mixed | | | .00 | (.08) | -.02 | (.08) | -.03 | (.08) | -.03 | (.08) | -.03 | (.08) |
| Indian | | | -.20*** | (.08) | -.15* | (.08) | -.14* | (.07) | -.15** | (.07) | -.16** | (.07) |
| Pakistani/Bang. | | | -.26*** | (.07) | -.15** | (.07) | -.16** | (.07) | -.19** | (.08) | -.20*** | (.08) |
| Black | | | -.04 | (.12) | -.08 | (.12) | -.07 | (.12) | -.07 | (.11) | -.06 | (.12) |
| Other ethnicity | | | -.27* | (.16) | -.21 | (.16) | -.21 | (.16) | -.22 | (.16) | -.21 | (.17) |
| SEN: no | | α | .0 | (.) | .0 | (.) | .0 | (.) | .0 | (.) | .0 | (.) |
| SEN: yes | | | .13* | (.07) | .12* | (.07) | .11 | (.07) | .08 | (.07) | .08 | (.07) |
| BMI | | | .00 | (.00) | -.00 | (.00) | .00 | (.00) | -.00 | (.00) | -.00 | (.00) |
| No. sisters | | | | | .04** | (.02) | .03 | (.02) | .03 | (.02) | .04** | (.02) |
| No. brothers | | | | | .03* | (.02) | .02 | (.02) | .02 | (.02) | .03 | (.02) |
| Single parent | | | | | .0 | (.) | .0 | (.) | .0 | (.) | .0 | (.) |
| Both parents | | | | | -.31*** | (.05) | -.31*** | (.05) | -.29*** | (.05) | -.28*** | (.05) |
| Stepfamily | | | | | -.07 | (.08) | -.07 | (.08) | -.07 | (.08) | -.06 | (.08) |
| Transitions | | | | | .00 | (.02) | -.00 | (.02) | -.00 | (.02) | -.00 | (.02) |
| Par. education | | | | | | | .016 | (.02) | .02 | (.02) | .02 | (.02) |
| Hours worked (main carer) | | | | | | | -.00*** | (.00) | -.00*** | (.00) | -.00*** | (.00) |
| Hours worked (partner) | | | | | | | -.00 | (.00) | -.00 | (.00) | -.00 | (.00) |
| Parental conflict (no) | | | | | | | .0 | (.) | .0 | (.) | .0 | (.) |
| Parental conflict (yes) | | | | | | | .22*** | (.06) | .18*** | (.06) | .18*** | (.06) |
| Harsh discipline | | | | | | | | | .02*** | (.00) | .02*** | (.00) |
| Parental engagement | | | | | | | | | -.00 | (.00) | -.00 | (.00) |
| Internalising | | | | | | | | | -.00 | (.01) | -.00 | (.01) |
| Externalising | | | | | | | | | .01 | (.01) | .01 | (.01) |
| Cognitive scores | | | | | | | | | -.00 | (.00) | -.00 | (.00) |
| Kessler scores | | | | | | | | | .01** | (.01) | .01** | (.01) |
| IMD scores | | | | | | | | | | | .00 | (.01) |
| Rural | | | | | | | | | | | .0 | (.) |
| Urban | | | | | | | | | | | .03 | (.04) |
| Overcrowding | | | | | | | | | | | -.08** | (.04) |
| England | | | | | | | | | | | .0 | (.) |
| Wales | | | | | | | | | | | -.06 | (.05) |
| Scotland | | | | | | | | | | | -.00 | (.05) |
| NI | | | | | | | | | | | -.11** | (.05) |
| Constant | 1.55*** | (.02) | 2.03*** | (.57) | 2.39*** | (.57) | 2.35*** | (.57) | 2.31*** | (.58) | 2.32*** | (.59) |
| N | 8682 | | 8682 | | 8682 | | 8682 | | 8682 | | 8682 | |
| R ² | .000 | | .003 | | .013 | | .017 | | .022 | | .023 | |

Standard errors in parentheses, * $p < .10$, ** $p < .05$, *** $p < .01$ ¹ Coded 1 (completely happy) to 7 (not at all happy)

Table E.2 Hierarchical multiple regression: Children's happiness with their family (binary) ¹

