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Change in wellbeing from childhood to adolescence:  
risk and resilience

Leslie Morrison Gutman, John Brown, Rodie Akerman, Polina Obolenskaya



Centre for Research on the  
Wider Benefits of Learning

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# **CHANGE IN WELLBEING FROM CHILDHOOD TO ADOLESCENCE: RISK AND RESILIENCE**

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## **Executive summary**

### **Background and introduction**

The wellbeing of children in the UK is currently of major public and government interest. In 2003, the Government's vision for childhood wellbeing was articulated in Every Child Matters (ECM), a national agenda to build services around the needs of children and young people. The ECM framework identified five outcomes as important for child wellbeing: being healthy; staying safe; enjoying and achieving; making a positive contribution; and achieving economic wellbeing.

Concern was recently sharpened by a United Nations Children's Fund (UNICEF) 'report card' ranking the UK in the bottom third of developed countries for child wellbeing (UNICEF, 2007), although a more recent OECD publication locates the UK about mid-table overall (OECD 2009). What is clear from the published literature – both policy and research – is that definitions of wellbeing vary, ranging from overall reports of "happiness" or "life satisfaction", through more in-depth consideration of psychosocial measures, to wide-ranging approaches which take in a basket of measures including physical and economic elements.

The approach we have taken here focuses on children's psychosocial wellbeing, looking at four different aspects: emotional, behavioural, social and subjective school wellbeing, examining in particular what drives change in these outcomes. This is informed in part by the developing debate about the nature of childhood – what constitutes a "good" or a "risky" childhood – and about the role which changing social values and family structures play. It also follows on from earlier work on children's wellbeing and on friendships in primary school which identifies a particular group at risk of declining wellbeing, and stems from a desire to find out what drives this change (Gutman and Feinstein, 2008; Gutman and Brown, 2008).

In this report, we use secondary data analysis to examine changes in wellbeing within the framework of risk and resilience. Using data from the Avon Longitudinal Study of Parents and Children (ALSPAC), we look at trajectories and drivers of change – both positive and negative – across two time periods: mid-childhood (7.5 years to 10.5 years) and early adolescence (10.5 years to 13.8 years). We also look at those children who have a large number of risks to wellbeing in their lives, identifying those factors which may help protect their wellbeing.

### **Key findings**

#### **Changes in wellbeing**

For the sample as a whole, change in the different dimensions of wellbeing is statistically significant, but (with the exception of school wellbeing, which shows a marked decline) small.

However, these are averages and there is a high degree of variation within this: for most dimensions of wellbeing, only around 50–60 per cent of children experience stability, with around half of the remainder experiencing an increase in wellbeing and half experiencing a

decline. The exception to this pattern is school wellbeing, where fewer children experience stability and more experience decline, particularly in mid-childhood.

### **Predictive factors**

Children with special educational needs (SEN) are more likely than others to experience poor and declining wellbeing through mid-childhood and adolescence. There is, however, some variation in the different types of SEN: emotional and behavioural difficulties followed by specific learning difficulties are the most frequent predictors of relatively worsening outcomes, but children with speech and language difficulties do not experience declines in wellbeing relative to their peers. And in some instances, particularly for children in adolescence, the SEN status is related to positive change, but this varies across gender and different dimensions of wellbeing and has no obvious pattern.

Child–parent relationships appear particularly important to sustaining and improving wellbeing: children who report positive relationships with their parents are significantly more likely to experience improvements in behavioural and social wellbeing and less likely to experience decline in subjective school wellbeing. Similarly, where parents report positive feelings about their child, children are significantly more likely to experience improvements in wellbeing than those whose parents report negative feelings. These relationships cannot be shown to be causal, however.

### **Gender differences**

There are also several small but significant gender differences in the patterns and drivers of change in wellbeing:

- Girls are more likely to experience slightly lower levels of, and greater declines in, their emotional wellbeing. Conversely, boys have lower behavioural, school and social wellbeing than girls, although the gender gap in social wellbeing narrows from mid-childhood to early adolescence.
- Boys tend to experience greater declines in wellbeing where there is maternal alcoholism (paternal alcoholism was not included in our measures for technical reasons) and stressful life events, whereas girls do not.
- Although a significant driver of wellbeing and of changes in wellbeing for both boys and girls, parents' feelings about their child seem to protect against declining wellbeing for girls with multiple risks in their lives, but did not seem to have the same protective power for boys at high risk.

## **Methodology**

### **Data**

Data are taken from the Avon Longitudinal Study of Parents and Children (ALSPAC) – an ongoing longitudinal study of children born to mothers resident in the geographic area of Avon in the United Kingdom with an expected delivery date between April 1991 and December 1992. It surveys children and parents year on year. By comparison with the 1991 National Census, the ALSPAC sample had a slightly greater proportion of mothers who were married or cohabiting, who were owner–occupiers, and who had a car in the household, and a smaller proportion of mothers from ethnic minority groups.

## Measures

For our outcome measures we examine four dimensions of wellbeing: emotional, behavioural, social and subjective school wellbeing at three age points: age 7.5 , age 10.5<sup>1</sup> and age 13.8, giving us indications of change across two developmental periods – mid-childhood (7.5 years to 10.5 years) and early adolescence (10.5 years to 13.8 years). Each dimension is a composite measure, identified through the statistical technique of factor analysis. Emotional wellbeing is based on a number of measures, including fears, anxiety and mood. Behavioural wellbeing includes measures such as children’s engagement in troublesome or anti-social activities. Social wellbeing includes measures regarding friends, social interactions and social competence. Subjective school wellbeing includes questions such as enjoyment of school. Within each dimension of wellbeing, measures are identical across the three time points in order to assess change. Further details of the measures used can be found at [www.alspac.bris.ac.uk](http://www.alspac.bris.ac.uk).

Our predictive factors were identified from examination of existing literature as to likely drivers of wellbeing. They include child variables (e.g. gender, SEN status), socio-demographic variables (e.g. household income, parental education) and variables relating to family function (e.g. maternal mental health, parent and child reports of family relationships).

## Analysis

We took a risk and resilience approach to the analysis, classifying our variables as either likely risk or protective factors, based on the research literature. Correlations between these factors and the wellbeing outcomes provided contextual information and broad confirmation that the factors selected are indeed risk or positive factors. A series of multiple regressions examined how these risk and positive factors contribute to changes in wellbeing across the two developmental periods – mid-childhood and early adolescence, considering:

- whether risk factors have a significant relationship with dimensions of wellbeing, controlling for prior wellbeing
- whether positive factors have a significant relationship with dimensions of wellbeing, controlling for prior wellbeing and risk factors
- whether any of these positive factors are protective – i.e. if they mitigate high levels of risk. To do this, we created a composite risk score using the following risk factors: stressful events, maternal depression, maternal alcoholism, low family income, and SEN for each child. Interactions between the composite risk score and positive factors are examined to determine which positive factors are protective for children at higher levels of risk.