| | Model 1 | | Model 2 | | Model 3 | | Model 4 | | Model 5 | | Model 6 | |
|---------------------------|---------|-------|---------|--------|---------|-------|---------|-------|---------|-------|---------|-------|
| No poverty | .0 | (.) | .0 | (.) | .0 | (.) | .0 | (.) | .0 | (.) | .0 | (.) |
| Some poverty | -.02* | (.01) | -.02* | (.01) | .01 | (.01) | .01 | (.01) | .02 | (.01) | .01 | (.01) |
| Persistent pov. | -.01 | (.01) | -.01 | (.01) | .05*** | (.02) | .05*** | (.02) | .06*** | (.02) | .05*** | (.02) |
| Sex: female | | | .0 | (.) | .0 | (.) | .0 | (.) | .0 | (.) | .0 | (.) |
| Sex: male | | | .00 | (.01) | .00 | (.01) | .00 | (.01) | .01 | (.01) | .00 | (.01) |
| Child age | | | .00 | (.001) | .00* | (.00) | .00* | (.00) | .00* | (.00) | .00* | (.00) |
| Firstborn: no | | | .0 | (.) | .0 | (.) | .0 | (.) | .0 | (.) | .0 | (.) |
| Firstborn: yes | | | .00 | (.01) | -.01 | (.01) | -.01 | (.01) | -.01 | (.01) | -.01 | (.01) |
| White | | | .0 | (.) | .0 | (.) | .0 | (.) | .0 | (.) | .0 | (.) |
| Mixed | | | -.01 | (.03) | -.00 | (.03) | .00 | (.03) | .00 | (.03) | .00 | (.03) |
| Indian | | | .03 | (.02) | .01 | (.02) | .01 | (.02) | .01 | (.02) | .01 | (.02) |
| Pakistani/Bang. | | | .04* | (.02) | .01 | (.02) | .01 | (.02) | .02 | (.02) | .02 | (.02) |
| Black | | | -.03 | (.03) | -.01 | (.03) | -.02 | (.03) | -.02 | (.03) | -.02 | (.03) |
| Other ethnicity | | | .02 | (.06) | .00 | (.06) | .00 | (.06) | .01 | (.06) | .01 | (.06) |
| SEN: no | | | .0 | (.) | .0 | (.) | .0 | (.) | .0 | (.) | .0 | (.) |
| SEN: yes | | | -.05*** | (.02) | -.05** | (.02) | -.04** | (.02) | -.04* | (.02) | -.04* | (.02) |
| BMI | | | -.00 | (.00) | -.00 | (.00) | -.00 | (.00) | -.00 | (.00) | -.00 | (.00) |
| No. sisters | | | | | -.02*** | (.01) | -.01*** | (.01) | -.01*** | (.01) | -.02*** | (.01) |
| No. brothers | | | | | -.01** | (.01) | -.01* | (.01) | -.01* | (.01) | -.01** | (.01) |
| Single parent | | | | | .0 | (.) | .0 | (.) | .0 | (.) | .0 | (.) |
| Both parents | | | | | .08*** | (.01) | .08*** | (.01) | .08*** | (.01) | .08*** | (.01) |
| Stepfamily | | | | | .01 | (.02) | .01 | (.02) | .02 | (.02) | .01 | (.02) |
| Transitions | | | | | -.00 | (.01) | -.00 | (.01) | -.00 | (.01) | -.00 | (.01) |
| Parental education | | | | | | | -.01 | (.00) | -.01* | (.00) | -.01 | (.00) |
| Hours worked (main carer) | | | | | | | .00*** | (.00) | .00*** | (.00) | .00*** | (.00) |
| Hours worked (partner) | | | | | | | .00 | (.00) | .00 | (.00) | .00 | (.00) |
| Parental conflict (no) | | | | | | | .0 | (.) | .0 | (.) | .0 | (.) |
| Parental conflict (yes) | | | | | | | -.06*** | (.02) | -.05*** | (.02) | -.05*** | (.02) |
| Harsh discipline | | | | | | | | | -.00*** | (.00) | -.003** | (.00) |
| Parental engagement | | | | | | | | | .00 | (.00) | .00 | (.00) |
| Internalising | | | | | | | | | .00 | (.00) | .00 | (.00) |
| Externalising | | | | | | | | | -.00 | (.00) | -.00 | (.00) |
| Cognitive scores | | | | | | | | | .00 | (.00) | .00 | (.00) |
| Kessler scores | | | | | | | | | -.00*** | (.00) | -.00*** | (.00) |
| IMD scores | | | | | | | | | | | -.00 | (.00) |
| Rural | | | | | | | | | | | .0 | (.) |
| Urban | | | | | | | | | | | -.01 | (.01) |
| Overcrowding | | | | | | | | | | | .02* | (.01) |
| England | | | | | | | | | | | .0 | (.) |
| Wales | | | | | | | | | | | .01 | (.01) |
| Scotland | | | | | | | | | | | -.01 | (.01) |
| NI | | | | | | | | | | | .02 | (.01) |
| Constant | .89*** | (.01) | .68*** | (.14) | .59*** | (.14) | .61*** | (.14) | .62*** | (.14) | .61*** | (.14) |
| N | 8682 | | 8682 | | 8682 | | 8682 | | 8682 | | 8682 | |
| R ² | .001 | | .003 | | .016 | | .022 | | .026 | | .027 | |

Standard errors in parentheses, * $p < .10$, ** $p < .05$, *** $p < .01$ ¹ Coded 1 (most happy: 1 or 2 out of 7) or 0 (less happy)

Table E.3 Hierarchical multiple regression: Parent-child closeness (parent report) ¹

| | Model 1 | Model 2 | Model 3 | Model 4 | Model 5 | Model 6 |
|---------------------------|----------------|----------------|---------------|---------------|----------------|---------------|
| No poverty | .0 (.) | .0 (.) | .0 (.) | .0 (.) | .0 (.) | .0 (.) |
| Some poverty | -.02 (.02) | -.02 (.02) | -.01 (.02) | -.02 (.02) | -.01 (.02) | -.00 (.02) |
| Persistent pov. | -.09*** (.03) | -.08*** (.03) | -.03 (.03) | -.06* (.03) | -.04 (.03) | -.03 (.03) |
| Sex: female | | .0 (.) | .0 (.) | .0 (.) | .0 (.) | .0 (.) |
| Sex: male | | -.05*** (.02) | -.05*** (.01) | -.05*** (.02) | -.03** (.01) | -.03** (.02) |
| Child age | | .00 (.00) | .00 (.00) | .00 (.00) | .00 (.00) | .00 (.00) |
| Firstborn: no | | .0 (.) | .0 (.) | .0 (.) | .0 (.) | .0 (.) |
| Firstborn: yes | | -.05*** (.02) | -.13*** (.02) | -.12*** (.02) | -.12*** (.02) | -.12*** (.02) |
| White | | .0 (.) | .0 (.) | .0 (.) | .0 (.) | .0 (.) |
| Mixed | | -.02 (.05) | -.04 (.05) | -.04 (.05) | -.04 (.05) | -.04 (.05) |
| Indian | | -.08 (.06) | -.07 (.06) | -.07 (.06) | -.08 (.06) | -.08 (.06) |
| Pakistani/Bang. | | -.11** (.04) | -.06 (.04) | -.07 (.04) | -.05 (.04) | -.05 (.04) |
| Black | | -.10* (.06) | -.09 (.06) | -.09 (.06) | -.10* (.05) | -.09* (.05) |
| Other ethnicity | | -.20** (.08) | -.20** (.08) | -.20** (.08) | -.20*** (.08) | -.19** (.08) |
| SEN: no | | .0 (.) | .0 (.) | .0 (.) | .0 (.) | .0 (.) |
| SEN: yes | | -.07** (.03) | -.08** (.03) | -.08** (.03) | -.05 (.03) | -.05 (.03) |
| BMI | | .00** (.00) | .01*** (.00) | .01*** (.00) | .01*** (.00) | .01*** (.00) |
| No. sisters | | | -.07*** (.01) | -.07*** (.01) | -.07*** (.01) | -.07*** (.01) |
| No. brothers | | | -.09*** (.01) | -.09*** (.01) | -.09*** (.01) | -.08*** (.01) |
| Single parent | | | .0 (.) | .0 (.) | .0 (.) | .0 (.) |
| Both parents | | | -.08*** (.02) | -.07*** (.03) | -.08*** (.03) | -.08*** (.03) |
| Stepfamily | | | -.06* (.03) | -.06* (.03) | -.05 (.03) | -.04 (.03) |
| Transitions | | | .00 (.01) | .00 (.01) | .01 (.01) | .01 (.01) |
| Parental education | | | | -.01* (.01) | -.02** (.01) | -.02*** (.01) |
| Hours worked (main carer) | | | | .00 (.00) | .00 (.00) | .00 (.00) |
| Hours worked (partner) | | | | -.00 (.00) | -.00* (.00) | -.00* (.00) |
| Parental conflict (no) | | | | .0 (.) | .0 (.) | .0 (.) |
| Parental conflict (yes) | | | | -.02 (.03) | .02 (.03) | .01 (.03) |
| Harsh discipline | | | | | -.02*** (.00) | -.02*** (.00) |
| Parental engagement | | | | | .01*** (.00) | .01*** (.00) |
| Internalising | | | | | -.01 (.00) | -.01 (.00) |
| Externalising | | | | | -.01*** (.00) | -.01*** (.00) |
| Cognitive scores | | | | | -.00 (.00) | -.00 (.00) |
| Kessler scores | | | | | -.01*** (.00) | -.01*** (.00) |
| IMD scores | | | | | | .00 (.00) |
| Rural | | | | | | .0 (.) |
| Urban | | | | | | .04** (.02) |
| Overcrowding | | | | | | -.04** (.02) |
| England | | | | | | .0 (.) |
| Wales | | | | | | .08*** (.02) |
| Scotland | | | | | | -.01 (.03) |
| NI | | | | | | .03 (.03) |
| Constant | 1.55*** (.011) | 1.34*** (.265) | 1.56*** (.26) | 1.60*** (.26) | 1.96*** (.271) | 1.94*** (.27) |
| N | 8682 | 8682 | 8682 | 8682 | 8682 | 8682 |
| R ² | .003 | .012 | .034 | .035 | .064 | .066 |

Standard errors in parentheses, * $p < .10$, ** $p < .05$, *** $p < .01$

¹ Coded 0 (not very or fairly) to 2 (extremely close)

Table E.4 Hierarchical multiple regression: Parent-child talk about the child's priorities (parent report)¹

| | Model 1 | Model 2 | Model 3 | Model 4 | Model 5 | Model 6 |
|---------------------------|---------------|---------------|---------------|---------------|---------------|---------------|
| No poverty | .0 (.) | .0 (.) | .0 (.) | .0 (.) | .0 (.) | .0 (.) |
| Some poverty | -.05** (.02) | -.06*** (.02) | -.03 (.02) | .01 (.02) | .02 (.02) | .03 (.02) |
| Persistent pov. | -.14*** (.03) | -.15*** (.03) | -.08** (.04) | -.00 (.04) | .00 (.04) | .03 (.04) |
| Sex: female | | .0 (.) | .0 (.) | .0 (.) | .0 (.) | .0 (.) |
| Sex: male | | -.04** (.02) | -.04** (.02) | -.04** (.02) | -.02 (.02) | -.02 (.02) |
| Child age | | .00 (.00) | .00 (.00) | .00 (.00) | .00 (.00) | .00 (.00) |
| Firstborn: no | | .0 (.) | .0 (.) | .0 (.) | .0 (.) | .0 (.) |
| Firstborn: yes | | .02 (.02) | -.01 (.02) | -.01 (.02) | -.02 (.02) | -.01 (.02) |
| White | | .0 (.) | .0 (.) | .0 (.) | .0 (.) | .0 (.) |
| Mixed | | .04 (.05) | .04 (.05) | .03 (.05) | .02 (.05) | .03 (.05) |
| Indian | | -.06 (.07) | -.07 (.07) | -.09 (.07) | -.09 (.08) | -.09 (.08) |
| Pakistani/Bang. | | -.00 (.05) | -.02 (.05) | -.02 (.05) | -.01 (.05) | -.00 (.05) |
| Black | | .16*** (.06) | .18*** (.06) | .15*** (.06) | .15** (.06) | .17*** (.06) |
| Other ethnicity | | -.10 (.09) | -.11 (.09) | -.12 (.09) | -.11 (.09) | -.10 (.09) |
| SEN: no | | .0 (.) | .0 (.) | .0 (.) | .0 (.) | .0 (.) |
| SEN: yes | | .11*** (.03) | .11*** (.03) | .12*** (.03) | .13*** (.03) | .13*** (.03) |
| BMI | | .00 (.00) | .00 (.00) | .00 (.00) | .00 (.00) | .00 (.00) |
| No. sisters | | | -.04*** (.01) | -.04*** (.01) | -.04*** (.01) | -.03*** (.01) |
| No. brothers | | | -.03*** (.01) | -.03*** (.01) | -.03*** (.01) | -.02** (.01) |
| Single parent | | | .0 (.) | .0 (.) | .0 (.) | .0 (.) |
| Both parents | | | .07** (.03) | .07** (.03) | .07** (.03) | .08*** (.03) |
| Stepfamily | | | .00 (.04) | .00 (.04) | .01 (.04) | .02 (.04) |
| Transitions | | | .00 (.01) | .00 (.01) | .00 (.01) | .00 (.01) |
| Parental education | | | | .04*** (.01) | .03*** (.01) | .03*** (.01) |
| Hours worked (main carer) | | | | .00* (.00) | .00 (.00) | .00 (.00) |
| Hours worked (partner) | | | | -.00 (.00) | -.00 (.00) | -.00 (.00) |
| Parental conflict (no) | | | | .0 (.) | .0 (.) | .0 (.) |
| Parental conflict (yes) | | | | -.01 (.03) | .00 (.03) | -.00 (.03) |
| Harsh discipline | | | | | -.01*** (.00) | -.01*** (.00) |
| Parental engagement | | | | | .01*** (.00) | .01*** (.00) |
| Internalising | | | | | -.01* (.00) | -.01* (.00) |
| Externalising | | | | | -.01** (.00) | -.01* (.00) |
| Cognitive scores | | | | | -.00 (.00) | -.00 (.00) |
| Kessler scores | | | | | -.00 (.00) | -.00 (.00) |
| IMD scores | | | | | | .01** (.00) |
| Rural | | | | | | .0 (.) |
| Urban | | | | | | .01 (.02) |
| Overcrowding | | | | | | -.05** (.02) |
| England | | | | | | .0 (.) |
| Wales | | | | | | .04 (.03) |
| Scotland | | | | | | -.01 (.03) |
| NI | | | | | | -.02 (.03) |
| Constant | 1.57*** (.01) | 1.13*** (.31) | 1.09*** (.31) | .95*** (.31) | .96*** (.35) | .96*** (.36) |
| N | 8682 | 8682 | 8682 | 8682 | 8682 | 8682 |
| R ² | .005 | .009 | .013 | .017 | .032 | .034 |