## Findings

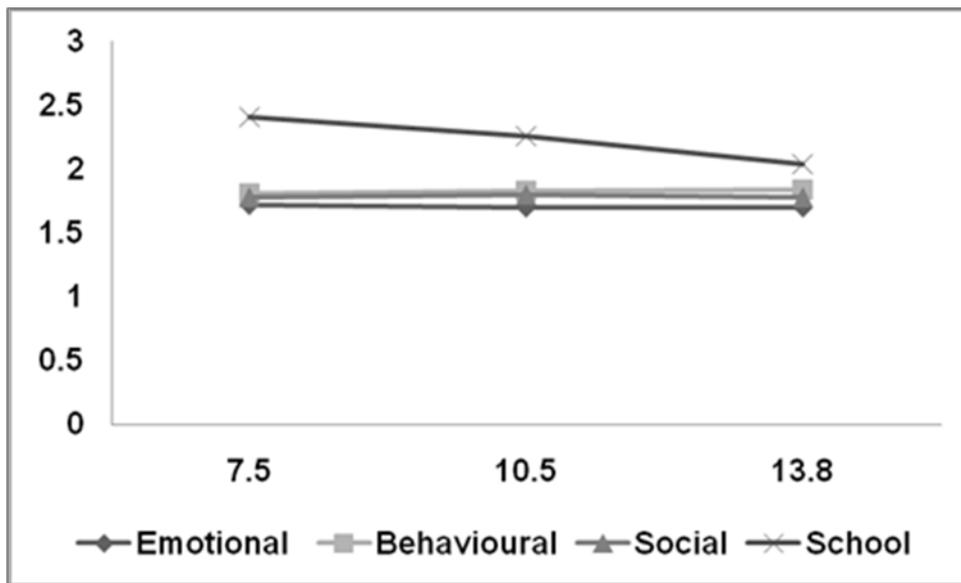
### Changes and patterns of wellbeing

As shown in Figure ES1, changes in most wellbeing dimensions are marginal, with the exception of school wellbeing, which shows some decline.

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<sup>1</sup> Age 9.5 for school wellbeing

**Figure ES1: Trajectories of wellbeing through mid-childhood and early adolescence**



These overall changes mask considerable variation, however. Table ES1 shows the percentage of children who experience negative, positive, or no change in wellbeing across the two time periods. About half of the children experience stable wellbeing, whereas similar percentages experience either an increase or decrease through mid-childhood and early adolescence. School wellbeing has a rather more unstable profile, with greater numbers experiencing change, particularly decline. Behavioural wellbeing shows the greatest stability.

**Table ES1: Change in wellbeing according to standard deviations**

	-2	-1	No change	1	2 <sup>2</sup>
<b>Mid-childhood</b>					
<b>Percentage</b>					
Emotional	3	24	50	19	4
Behavioural	3	18	60	16	3
Social	3	19	52	23	3
Subjective School	2	33	38	25	2
<b>Early adolescence</b>					
Emotional	3	23	48	23	3
Behavioural	3	15	62	17	3
Social	3	20	56	18	3
Subjective School	4	26	45	23	2

### Predictors of wellbeing

While this report focuses principally on **changes** in wellbeing, it is useful to set the context

<sup>2</sup> The number of standard deviations (SDs) represents ranges: 2 SD is any change greater than 1.5 SD; 1 SD a range between 0.5 and 1.5 SD; no change a range between -0.5 and 0.5 SD, and so on.

for this by considering those factors which are associated with wellbeing per se. Correlations<sup>3</sup> show that, as we would expect, our risk factors generally are associated with lower wellbeing, whereas our positive factors generally are associated with higher levels of wellbeing. However, although most relationships are statistically significant, they are relatively weak.<sup>4</sup> The exceptions to this are the SEN status of the child, parents' reported feelings about their child, the child's report of their relationship with their parents, and Key Stage 1 results, where correlations are stronger.<sup>5</sup>

It is also important to highlight cases of non-significance, where relationships may have been expected. Neither low parental education nor stressful events are associated with the subjective school wellbeing of either boys or girls, although they are significant risk factors for other dimensions of wellbeing. Furthermore, few risk factors, with the exception of low household income, are associated with subjective school wellbeing for girls in early adolescence.

### **Predictors of change in wellbeing**

The factors which predict change in wellbeing reflect, to a large degree, the raw correlations with wellbeing: many factors which are associated with poor wellbeing also predict worse than average changes in wellbeing; conversely, factors associated with good wellbeing also predict better than average changes.

In keeping with this, SEN status is consistently the most powerful predictor of worse than average change in wellbeing for both boys and girls, affecting all dimensions of wellbeing, but particularly social and behavioural aspects. There is, however, variation in different types of SEN according to the particular dimension of wellbeing as well as the developmental period and gender of the child. Specific types of SEN are more predictive of changes in wellbeing than overall SEN, with the exception of a few cases (i.e. boys' emotional wellbeing in early adolescence and boys' school wellbeing in mid-childhood). For the most part, emotional and behavioural difficulties followed by specific learning difficulties are the most frequent predictors of poor outcomes, although other types of SEN emerge as significant. For example, boys with behavioural and emotional difficulties experience greater declines in behavioural wellbeing in mid-childhood than boys without behavioural and emotional difficulties. Girls with physical difficulties suffer greater declines in wellbeing during mid-childhood compared to girls without physical difficulties.

Other risk factors have a more limited effect, being associated with an increased risk of declining wellbeing for specific groups and dimensions of wellbeing:

- **Maternal depression:** boys and girls with depressed mothers experience a greater decline in their emotional wellbeing in mid-childhood compared to children whose mothers do not report being depressed. The social wellbeing of girls also suffers. It should be noted that paternal depression is not included in the analysis for technical reasons.

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<sup>3</sup> We have used correlations that give only raw associations, rather than attempting to assess the independent net effect of each variable, as the interpretation of regression models including risk and positive factors with and without the element of change proved overly complex.

<sup>4</sup> r-values rarely exceeding +/-0.15

<sup>5</sup> r-values typically in the +/-0.20 to +/- 0.35 range.

- **Stressful events:** boys who experience stressful life events experience a greater decline in behavioural and social wellbeing during early adolescence compared to others. However, there is no significant effect for girls.

Turning to those positive factors which might support wellbeing, the analysis shows the importance of family relationships for the wellbeing of children as they mature into adolescents. Firstly, as we noted earlier, the correlations between child wellbeing with both positive child–parent relations and parents’ feelings towards their children are relatively strong. Secondly, these factors also predict better than average change across the different dimensions of wellbeing. Its association with more positive change in wellbeing is evident for both sexes, though perhaps somewhat more evident for girls, and for both time periods.

Attainment is another significant positive factor, chiefly for girls in mid-childhood, for whom higher Key Stage 1 scores predict better than average changes in their emotional, behavioural and social wellbeing in mid-childhood compared to those children with lower scores. This finding is significant even though the different measures of SEN are taken into account, suggesting that attainment and SEN have independent effects on children’s wellbeing.

Children’s friendships also appear to provide some, more limited, support for their wellbeing, with boys having more positive changes in their social wellbeing and girls experiencing more positive changes in their school wellbeing in mid-childhood where they report high levels of satisfaction with their friendships.