Standard errors in parentheses, * $p < .10$, ** $p < .05$, *** $p < .01$

¹ Coded 0 (< once a month) to 2 (at least several times a week)

Table E.5 Hierarchical multiple regression: Whether children tell someone at home if worried ¹

| | Model 1 | Model 2 | Model 3 | Model 4 | Model 5 | Model 6 |
|---------------------------|---------------|---------------|---------------|---------------|---------------|---------------|
| No poverty | .0 (.) | .0 (.) | .0 (.) | .0 (.) | .0 (.) | .0 (.) |
| Some poverty | -.06*** (.01) | -.06*** (.01) | -.05*** (.01) | -.05*** (.02) | -.04*** (.01) | -.04*** (.02) |
| Persistent pov. | -.06*** (.02) | -.06*** (.02) | -.03 (.02) | -.03 (.03) | -.03 (.03) | -.02 (.03) |
| Sex: female | | .0 (.) | .0 (.) | .0 (.) | .0 (.) | .0 (.) |
| Sex: male | | -.03** (.01) | -.03** (.01) | -.02** (.01) | -.02* (.01) | -.02* (.01) |
| Child age | | -.00* (.00) | -.00* (.00) | -.00* (.00) | -.00* (.00) | -.00 (.00) |
| Firstborn: no | | .0 (.) | .0 (.) | .0 (.) | .0 (.) | .0 (.) |
| Firstborn: yes | | .04*** (.01) | .03*** (.01) | .03** (.01) | .04*** (.01) | .04*** (.01) |
| White | | .0 (.) | .0 (.) | .0 (.) | .0 (.) | .0 (.) |
| Mixed | | -.01 (.04) | -.01 (.04) | -.00 (.04) | -.01 (.04) | -.01 (.04) |
| Indian | | .02 (.04) | .01 (.04) | .01 (.04) | .01 (.04) | .01 (.04) |
| Pakistani/Bang. | | .01 (.03) | -.01 (.03) | -.01 (.03) | -.00 (.03) | -.01 (.03) |
| Black | | .07* (.04) | .07** (.04) | .07** (.04) | .07* (.04) | .06* (.04) |
| Other ethnicity | | .02 (.07) | .01 (.08) | .01 (.08) | .01 (.08) | .01 (.08) |
| SEN: no | | .0 (.) | .0 (.) | .0 (.) | .0 (.) | .0 (.) |
| SEN: yes | | -.03 (.03) | -.03 (.02) | -.03 (.03) | -.01 (.03) | -.01 (.03) |
| BMI | | -.00 (.00) | -.00 (.00) | -.00 (.00) | -.00 (.00) | -.00 (.00) |
| No. sisters | | | -.01 (.01) | -.01 (.01) | -.01* (.01) | -.01* (.01) |
| No. brothers | | | -.00 (.01) | -.00 (.01) | -.00 (.01) | -.00 (.01) |
| Single parent | | | .0 (.) | .0 (.) | .0 (.) | .0 (.) |
| Both parents | | | .03** (.02) | .04** (.02) | .03** (.02) | .04** (.02) |
| Stepfamily | | | -.04* (.02) | -.03 (.02) | -.03 (.02) | -.03 (.02) |
| Transitions | | | -.00 (.01) | .00 (.01) | .00 (.01) | .00 (.01) |
| Parental education | | | | .00 (.01) | .00 (.01) | .00 (.01) |
| Hours worked (main carer) | | | | -.00 (.00) | -.00 (.00) | -.00 (.00) |
| Hours worked (partner) | | | | -.00 (.00) | -.00 (.00) | -.00 (.00) |
| Parental conflict (no) | | | | .0 (.) | .0 (.) | .0 (.) |
| Parental conflict (yes) | | | | -.04* (.02) | -.03 (.02) | -.03 (.02) |
| Harsh discipline | | | | | -.01*** (.00) | -.01*** (.00) |
| Parental engagement | | | | | .00 (.00) | .00 (.00) |
| Internalising | | | | | -.00 (.00) | -.00 (.00) |
| Externalising | | | | | -.01*** (.00) | -.01*** (.00) |
| Cognitive scores | | | | | .00 (.00) | .00 (.00) |
| Kessler scores | | | | | -.00 (.00) | -.00 (.00) |
| IMD scores | | | | | | -.00 (.00) |
| Rural | | | | | | .0 (.) |
| Urban | | | | | | -.00 (.01) |
| Overcrowding | | | | | | -.00 (.01) |
| England | | | | | | .0 (.) |
| Wales | | | | | | -.03** (.01) |
| Scotland | | | | | | -.04** (.02) |
| NI | | | | | | .02 (.02) |
| Constant | .74*** (.01) | 1.12*** (.20) | 1.07*** (.20) | 1.07*** (.20) | 1.22*** (.22) | 1.19*** (.22) |
| N | 8682 | 8682 | 8682 | 8682 | 8682 | 8682 |
| R ² | .005 | .008 | .011 | .012 | .019 | .020 |

Standard errors in parentheses, * $p < .10$, ** $p < .05$, *** $p < .01$

¹ Coded 1 (yes) or 0 (no)

Table E.6 Hierarchical multiple regression: Whether parent and child have frequent battles of will (parent report) ¹

| | Model 1 | | Model 2 | | Model 3 | | Model 4 | | Model 5 | | Model 6 | |
|---------------------------|---------|-------|---------|-------|---------|-------|---------|-------|---------|-------|---------|-------|
| No poverty | .0 | (.) | .0 | (.) | .0 | (.) | .0 | (.) | .0 | (.) | .0 | (.) |
| Some poverty | -.02 | (.01) | -.03* | (.01) | -.01 | (.02) | -.00 | (.02) | .02 | (.02) | .01 | (.02) |
| Persistent pov. | -.02 | (.02) | -.04** | (.02) | -.02 | (.02) | .01 | (.03) | .04 | (.03) | .04 | (.03) |
| Sex: female | | | .0 | (.) | .0 | (.) | .0 | (.) | .0 | (.) | .0 | (.) |
| Sex: male | | | .02** | (.01) | .02** | (.01) | .02* | (.01) | .04*** | (.01) | .04*** | (.01) |
| Child age | | | .00 | (.00) | .00 | (.00) | .00 | (.00) | .00 | (.00) | .00 | (.00) |
| Firstborn: no | | | .0 | (.) | .0 | (.) | .0 | (.) | .0 | (.) | .0 | (.) |
| Firstborn: yes | | | -.10*** | (.01) | -.11*** | (.01) | -.11*** | (.01) | -.10*** | (.01) | -.10*** | (.01) |
| White | | | .0 | (.) | .0 | (.) | .0 | (.) | .0 | (.) | .0 | (.) |
| Mixed | | | .05 | (.04) | .05 | (.04) | .05 | (.04) | .05 | (.04) | .05 | (.04) |
| Indian | | | .08** | (.04) | .07* | (.04) | .07* | (.04) | .07** | (.03) | .07** | (.03) |
| Pakistani/Bang. | | | .13*** | (.02) | .12*** | (.02) | .13*** | (.02) | .14*** | (.02) | .14*** | (.02) |
| Black | | | .13*** | (.03) | .14*** | (.03) | .14*** | (.03) | .11*** | (.03) | .11*** | (.03) |
| Other ethnicity | | | .11** | (.04) | .10** | (.04) | .10** | (.04) | .09** | (.05) | .09* | (.05) |
| SEN: no | | | .0 | (.) | .0 | (.) | .0 | (.) | .0 | (.) | .0 | (.) |
| SEN: yes | | | -.12*** | (.02) | -.12*** | (.02) | -.12*** | (.02) | -.07*** | (.02) | -.07*** | (.02) |
| BMI | | | -.01*** | (.00) | -.01*** | (.00) | -.01*** | (.00) | -.01*** | (.00) | -.01*** | (.00) |
| No. sisters | | | | | .00 | (.01) | .00 | (.01) | .00 | (.01) | .00 | (.01) |
| No. brothers | | | | | -.014* | (.01) | -.01 | (.01) | -.01* | (.01) | -.01* | (.01) |
| Single parent | | | | | .0 | (.) | .0 | (.) | .0 | (.) | .0 | (.) |
| Both parents | | | | | .02 | (.02) | .01 | (.02) | -.01 | (.02) | -.01 | (.02) |
| Stepfamily | | | | | -.01 | (.03) | -.01 | (.03) | .00 | (.03) | .00 | (.03) |
| Transitions | | | | | -.01 | (.01) | -.01 | (.01) | -.01 | (.01) | -.01 | (.01) |
| Parental education | | | | | | | -.00 | (.01) | -.02*** | (.01) | -.01** | (.01) |
| Hours worked (main carer) | | | | | | | .00*** | (.00) | .00** | (.00) | .00** | (.00) |
| Hours worked (partner) | | | | | | | .00** | (.00) | .00** | (.00) | .00** | (.00) |
| Parental conflict (no) | | | | | | | .0 | (.) | .0 | (.) | .0 | (.) |
| Parental conflict (yes) | | | | | | | -.05*** | (.02) | -.02 | (.02) | -.02 | (.02) |
| Harsh discipline | | | | | | | | | -.02*** | (.00) | -.02*** | (.00) |
| Parental engagement | | | | | | | | | .00 | (.00) | .00 | (.00) |
| Internalising | | | | | | | | | .00 | (.00) | .00 | (.00) |
| Externalising | | | | | | | | | -.02*** | (.00) | -.02*** | (.00) |
| Cognitive scores | | | | | | | | | .00 | (.00) | .00 | (.00) |
| Kessler scores | | | | | | | | | -.01*** | (.00) | -.01*** | (.00) |
| IMD scores | | | | | | | | | | | -.00 | (.00) |
| Rural | | | | | | | | | | | .0 | (.) |
| Urban | | | | | | | | | | | -.02 | (.01) |
| Overcrowding | | | | | | | | | | | .00 | (.01) |
| England | | | | | | | | | | | .0 | (.) |
| Wales | | | | | | | | | | | -.04** | (.02) |
| Scotland | | | | | | | | | | | -.00 | (.02) |
| NI | | | | | | | | | | | -.02 | (.02) |
| Constant | 1.73*** | (.01) | 1.66*** | (.22) | 1.64*** | (.22) | 1.64*** | (.22) | 2.05*** | (.23) | 2.07*** | (.23) |
| N | 8682 | | 8682 | | 8682 | | 8682 | | 8682 | | 8682 | |
| R ² | .000 | | .025 | | .027 | | .031 | | .103 | | .104 | |

Standard errors in parentheses, * $p < .10$, ** $p < .05$, *** $p < .01$. ¹ Coded (1 (yes) or 0 (no))