### **Relationships between different forms of wellbeing**

There are also associations between the different dimensions of wellbeing, with high prior measures on one dimension predictive of better than average changes on another. This is particularly the case for behavioural and social wellbeing, where high prior measures of behavioural wellbeing are associated with more positive changes in social outcomes for both boys and girls across both time periods. The reverse association, however – high social wellbeing with later behavioural wellbeing – only holds for boys in mid-childhood. These findings support our earlier work demonstrating that early behavioural difficulties may contribute to a greater escalation of problems in social relationships as children mature (Gutman and Brown, 2008).

There are thus a number of factors which are associated with positive and negative change in wellbeing. Our models suggest that these have particular importance for social and behavioural wellbeing, where our identified risk and positive factors explain a much greater proportion of the variance than is the case for emotional and school wellbeing.

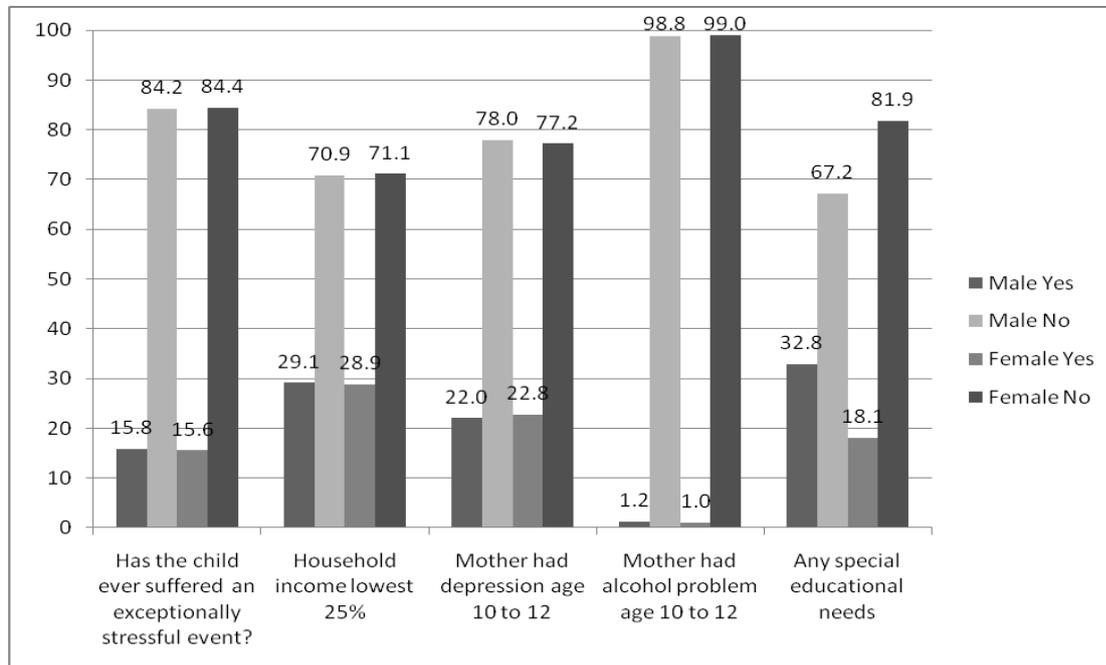
The scale of these average effects, while statistically significant, is generally modest (a one standard deviation change in the risk or positive factors rarely being associated with a change in wellbeing exceeding +/- 0.20 standard deviations), and there is a strong degree of continuity in wellbeing. It should be stressed, however, that these are average effects and the importance of these factors may vary greatly for individuals. To explore some of these differences, we go on to look at different effects for children at high and low risk to determine whether some factors might offer particular protection for children at high risk.

### **Protective factors for high-risk children**

To examine how positive factors might offer protection for children at particular risk, we looked at their differential effects on children at low risk (those with none of five risk factors

identified as being of particular significance to wellbeing) compared with those at high risk (those with three or more of five identified risk factors). Figure ES2 shows the percentages of children who have experienced these factors.

**Figure ES2: Percentages of risk factors by gender**



Our analysis shows that parents' positive feelings towards their children can act to protect the wellbeing of high-risk children, particularly girls. High-risk girls whose parents report fewer negative feelings about them have more positive changes in their behavioural, social and school wellbeing than their high-risk peers whose parents report more negative feelings. For low-risk girls, in contrast, parental feelings make little difference to their trajectories of wellbeing. Similar protective effects for high-risk boys appear to be limited to social wellbeing in mid-childhood.

For children at high risk, having high levels of wellbeing in one dimension support other aspects of their wellbeing. In particular, there appear to be some mutually supportive relationships between a) social and behavioural wellbeing and b) behavioural and school wellbeing for adolescent girls at high risk, whereby experiencing high levels of the first significantly increases the likelihood of experiencing improvements in the second later on, but has little effect for their peers at low risk. This effect is particularly marked in the case of the relationship between behavioural and school wellbeing. In addition, school wellbeing appears more generally supportive of other forms of wellbeing: high-risk children who enjoy primary school experience more positive change in their social and behavioural wellbeing than those who did not enjoy school.

## Conclusions

This report documents wellbeing from mid-childhood to early adolescence. Our findings suggest that although changes for the overall population may be small, the course of

wellbeing for the individual child, or for particular groups of children, can be much more varied. Policy development will need to be informed by this variability and seek to differentiate, if it is to support wellbeing effectively.

While we identify a number of factors as potential risks or supporters of wellbeing per se, the focus of our report is on change. This has a number of advantages. First, it gives a perspective on an aspect of wellbeing that is less well covered than single time point measures in existing research. Second, it factors out any fixed congenital disposition towards wellbeing. Third, policy is usually concerned to effect change: therefore if we identify drivers of positive and negative change, this may give us a better idea of how to improve and support wellbeing than a single snapshot view.

While none of the relationships we identify can be proven to be causal, there are factors which are clearly associated with good or poor wellbeing and which give good indications as to how positive change in wellbeing may be supported or undermined. Some of these factors apply universally across our sample, while others are differentiated by risk and gender. In particular we would highlight the importance of children's environments— particularly in terms of their relationships with parents, and to a lesser extent their friends, and school—as well as their experiences and capabilities—in terms of attainment and SEN. These factors give us the best indications of how and where child wellbeing can be leveraged through policy.

Positive parent–child relationships have been shown to have particular value in supporting children's wellbeing. Families, particularly those contending with a significant number of problems (for example parental depression, low income), may benefit from accessible and non-stigmatising support in establishing and maintaining such relationships.

With regard to the effects of a child's own capabilities on their wellbeing, it may be a truism to suggest that doing well in school can help a child to feel better about themselves, but this finding highlights the need to consider the case of children who are **not** achieving so well and the need to avoid a downward spiral of low achievement and poor wellbeing. Schools can play a positive role here in fostering engagement and enjoyment of learning. This may be particularly important for children who have particular pressures in their lives – for example difficulties at home, poor parental support or experience of stressful events. Our analysis shows that children experiencing these kinds of risks experienced more positive changes in their behaviour and their social capabilities if they had enjoyed school. This emphasises the importance of a positive school environment.