Appendix F. Models: Sibling relationships

Table F.1 Hierarchical multiple regression: Frequent bullying by siblings¹

| | Model 1 | Model 2 | Model 3 | Model 4 | Model 5 | Model 6 |
|---------------------------|--------------|---------------|---------------|---------------|---------------|---------------|
| No poverty | .0 (.) | .0 (.) | .0 (.) | .0 (.) | .0 (.) | .0 (.) |
| Some poverty | .05*** (.01) | .05*** (.01) | .03** (.01) | .04*** (.01) | .03** (.01) | .03* (.01) |
| Persistent pov. | .07*** (.02) | .09*** (.02) | .05** (.02) | .06** (.02) | .04* (.02) | .04 (.03) |
| Sex: female | | .0 (.) | .0 (.) | .0 (.) | .0 (.) | .0 (.) |
| Sex: male | | -.00 (.01) | -.00 (.01) | -.00 (.01) | -.01 (.01) | -.01 (.01) |
| Child age | | -.00*** (.00) | -.00*** (.00) | -.00*** (.00) | -.00*** (.00) | -.00*** (.00) |
| Firstborn: no | | .0 (.) | .0 (.) | .0 (.) | .0 (.) | .0 (.) |
| Firstborn: yes | | .01 (.01) | .03** (.01) | .03** (.01) | .03** (.01) | .03** (.01) |
| White | | .0 (.) | .0 (.) | .0 (.) | .0 (.) | .0 (.) |
| Mixed | | -.02 (.03) | -.03 (.03) | -.03 (.03) | -.03 (.03) | -.03 (.03) |
| Indian | | -.01 (.03) | -.00 (.03) | -.00 (.03) | -.01 (.03) | -.01 (.03) |
| Pakistani/Bang. | | -.04 (.03) | -.04 (.03) | -.03 (.03) | -.05 (.03) | -.05* (.03) |
| Black | | -.12*** (.03) | -.13*** (.03) | -.13*** (.03) | -.13*** (.03) | -.14*** (.03) |
| Other ethnicity | | -.11*** (.04) | -.10*** (.04) | -.10*** (.04) | -.10*** (.04) | -.11*** (.04) |
| SEN: no | | .0 (.) | .0 (.) | .0 (.) | .0 (.) | .0 (.) |
| SEN: yes | | .07*** (.02) | .06*** (.02) | .06*** (.02) | .04* (.02) | .04* (.02) |
| BMI | | .00** (.00) | .00** (.00) | .00** (.00) | .00** (.00) | .00** (.00) |
| No. sisters | | | .01 (.01) | .01 (.01) | .01 (.01) | .01 (.01) |
| No. brothers | | | .05*** (.01) | .04*** (.01) | .04*** (.01) | .04*** (.01) |
| Single parent | | | .0 (.) | .0 (.) | .0 (.) | .0 (.) |
| Both parents | | | -.03** (.02) | -.04** (.02) | -.03* (.02) | -.03* (.02) |
| Stepfamily | | | -.05** (.02) | -.05** (.02) | -.05** (.02) | -.05** (.02) |
| Transitions | | | .01 (.01) | .01 (.01) | .01 (.01) | .01 (.01) |
| Parental education | | | | .01 (.01) | .01** (.01) | .01** (.01) |
| Hours worked (main carer) | | | | -.00 (.00) | -.00 (.00) | -.00 (.00) |
| Hours worked (partner) | | | | .00 (.00) | .00 (.00) | .00 (.00) |
| Parental conflict (no) | | | | .0 (.) | .0 (.) | .0 (.) |
| Parental conflict (yes) | | | | .07*** (.02) | .06*** (.02) | .06*** (.02) |
| Harsh discipline | | | | | .01*** (.00) | .01*** (.00) |
| Parental engagement | | | | | -.00** (.00) | -.00** (.00) |
| Internalising | | | | | .00 (.00) | .00 (.00) |
| Externalising | | | | | .01*** (.00) | .01*** (.00) |
| Cognitive scores | | | | | -.00*** (.00) | -.00*** (.00) |
| Kessler scores | | | | | .00 (.00) | .00 (.00) |
| IMD scores | | | | | | -.00 (.00) |
| Rural | | | | | | .0 (.) |
| Urban | | | | | | -.01 (.01) |
| Overcrowding | | | | | | .01 (.01) |
| England | | | | | | .0 (.) |
| Wales | | | | | | -.02 (.02) |
| Scotland | | | | | | -.02 (.02) |
| NI | | | | | | -.01 (.02) |
| Constant | .20*** (.01) | .62*** (.20) | .60*** (.19) | .58*** (.19) | .66*** (.21) | .66*** (.21) |
| N | 9186 | 9186 | 9186 | 9186 | 9186 | 9186 |
| R ² | .005 | .012 | .021 | .023 | .031 | .032 |

Standard errors in parentheses. * $p < .10$, ** $p < .05$, *** $p < .01$

¹ Coded 1 (most days) or 0 (less often)