The findings also highlight the area of special educational needs, which are thought to affect one in five children at some point in their school careers (DCSF, 2008a), and are correlated with declining wellbeing in all dimensions. However, the finding that children with some kinds of SEN experience more positive changes in wellbeing as they grow older is a hopeful result. Closer study of some of these groups may also add to our understanding of how parents, practitioners and schools may buffer the potential risks associated with SEN.

By contrast with children's environments and capabilities, their social background and where they live, although correlated with levels of wellbeing, do not predict change in wellbeing.

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# **1. Introduction**

## **1.1 Aims and methodology**

This report examines children’s social, psychological and behavioural wellbeing from childhood to adolescence. We first provide a background on the concept of wellbeing, examining the current climate in which concepts of wellbeing exist and how both policy and research define and measure wellbeing. Then, we focus more specifically on social, psychological and behavioural wellbeing from childhood to adolescence, discussing how it has been measured in both policy and research and how it changes from childhood to adolescence. We next discuss our examination of wellbeing through a resilience framework. To do this, we provide a background of how resilience is conceived in policy and research, defining its key concepts. We then focus more specifically on the risk factors which may contribute to a decline in wellbeing from childhood to adolescence as well as focusing on the protective factors which may provide a buffer during this period.

This provides the background for the next step of our report – secondary data analysis, in which we examine different dimensions of wellbeing, including emotional, behavioural, social and subjective school wellbeing, using the Avon Longitudinal Study of Parents and Children (ALSPAC). Rather than examining a single point in time, we investigate how these dimensions of wellbeing change from mid-childhood to early adolescence and the positive and negative factors which contribute to such changes. This stems from our previous research (Gutman and Feinstein, 2008), which identified a particular group of children who were at risk of declining wellbeing, and a desire to find out what drives this sort of change. Identifying drivers of positive and negative change, rather than just high or low levels, provides a better understanding of how to improve wellbeing, particularly for those most at risk of experiencing a decline.

To do this, we first look at patterns of change in four dimensions of wellbeing: emotional, behavioural, social and subjective school wellbeing at three age points: age 7.5, age 10.5<sup>6</sup> and age 13.8, giving us indications of change across two developmental periods – mid-childhood (7.5 years to 10.5 years) and early adolescence (10.5 years to 13.8 years). Next, we examine the risk factors which predict negative changes in wellbeing and the positive factors which predict positive changes in wellbeing across two time periods. We then examine protective factors which may buffer the impact of risk factors on wellbeing. For both risk/protective factors, we explore whether there are any particular vulnerable periods as well as gender differences. Lastly, we place these findings within the wider definitions of wellbeing. In terms of policy implications, we focus on whether there are particular groups that should be targeted for support and which particular aspects of support should be given more priority or increased focus.

## **1.2 Background: the concept of wellbeing**

The wellbeing of children in the UK is currently of major public interest. Concern has been sharpened by a United Nations Children’s Fund (UNICEF) ‘report card’ ranking the UK in the bottom third of developed countries for child wellbeing (UNICEF, 2007), followed more

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<sup>6</sup> Age 9.5 for school wellbeing

recently by a similar comparison ranking the UK twenty-fourth of 29 European countries (Child Poverty Action Group, 2009). Wide media coverage and comment surrounds reports on children and young people's issues, such as that of a poll, conducted as part of the Children's Society's *Good Childhood Inquiry* (Children's Society, 2008),<sup>7</sup> which reported that one in four teenagers said they often felt depressed; they cited peer pressure, academic stress and bullying as the greatest causes of worry.

The Government's agenda reflects this interest, with the creation of the new Department for Children, Schools and Families (DCSF) in 2007 indicating a concern within central government for children's wellbeing and development in the round, and the 2008 Children and Young Person's Act placing the Secretary of State for Children, Schools and Families under a duty to promote children's wellbeing. Nevertheless, there is a lack of consensus regarding the concept of wellbeing, in the realms of both policy and research. As a social construct, wellbeing represents a shifting set of meanings, but is essentially what people collectively decide makes "a good life" (Ereaut and Whiting, 2008, p.1). Since wellbeing encompasses multiple dimensions – such as the social, emotional and psychological – it has been defined according to different criteria, as is further explored below.

### **1.2.1 What is the current climate in which concepts of wellbeing exist?**

We have indicated that the issue of children and young people's wellbeing is a matter of considerable and widespread concern in the current climate. Frequent newspaper headlines on issues such as children's safety or mental health, and concern about the numbers of young people not in education, employment or training, or involved in anti-social behaviour, serve to illustrate the view of some that modern childhood has become "toxic" (Palmer, 2006). Equally, the notion of what makes a "good" childhood has been the subject of concern: the Children's Society's *Good Childhood Inquiry*, mentioned above, considered the themes of family, friends, lifestyle, values, schooling, mental health and inequalities in its investigation of the topic. It came to some negative conclusions: "excessive individualism is causing a range of problems for children including: high family break-up, teenage unkindness, commercial pressures towards premature sexualisation, unprincipled advertising, too much competition in education and acceptance of income inequality."<sup>8</sup>

There seems therefore to be a perception in some quarters that many children growing up in the UK lack wellbeing. This is a perception that policy is making clear attempts to address, and government surveys also emphasise that the majority of children and young people seem to hold a positive view: when a large sample was questioned (Office for Standards in Education [Ofsted], 2008), 69 per cent reported feeling happy about life at the moment. A large majority also felt healthy, and safe in their schools and local areas, although almost half were worried about their future.

In the light of the widespread interest, it is unsurprising that "wellbeing" as a term is an important feature of current policy discourse. The Local Government Act 2000 placed the term high on the agenda, giving local authorities the power to take any action likely to improve economic, social and environmental wellbeing in their areas, and requiring them to develop a strategy for doing so. Improving the health and wellbeing of all has been a long-standing objective of the Department of Health, and improving children's and young people's

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<sup>7</sup> See, for example, [www.guardian.co.uk/society/2008/apr/24/mentalhealth.children](http://www.guardian.co.uk/society/2008/apr/24/mentalhealth.children) (accessed 24 February 2009).

<sup>8</sup> [www.childrency.org.uk/all\\_about\\_us/how\\_we\\_do\\_it/the\\_good\\_childhood\\_inquiry/report\\_summaries/13959.html](http://www.childrency.org.uk/all_about_us/how_we_do_it/the_good_childhood_inquiry/report_summaries/13959.html) (accessed 26 March 2009).

health and wellbeing subsequently became the focus of one of the 30 Public Service Agreements, or top-level, cross-government targets. The stipulated indicators of success for meeting this target focus on physical health, but they also cover children's emotional health and wellbeing, and the provision of child and adolescent mental health services. The Government's vision and policy for children and young people is described in detail in the *Children's Plan* (DCSF, 2007a), which is based on the twin aims of raising children and young people's educational attainment and improving their wider wellbeing.