Table F.2 Hierarchical multiple regression: Frequent bullying of siblings¹

| | Model 1 | Model 2 | Model 3 | Model 4 | Model 5 | Model 6 |
|---------------------------|--------------|--------------|--------------|--------------|--------------|--------------|
| No poverty | .0 (.) | .0 (.) | .0 (.) | .0 (.) | .0 (.) | .0 (.) |
| Some poverty | .03*** (.01) | .03*** (.01) | .03*** (.01) | .02** (.01) | .02* (.01) | .02* (.01) |
| Persistent pov. | .06*** (.01) | .06*** (.01) | .05*** (.02) | .03* (.02) | .02 (.02) | .02 (.02) |
| Sex: female | | .0 (.) | .0 (.) | .0 (.) | .0 (.) | .0 (.) |
| Sex: male | | .01 (.01) | .01 (.01) | .01 (.01) | .01 (.01) | .01 (.01) |
| Child age | | -.00 (.00) | -.00 (.00) | -.00 (.00) | -.00 (.00) | -.00 (.00) |
| Firstborn: no | | .0 (.) | .0 (.) | .0 (.) | .0 (.) | .0 (.) |
| Firstborn: yes | | .06*** (.01) | .07*** (.01) | .07*** (.01) | .07*** (.01) | .07*** (.01) |
| White | | .0 (.) | .0 (.) | .0 (.) | .0 (.) | .0 (.) |
| Mixed | | -.03 (.02) | -.03 (.02) | -.03 (.02) | -.03 (.02) | -.03 (.02) |
| Indian | | -.03 (.02) | -.03 (.02) | -.03 (.02) | -.03 (.02) | -.03 (.02) |
| Pakistani/Bang. | | -.00 (.02) | -.01 (.02) | -.01 (.02) | -.01 (.02) | -.01 (.02) |
| Black | | -.04 (.03) | -.05 (.03) | -.04 (.03) | -.04 (.03) | -.04 (.03) |
| Other ethnicity | | -.04 (.03) | -.04 (.03) | -.04 (.03) | -.04 (.03) | -.04 (.03) |
| SEN: no | | .0 (.) | .0 (.) | .0 (.) | .0 (.) | .0 (.) |
| SEN: yes | | .04** (.02) | .04** (.02) | .04** (.02) | .02 (.02) | .02 (.02) |
| BMI | | .00 (.00) | .00 (.00) | .00 (.00) | .00 (.00) | .00 (.00) |
| No. sisters | | | .01* (.01) | .01 (.01) | .01 (.01) | .01 (.01) |
| No. brothers | | | .02*** (.01) | .02*** (.01) | .02*** (.01) | .02*** (.01) |
| Single parent | | | .0 (.) | .0 (.) | .0 (.) | .0 (.) |
| Both parents | | | -.01 (.01) | -.01 (.01) | -.01 (.01) | -.01 (.01) |
| Stepfamily | | | -.03* (.02) | -.03* (.02) | -.04** (.02) | -.03* (.02) |
| Transitions | | | -.00 (.01) | -.00 (.01) | -.00 (.01) | -.00 (.01) |
| Parental education | | | | -.00 (.00) | .00 (.00) | .00 (.00) |
| Hours worked (main carer) | | | | -.00* (.00) | -.00 (.00) | -.00 (.00) |
| Hours worked (partner) | | | | -.00 (.00) | -.00 (.00) | -.00 (.00) |
| Parental conflict (no) | | | | .0 (.) | .0 (.) | .0 (.) |
| Parental conflict (yes) | | | | .03** (.02) | .03* (.02) | .03* (.02) |
| Harsh discipline | | | | | .00 (.00) | .00 (.00) |
| Parental engagement | | | | | -.00 (.00) | -.00 (.00) |
| Internalising | | | | | .00 (.00) | .00 (.00) |
| Externalising | | | | | .01*** (.00) | .01*** (.00) |
| Cognitive scores | | | | | -.00 (.00) | -.00 (.00) |
| Kessler scores | | | | | .00 (.00) | .00 (.00) |
| IMD scores | | | | | | .00 (.00) |
| Rural | | | | | | .0 (.) |
| Urban | | | | | | .02* (.01) |
| Overcrowding | | | | | | -.00 (.01) |
| England | | | | | | .0 (.) |
| Wales | | | | | | .01 (.01) |
| Scotland | | | | | | .01 (.01) |
| NI | | | | | | .02 (.01) |
| Constant | .10*** (.01) | .21 (.15) | .19 (.15) | .20 (.15) | .19 (.16) | .17 (.16) |
| N | 86 | 9186 | 9186 | 9186 | 9186 | 9186 |
| R ² | .004 | .015 | .018 | .019 | .025 | .026 |

Standard errors in parentheses. * $p < .10$, ** $p < .05$, *** $p < .01$

¹ Coded 1 (most days) or 0 (less often)

Appendix G. Consultation with young research advisors

Stage 1 Consultation

On Saturday 25th April, NCB met with nine members of the Young Researchers Advisory Group (YRAs), who ranged in age from 13 to 21. They were provided with an overview of the study, and shared their views on:

- Whether, how and why poverty might be associated with children's relationships
- Possible explanations for the patterns apparent in our initial (bivariate) findings
- Factors other than poverty which could influence children's relationship outcomes.

Expected links between poverty and relationships

Prior to being shown any results, there was a strong consensus within the group that family poverty **was** likely to affect children's relationships with parents, siblings and peers. Although one young person also highlighted that experience of poverty could motivate people to try harder to get on in life, the group highlighted the following mechanisms by which poverty could exert a negative impact:

- **Inability to satisfy basic needs** (e.g. going without breakfast) affecting concentration, performance, social participation, status, mood, wellbeing, interaction and therefore relationships
- **Restricted access to material goods** (e.g. branded clothing, games) affecting enjoyment of life, self-esteem and standing in the peer group, causing jealousy / resentment of parents, siblings or peers
- **Feeling different from, and unable to compete with, more affluent groups** reinforcing social segregation / tensions, and potentially encouraging young people into alternative, even antisocial or criminal behaviour
- **Intergenerational effects** whereby for parents, previous experience of poverty may have damaged their self-esteem, expectations, mental health and social networks and left them less able to provide a stimulating and supportive home environment for their children.
- **Ongoing effects of poverty – and associated stress - on parenting** (as above - e.g. if working long hours to earn a low wage, or stressed or depressed through lack of work, parents may struggle to find time and/or energy to engage with and supervise their children – which may mean their relationships are less close. This, they felt, could be exacerbated in large families).

Reactions to initial bivariate findings

- **The young people initially expressed surprise that young people's overall happiness with friends and family was not associated with poverty.** However, they felt the questions were very broad, and that children may have been expressing loyalty to those they cared about. Another suggested explanation was that parents on low incomes might prioritise buying goods for the children so that they did not necessarily go without, even if the parents suffered to a greater extent.
- **They were not surprised by the (linear) associations between poverty and other measures of relationships.** These were in line with their initial suggestions about the effects of poverty. In addition, they suggested that, if there were problems (e.g. financial) at home, children could find it harder to express themselves or talk about worries such that it 'all comes out' at school, adversely affecting their behaviour and performance and relationships – involuntarily, or in a bid for attention.
- **They offered a few suggestions for why children from poor backgrounds might have responses clustered at both extremes of the distribution,** as on some of the MCS items. For example, they felt that some families might have successfully shielded them from the effects of poverty, particularly if they had strong social support, whereas others were struggling to compensate. This might be due to other pressures in their lives, e.g. family conflict or breakdown.