Schools are positioned as key to achieving both the educational attainment and the wellbeing aims of government, with the National Curriculum defining education as "a route to the wellbeing and development of the individual" (Qualifications and Curriculum Authority [QCA], 1999, in Foresight Mental Capital and Wellbeing Project, 2008a, p.72). The Education and Inspections Act 2006 placed schools under a duty to promote children's wellbeing, and from September 2009, Ofsted inspections will consider schools' success in this. The *21st Century Schools* vision document (DCSF, 2008a) proposes a new "scorecard" system of reporting to parents on how schools are supporting children's wider development and wellbeing, as well as raising standards. *21st Century Schools* also recognises that: "Doing well at school and doing well in other aspects of life are not separate issues". It cites the National Healthy Schools programme (which has a theme devoted to emotional health and wellbeing) and extended school activities as ways in which schools are promoting children's wellbeing. In *The Children's Plan: One Year On* (DCSF, 2008b) schools are made responsible for promoting the wellbeing of all children in their area – not just those on their roll. It is also recognised that the transition between primary and secondary school can be a time of particular difficulty for children, when mental health problems affecting psychological wellbeing may come to the fore (CAMHS Review, 2008).

Within the curriculum, wellbeing is often considered together with Personal, Social, Health and Economic education (PSHE) and sex and relationships education. At Key Stages 3 and 4 it is the focus of its own (non-statutory) programme of study, designed to fit in with these subjects as well as with the social and emotional skills on which the Social and Emotional Aspects of Learning (SEAL) programme<sup>9</sup> is based, and the Personal, Learning and Thinking Skills (PLTS) framework<sup>10</sup> developed by QCA for inclusion within the curriculum for 11- to 19-year-olds. The introduction of these elements into the curriculum; the pilot of the UK Resilience Programme<sup>11</sup>; the announcement by the independent school Wellington College that it was beginning lessons in wellbeing; and work of authors such as Layard<sup>12</sup> has led to

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<sup>9</sup> SEAL takes a whole-school approach to promoting wellbeing alongside positive behaviour, attendance, learning and employability, and was being used by approximately 80 per cent of primary schools and 30 per cent of secondary schools by July 2008 (DCSF, 2008b). The programme covers five principal "aspects of learning": self-awareness, managing feelings, motivation, empathy and social skills.

<sup>10</sup> The PLTS framework specifies six "groups of skills", under the headings: Independent Enquirers, Creative Thinkers, Reflective Learners, Team Workers, Self-Managers and Effective Participators. These headings are conceived as capturing the "essential skills of: managing self; managing relationships with others; and managing own learning, performance and work" (Boston, 2006).

<sup>11</sup> The UK Resilience Programme is being piloted with year 7 students in 22 schools and is based on the Penn Resiliency Program, developed by psychologists at the University of Pennsylvania. The programme aims to prevent adolescent depression, build resilience and promote optimistic thinking, adaptive coping skills and social problem-solving. The evaluation is investigating the programme's impact on psychological wellbeing (through questionnaires assessing depression, anxiety, coping skills and life satisfaction), behaviour (through questionnaires completed by children and teachers), attendance and academic outcomes (Challen *et al.*, 2009).

<sup>12</sup> For example Layard (2005). See also BBC news 3 May 2007, *Pupils 'need happiness lessons'*. Available at <http://news.bbc.co.uk/1/hi/education/6618431.stm> (accessed 19 June 2009).

considerable media interest under headlines such as “ ‘Happiness’ lessons to be given to schoolchildren”.<sup>13</sup>

Wellbeing is also a focus in policy emerging from other government departments. The child health strategy (Department of Health and DCSF, 2009), unsurprisingly, tends to pair wellbeing with health, focusing on “psychological wellbeing” as an aspect of mental health, as well as making reference to “emotional wellbeing”. Its aim is to help secure “world-class health and wellbeing outcomes” for children, and like other recent documents it positions schools as playing a central role in this, again through acquisition of Healthy School and Extended School status. It identifies certain groups of children and young people as being in need of particular support: “Children in low-income households, those living in single-parent families, children in care, teenage mothers, families where parents have low educational attainment, or families where parents are unemployed, are all more likely than their peers to suffer from emotional health and wellbeing problems” (p.14).

*New Opportunities: Fair chances for the future* (HM Government, 2009), the White Paper on social mobility, takes a broader view of wellbeing, including it among the overall aims of the paper “to ensure successive generations have the opportunities to realise their potential and improve their position in society, delivering improvements in wealth, wellbeing and ambitions for individuals and their families and ensuring a fairer and more equal society” (p.22). In addition to efforts that can be made by government, there is also an emphasis here on families’ responsibility for their own wellbeing – for example, reference is made to parents’ responsibility for their children’s “wellbeing and development” (p.85). This theme also appears in the child health strategy, which notes that young people become more responsible for their own health and wellbeing as they grow older.

### **1.2.2 How does policy define and measure wellbeing?**

How wellbeing might be defined and measured has also been a focus of attention. Ereat and Whiting (2008) consider the use of the term “wellbeing” by DCSF and other government departments, as well as more widely, and highlight its use in several different domains, which may overlap with each other. Within DCSF, following the lines of the Children Act 2004, the five Every Child Matters (ECM) outcomes (staying safe, being healthy, enjoying and achieving, making a positive contribution and achieving economic wellbeing) are generally taken as a definition of wellbeing. For example, local authorities and their partners (including schools and health authorities) have been placed under a duty of cooperation to ensure children’s wellbeing, and for this the five outcomes constitute a legal definition of the term (DCSF, 2008c). The outcomes are thought to be mutually reinforcing, with staying healthy and safe underpinning learning, for example, and educational achievement being seen as a route out of poverty. The outcomes are described by the Government as being “universal ambitions for every child and young person, whatever their background or circumstances”,<sup>14</sup> with a focus on narrowing the gap between the outcomes of disadvantaged children and their peers.

Ereat and Whiting term the definition of wellbeing according to the ECM outcomes (a definition specific to DCSF) an “operationalised” discourse, in that the concept is defined by the very outcomes designed to measure it. They also point out that in DCSF and some other government texts, wellbeing is linked to independence and skills, and indirectly to economic

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<sup>13</sup> *The Telegraph*, 7 September 2008. Available at [www.telegraph.co.uk/education/2699739/Happiness-lessons-to-be-given-to-schoolchildren.html](http://www.telegraph.co.uk/education/2699739/Happiness-lessons-to-be-given-to-schoolchildren.html) (accessed 19 June 2009).

<sup>14</sup> [www.everychildmatters.gov.uk/aims/outcomes/](http://www.everychildmatters.gov.uk/aims/outcomes/) (accessed 26 March 2009)

success: it is “constructed as ... a means to an end, as well as an end in itself” (Ereaut and Whiting, 2008, p.13). In “medical discourse”, meanwhile, such as that employed by the Department of Health, the term is often paired with “health” and means an extension of concern for physical health to the mental and emotional spheres, and may sometimes be used as a way of avoiding the stigma surrounding discussion of mental health issues. In “sustainability” discourse – for example in that used by the Department for Environment, Food and Rural Affairs (Defra) – it implies living within environmental limits and “ensuring a strong, healthy and just society” (Ereaut and Whiting, 2008, p.11); more detail on this usage is given below. The term also features in a discourse of “holism”, i.e. a concept of the ‘whole person’, taking in physical and emotional health as well as ideas of spirituality and the environment. Finally there is a philosophical usage of the term, stretching back to Aristotle and centring on an ideal or aspiration of “all that is best and desirable for a person” (Ereaut and Whiting, 2008, p.12) – an aspiration reflected in the DCSF’s aim of making England “the best place in the world for children and young people to grow up” (DCSF, 2007a).

Work has been undertaken in central government to come to a common understanding of wellbeing. The following statement, developed by the Whitehall Wellbeing Working Group in 2006, sums up this understanding:

“Wellbeing is a positive physical, social and mental state; it is not just the absence of pain, discomfort and incapacity. It arises not only from the action of individuals, but from a host of collective goods and relationships with other people. It requires that basic needs are met, that individuals have a sense of purpose, and that they feel able to achieve important personal goals and participate in society. It is enhanced by conditions that include supportive personal relationships, involvement in empowered communities, good health, financial security, rewarding employment, and a healthy and attractive environment.”

(Steuer and Marks, 2008, p.9)

With this definition in mind, the cross-departmental Wellbeing Indicators Group is developing a ‘national indicator’ in order to measure wellbeing; although they are not required to act upon this, the aim is that local authorities will be able use the indicator to measure progress against the UK sustainable development strategy (HM Government, 2005). The indicator takes in a variety of measures, including: overall life satisfaction; satisfaction with particular aspects of life, such as relationships, the community and the achievement of goals; positive and negative feelings; engagement in positive activities; child wellbeing (including positive and negative feelings, feelings of safety, the local environment, and health); physical activity; access to green space; cultural participation; and positive mental health. In addition, the indicator includes wider measures that overlap with other indicators, such as crime, poverty, health and education (Defra/National Statistics, 2008). Meanwhile in Ireland, the National Children’s Office has identified a list of 42 child wellbeing indicators and seven socio-demographic indicators, which will be used to contextualise children’s lives in Ireland (National Children’s Office, 2005).

A paper on measuring local wellbeing (Steuer and Marks, 2008) has noted that several of the existing national indicators by which local authorities’ performance is currently measured (see Department of Communities and Local Government [CLG], 2007) could be used together as part of a measure of wellbeing. These include the percentage of people who feel that they belong in their neighbourhood, and a self-reported measure of overall health and

wellbeing. CLG has also developed its own *Local Index of Child Wellbeing* in order to measure how children are doing in different local communities (CLG, 2009). This covers the “domains” of material wellbeing, health, education, crime, housing, environment and “children (at risk of being) in need”, with a list of indicators provided for each of these.

The DCSF, meanwhile, has also made attempts to identify how wellbeing is generally understood by families. A study conducted on behalf of the then Department for Education and Skills (DfES) with parent focus groups (Counterpoint Research, 2008) found that the notion of a “good” or “content” childhood was thought to be a more readily accessible concept than that of childhood wellbeing, which for these parents involved a more narrow focus on being healthy and having one’s basic material needs met. Factors making for a good childhood were thought to include: being well cared for, safe and secure; getting a good education; spending quality time with family and having friends; and having enough material and other support in place to feel content.

The factors identified by these parents fit broadly with the ECM outcomes; however, many lower-level indicators are also being taken into account by different agencies in the quest for measures of wellbeing. In *Children and Young People Today* (DCSF, 2007b), a collection of evidence to inform the development of the *Children’s Plan*, the chapter based on the Departmental Strategic Objective to “secure the wellbeing and health of children and young people” incorporates a wide variety of themes and lists the evidence that was collected for each, with the implication that these are indicators of wellbeing and health. The themes and evidence include:

- subjective measures of happiness (from self-reports in the *TellUs2 survey*<sup>15</sup> [Ofsted, 2007] and the *Family and Children’s Study* [Vaid/Greater London Authority, 2006])
- social and emotional skills development (data on the number of Foundation Stage children working securely within social and emotional learning goals; number of young people belonging to a “delinquent youth group”; number of children experiencing bullying; evaluation of the SEAL programme)
- family functioning (incidence of family meals and of young people whose parents spend time just talking to them; number of children experiencing the divorce/separation of their parents; children living in stepfamilies; children reporting that they worry about family more than anything else; children contacting ChildLine because of family tensions; children witnessing domestic violence)
- friends (using questions about friendships in the *TellUs2 survey* [Ofsted, 2007], *The Good Childhood Inquiry* [Children’s Society, 2008] and OECD data [UNICEF, 2007])
- mental health (prevalence of mental health and conduct disorders in children; proportion of young people with hyperactive/emotional problems; prevalence of suicide among young people)
- physical health (using self-reports in the *Health Survey for England* [NHS, 2005]; infant mortality rates and infant deaths by social class; birth weight; breastfeeding rates; vaccination rates; traffic levels; information on diet and physical activity)
- commercial pressures (parents reporting feeling pressured to buy things for their children [Counterpoint Research, 2008]).

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<sup>15</sup> A survey by Ofsted of over 100,000 children in school years 6, 8 and 10; *TellUs* was carried out in 2006, *TellUs2* in 2007 and *TellUs3* in 2008.

The contribution of schools is likely to be defined and measured differently again. In 2008–09, the DCSF and Ofsted carried out a consultation (DCSF/Ofsted, 2008) on indicators for the measurement of wellbeing, in advance of its incorporation in the Ofsted inspection framework in September 2009. It was proposed that the indicators cover objective measures such as attendance and exclusion rates, participation in sports, take-up of school meals and, for secondary schools, pupils' post-16 destinations. In addition, pupils and their parents would be asked about the extent to which children enjoyed school, and felt safe, listened to and that they had someone to turn to. They would also be asked to what extent their school contributed to wellbeing through measures such as promoting healthy lifestyles, helping them “manage their feelings and be resilient”, giving them opportunities to contribute to their community, helping people from different backgrounds to get on, giving them the knowledge and skills they need, and helping them progress towards their chosen future.

*The Children's Plan: One Year On* (DCSF, 2008b), which states the Government's commitment to developing an “outcome measure for children's emotional wellbeing”, discusses psychological wellbeing in particular. It measures this using “a proxy measure of good relationships, through which we can assess children's resilience and emotional wellbeing”. The *TellUs3* survey (Ofsted, 2008) is used to collect this data; the survey also gives each local authority a score on five measures of wellbeing: the “emotional health” of children; levels of bullying; participation in sports and volunteering; substance misuse; and how happy children are with their access to parks and play areas.

The final report of the review of Child and Adolescent Mental Health Services (CAMHS Review, 2008) almost always refers to wellbeing with the formula “mental health and psychological wellbeing”. It describes psychological wellbeing as including “emotional, behavioural, social and cognitive attributes of wellbeing” (p.15). The children contributing to the review reportedly described mental health and psychological wellbeing as “‘feeling in control’ or ‘feeling balanced’”. The authors point out that such terms are “useful, because they highlight the fact that mental health and psychological wellbeing are not about feeling happy all the time. They are about having the resilience, self-awareness, social skills and empathy required to form relationships, enjoy one's own company and deal constructively with the setbacks that everyone faces from time to time” (pp.14–15). The children were also asked to describe what “made them feel good inside” or what they thought was important for wellbeing. The common factors in their responses were having good support networks, being able to do things they enjoyed and building self-esteem. The CAMHS Review also makes use of the World Health Organization's (WHO's) definition of mental health, which encompasses wellbeing by defining mental health as: “A state of wellbeing in which the individual realises his or her own abilities, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to his or her community.”