Other influences on children's relationships

In terms of other factors which could influence children's relationships, the young people highlighted the following:

- **Family structure** (as pressures could be greater on single parents)
- **Family size** (which could interact with poverty to restrict the time and resources parents could devote to individual children)
- **Parenting** (or parents' ability to prioritise nurturing their child and providing appropriate guidance & supervision, including as a result of stress or other mental health problems influenced by poverty)
- **Parents' hours of work** (if parents work long, antisocial hours, this could impact on the time and energy they have to devote to children)
- **Children's social skills and coping mechanisms** (particularly during the stressful transition to secondary school, these could make the difference between children making friends or struggling)
- **Environmental / area deprivation** (amenities such as sports and leisure facilities were seen as important for allowing young people safe places to meet and pursue joint interests)
- **Relative deprivation** (if young people from poorer families lived - or attended schools in - mixed income areas, it was suggested that they might be more affected by any apparent differences in the material goods or lifestyles enjoyed by their peers)
- **Housing quality and security** (as this could affect children's health, sense of security and ability to play or socialise at home).

Stage 2 Consultation

On Saturday 12th September, the researchers held a second meeting with 12 of the young research advisors. After a recap of the Stage 1 (bivariate) findings, they were presented with an overview of the final (multivariate) results. They were then asked to discuss:

- Their reactions to, and interpretations of, the findings
- Key messages for dissemination
- Their priorities for further research.

Perspectives on the multivariate results

Whereas the broad pattern of the bivariate results 'rang true' for the young people, and was in line with what they expected, they were surprised that, after controlling for other factors, poverty was no longer an independent predictor of many aspects of relationships.

Individual young people raised a number of possible explanations for this, including that:

- Compared to more independent, older children, 11 year olds might be exposed to less pressure to have expensive things or 'keep up' with expensive trends.
- Poverty could be causing a lot of stress within the family (for example, if parents are unable to pay bills, humiliated, ashamed, constantly having to say 'no' to treats, getting into debt, and living in poor housing), but this could manifest in parental conflict, family breakdown, hostile or harsh parenting, and mental health and behavioural problems ('lashing out') which were themselves predictors of relationship outcomes. One girl described this as a 'domino effect'.
- There could be reciprocal effects between poverty and other factors. For example, one girl described how family breakdown, triggered by money worries, could lead to further poverty, with newly single parents being unable to maintain their working hours, and with distress and resentment all round causing further deterioration in family relationships.

There was a broad consensus in the group on these points.

The YRAs also offered some explanations for the links with poverty which remained significant, even after controlling for other factors.

Firstly, in relation to time spent with friends, they suggested that:

- Children from poorer families could be 'escaping' stressful, conflictual or unstimulating homes in search of more enjoyable, rewarding interaction
- They could be seeking out friends who had material things or opportunities they lacked, such as an Xbox, or somewhere bigger and better to hang out
- They might have more freedom than other children to 'get in with the wrong crowd' – which might perpetuate tensions with – and avoidance of – their parents.

In relation to fighting with or bullying peers, the young people felt this was likely to reflect 'lashing out' to gain status or exert control (which they might lack at home), and/or 'bottled up' frustration at families' inability to provide things they wanted.

Focusing on confiding at home (where *some* but not *persistent* poverty was a significant independent predictor), it was thought that this could easily be affected by children's wish not to burden poor, stressed parents with (more) problems – or by a feeling that parents were too distracted to listen or help. Some of the YRAs thought that those in *persistent* poverty might be used to it, and therefore that it could be 'normal' and not so much of a deterrent to confiding as a move *into* poverty, especially if that move was caused by a stressful family breakup or job loss.

In relation to the surprising finding that, controlling for other factors, persistent poverty was associated with *higher* levels of happiness with families, a number of the young people felt that in poor but stable families, children might value the simple pleasures of family life more, and might be more resourceful and imaginative about how to have fun, compared to those in richer homes with a lot of material goods and expensive activities.

Key messages for dissemination

The young people felt it was important to disseminate a balanced picture of the results, with positive and negative findings. They thought it was important for policy makers *and* parents to know that children from poor households were just as happy with their families – or even happier, if other factors were taken into account – than were their more affluent peers. This would, they felt, counter some of the stereotypes about poor parents being bad parents.

However, the group were convinced that poverty was linked to stressful experiences, which impacted negatively on relationships. At its simplest, therefore, they felt that the government should recognise the damage that poverty could do, and renew their efforts to ensure that families had decent, secure incomes.

In addition, they argued that, as 'some' experience of poverty was associated with lower levels of confiding in parents (as was 'persistent' experience of poverty before controlling for other factors), there should be additional efforts to provide non-stigmatising services – in schools and elsewhere in the community - to help children *and* parents talk about and address their worries. This could also help alleviate some of the causes of fighting and bullying among children with experience of poverty – if, as the young people suggested – some of these arguments were fuelled by frustrations at home.

Areas for further research

The young people were very interested in the finding that children from poorer backgrounds were likely to spend more time with friends, and wanted to understand more about this. They were keen to know what was driving it (whose choices or what constraints), and whether the friendship group activities - and also fights or bullying – among children from poor and affluent homes were qualitatively different.

They were also very interested in gender, ethnicity and country-based variation in relationships, and how these might interact with poverty.

They also believed that there were a few factors which were not included in the present study which could be considered in future, as possibly influenced by poverty *and* influencing children's relationships, including:

- Stress and stressful life events (as mentioned above)
- School and classroom experiences
- Out of school activities (organised clubs, sports, volunteering).

In addition, they were keen to know how, if at all, poverty was linked to relationships with teachers, other authority figures and 'romantic' partners (as children moved into adolescence).