The Government Office for Science's review of mental capital and mental wellbeing (Foresight Mental Capital and Wellbeing Project, 2008b, p.10) also makes use of the WHO definition to explain mental capital, which is described as:

“a person's cognitive and emotional resources. It includes their cognitive ability, how flexible and efficient they are at learning, and their ‘emotional intelligence’, such as their social skills and resilience in the face of stress. It therefore conditions how well an individual is able to contribute effectively to society, and also to

experience a high personal quality of life.”

This is distinguished from mental wellbeing, described as:

“a dynamic state, in which the individual is able to develop their potential, work productively and creatively, build strong and positive relationships with others, and contribute to their community. It is enhanced when an individual is able to fulfil their personal and social goals and achieve a sense of purpose in society.”

A paper contributing to this review (Thomson and Marks, 2008) notes that wellbeing can be measured, for policy purposes, on three possible levels and using a variety of existing measurement tools. These are: the “universal approach” (measured through large-scale surveys of general wellbeing using instruments such as The Satisfaction with Life Scale or the Warwick Edinburgh Mental Wellbeing Scale); the “domain approach” (measured by asking people how they feel about specific aspects of their lives, such as health or their communities, through instruments such as the Index of Individual Living Conditions or the Personal Wellbeing Index); and the “targeted approach” (using more detailed instruments such as the Psychological Wellbeing Scale or the Psychological Needs Scale to gain an understanding of “the psychological wellbeing of people identified as vulnerable or in need of specialised services” (p.27).

In the realm of health, and specifically mental health, therefore, it seems that a subjective measure of wellbeing has been prominent. This contrasts with the broad range of factors taken into account by some of the other bodies mentioned above. It is clear, then, that wellbeing has been conceptualised and defined in policy in a variety of different ways, and that how it might be measured is a question still under debate. It is also noteworthy that the concept of resilience is a feature in discussions of wellbeing in some instances.

### **1.2.3 How does research define wellbeing?**

The research literature also offers a variety of definitions of wellbeing. A systematic review of the literature on child wellbeing from 1974 to 1992 found that wellbeing is commonly used but inconsistently defined in the study of child development (Pollard and Lee, 2003). Within research – as in policy – wellbeing is often considered something that simply exists and which needs investigating (Ereaut and Whiting, 2008). Too often, researchers examining wellbeing do not explicitly define the term. Pollard and Lee (2003) suggest that a consistent, unified and comprehensive definition of wellbeing is needed to span multiple domains and disciplines.

In our own review of the literature from 2000 to March 2009, we searched using a variety of databases with key terms including “well-being”, “wellbeing”, “psychological wellbeing” and “emotional wellbeing”, limiting our search to childhood and adolescence. We found that the term “wellbeing” has been studied across a wide range of disciplines, cultures and countries. Nevertheless, the majority of the articles focus on a specific sample, such as those children with a health condition (e.g. intellectual disability, asthma, AIDS/HIV, obesity) or a particular living circumstance (e.g. orphaned, adopted/fostered, poverty).

Research tends to conflate wellbeing with other concepts, including happiness, life satisfaction and quality of life. In psychology, wellbeing has been defined as a positive state of happiness (Pollard and Lee, 2003). Life satisfaction also has been viewed as a subjective

measure of wellbeing, in terms of how one feels about one's life. Helliwell and Putnam (2004) differentiate between the terms "happiness" and "life satisfaction":

"Generally speaking, self-ratings of 'happiness' turn out to reflect relatively short-term, situation-dependent expressions of mood, whereas self-ratings of 'life satisfaction' appear to measure longer-term, more stable evaluations."

Dolan, Peasgood and White (2006), in their review of research on the influences on "personal wellbeing" and its relevance to policy-making, also differentiate between accounts of wellbeing based on the satisfaction of wants and those based on how a person feels. Nonetheless, psychological research has found that ratings of life satisfaction are a reasonably reliable indicator of how people feel about their lives, providing a good sense of individuals' subjective wellbeing (Galloway, 2006). Life satisfaction can be seen more generally (e.g. 'How do you feel about your life as a whole?'), or across multiple domains (e.g. self, friends, family, living environment and school). In the field of happiness economics, subjective wellbeing has also been defined using life satisfaction. Economists also accept the evidence from psychology studies that individuals' expressions of life satisfaction involve different aspects of their self-perceptions, which include both subjective and objective qualities (Veenhoven, 1988).

Quality of life (QOL) has also been frequently used interchangeably with the concept of wellbeing, although some see wellbeing as one component of the broader concept of QOL. QOL has many of the same definitional problems of wellbeing (see Galloway, 2006). In a systematic review of health-related QOL models carried out by Tailleffer *et al.* (2003), wellbeing was found in the definition of one-third of the models; however, most of the models define wellbeing as a concept related to, but separate from, the concept of QOL. When wellbeing is seen as one dimension of QOL, it is often discussed as subjective wellbeing, which includes subjective assessments of one's life, whereas QOL is seen more broadly as including both subjective and objective indicators (Haas, 1999). In this respect the concept of QOL in the research literature might be seen as similar to that encompassed by the five ECM outcomes.

Some researchers, however, criticise the common interpretation of wellbeing as a product of happiness or satisfaction. According to Claxton (2007), wellbeing "flows from making progress in challenging and worthwhile projects" rather than merely "feeling good". Wellbeing is more closely associated with effective striving, and challenging learning, than with arriving at particular goals. Huppert (2007) defines sustainable wellbeing as a combination of both feeling good and functioning effectively, both of which involve personal and interpersonal components. Feeling good, for example, may involve having confidence and optimism on a personal level, while also including a sense of belonging and support on an interpersonal level. Functioning effectively, on a personal level, may include feelings of curiosity, engagement and purpose, while social engagement and helping others are important on an interpersonal level (see Duckworth *et al.*, 2009, for a review). Philosophers of education (e.g. Suissa, 2008) have further stressed the need to stand back and consider the need to avoid normative definitions of happiness and wellbeing, and to understand that not all aspects of such concepts are empirically measurable. Nevertheless, research has often made attempts to measure wellbeing.

#### **1.2.4 How does research measure wellbeing?**

In terms of its measurement, there are also many inconsistencies regarding what constitutes

an adequate assessment of wellbeing. As with its definition, few studies discuss their rationale regarding the choice of assessment tools. We found, for example, that wellbeing is often mentioned in the title or text of the article and measured with various related constructs without explanation about their inclusion in the study. Too often, the choice of measurement is inadequate – using one or two indicators which do not capture the multi-dimensional nature of wellbeing. These issues are likely to reflect the absence of a universally accepted measurement tool that reflects the complexity of wellbeing (Pollard and Lee, 2003).

The measurement of wellbeing also varies in terms of whether positive versus negative indicators are used. Although wellbeing generally has a positive connotation, negative indicators of wellbeing tend to be more frequent than positive indicators. This is particularly true for emotional and psychological wellbeing, which often includes measures of anxiety or depression. According to Pollard and Lee (2003), this emphasis might lead researchers, practitioners and policy-makers to focus research and intervention efforts on children's deficits, neglecting to identify and promote children's strengths.

Differences also exist in the number and type of dimensions examined. While a few studies claim to assess wellbeing with only a single indicator, such as depression, most studies employ multiple indicators. Two reports, for example, compared the wellbeing of children across economically advanced nations using multiple dimensions consisting of both subjective and objective indicators. UNICEF (2007) assessed six dimensions of wellbeing including: material wellbeing, health and safety, education, peer and family relationships, behaviours and risks, and children's own subjective sense of their wellbeing. Material wellbeing, child health and safety, education, and behaviours and risks included objective assessments of children's lives, such as relative income poverty, health at age 0–1, average achievement, and health behaviours. Peer and family relationships included both subjective and objective indicators, such as family structure, family relationships and peer relationships. Children's own subjective sense of their wellbeing included components such as liking school and life satisfaction. The Child Poverty Action Group (2009) report (led by Bradshaw, one of the co-authors of the UNICEF report) used seven dimensions, which are broadly the same as UNICEF's but with the addition of housing and environment, including indicators of overcrowding, housing problems, crime and pollution.

An investigation of countries with high-performing education systems (Husbands, Shreeve and Jones, 2008) found that the measurement of wellbeing varies from country to country, but that subjective and objective indicators include general subjective wellbeing, family environment, relationships and social participation, employment and income, housing, environment and criminal activity. Similarly, in a study of regional wellbeing and exclusion within EU regions, Stewart (2002) describes the concept of wellbeing in terms of five dimensions: material wellbeing; health; education and literacy; participation in the productive sphere; and participation in the social sphere. Stewart notes that these indicators are broadly similar to those used in the United Nations Development Programme Human Poverty Index for industrialised countries, and to common measures of social exclusion.

In these examples, wellbeing is measured according to multiple dimensions in order to compare children's wellbeing across different countries and regions. These reports use both subjective and objective measures to capture the different factors that affect children's lives. However, the more objective indicators may be seen as a different concept from wellbeing itself. The Child Poverty Action Group notes, for example, that while poverty is a different concept from wellbeing, it influences "each aspect of wellbeing and is a major impediment

to delivering better wellbeing”. Nevertheless, the findings provide a snapshot of children’s lives, especially in comparison with other children living in different nations.

Both the policy and the research literature therefore suggest that the concept of wellbeing is sensitive to the context in which it is used, being defined differently based on the areas of policy, public service or academic disciplines in question. The term often seems to be used as a shorthand for “psychological wellbeing” or “social wellbeing”, and the research literature in particular, along with policy on mental health, tends to focus on subjective aspects of wellbeing. However, it can also be applied to much broader concepts, encompassing physical health, academic achievement, economic circumstances and local environment. This is particularly true for the policy literature – which also tends to be more concerned with the wellbeing of all, rather than specific sub-groups – and for research that is policy-focused. The way in which wellbeing is measured can rely upon a single indicator of “happiness” or “life satisfaction”, or can include composite measures that vary in scope according to how the term is defined. In some cases it seems that “wellbeing” is taken as a given, and defined and measured according to the available data, rather than according to any conceptual basis.

### **1.3 What are the social, psychological and behavioural aspects of wellbeing?**

In this report, we focus on social, psychological and behavioural aspects of wellbeing, including emotional, behavioural, social and subjective school wellbeing, in line with the growing emphasis on wellbeing as a social concept within both policy and research spheres. For example, the Economic and Social Research Council (ESRC) Research Group on Wellbeing in Developing Countries, having considered the issue over five years, defined wellbeing as “a *state of being with others*, where human needs are met, where one can act meaningfully to pursue goals, and where one enjoys a satisfactory quality of life” (2007, p.1).

Within other research, there has also been increased focus on the social, psychological and behavioural aspects of children’s wellbeing. Previous research by the Centre for Research on the Wider Benefits of Learning (WBL), for example, focused on young people’s psychological wellbeing, including young people’s reports of their self-esteem, self-efficacy, self-concept of ability and symptoms of depression. Self-esteem has been defined as self-acceptance and a basic feeling of self-worth (Rosenberg, 1965). Bandura (1994) describes self-efficacy as an individual’s beliefs about his or her capabilities to produce designated levels of performance that exercise influence over events affecting their lives. Self-concept of ability refers to the beliefs a child has concerning their abilities to do well in school (Harter, 1982), which has been shown to relate positively to children’s mental health, social relationships and school achievement (e.g. Damon and Hart, 1982). Depression relates to an individual’s mood and feelings, such as sadness, loneliness, negativity and lethargy. It has been related to poor overall functioning, and interpersonal and behavioural problems (Reinherz *et al.*, 1999).

Other WBL research (Gutman and Feinstein, 2008) has identified four dimensions of emotional and social wellbeing: mental health; anti-social behaviours; pro-social behaviours; and achievement. Mental health included dimensions of psychological and emotional wellbeing, including locus of control (whether one feels in control of one’s life or believes that external events have more influence), scholastic competence (belief in one’s own

academic ability) and depression. Anti-social behaviours included: peer victimisation (being the target of aggressive behaviour or rejection by others); bullying of others; involvement in activities such as truancy, smoking and stealing; and association with anti-social friends. Pro-social behaviours included talking to one's teacher, liking school and having satisfying friendships, while achievement was measured by Key Stage scores in English and mathematics.

Numerous other studies also define wellbeing according to social, psychological and behavioural elements. Nef and Nottingham City Council (2008), for example, define wellbeing as a broad term consisting of several social and psychological dimensions, including: life satisfaction; curiosity; satisfaction with different domains of life – family, friends, living environment, school and self; self-esteem; pro-social behaviour; and favourite activities. Margo and Sodha (2007), in another example, use the Birth Cohort Study of people born in 1970 (BCS-70) to look at aspects of both emotional (i.e. locus of control, self-esteem, and emotional problems) and behavioural wellbeing (i.e. conduct and hyperactivity). McLeod and Owens (2004) also investigate four indicators of psychological and behavioural wellbeing, including scholastic competence, self-worth, depression and hyperactivity. A review of effective approaches to developing children's social and emotional skills (Weare and Gray, 2003) concluded that "emotional and social wellbeing" was one of the most useful terms to describe the focus of work in this area. These studies represent a few of the many which focus on the social, psychological and behavioural aspects of wellbeing, indicating their importance in recent research.

The focus on some of the social and psychological aspects of wellbeing in policy has already been outlined. The importance of the social dimension of individual wellbeing is recognised, for example in the emphasis not only on the individual but also on the importance of "collective goods and relationships with other people" (Steuer and Marks, 2008, p.9), contained within the common understanding of wellbeing quoted above. The work to build sustainable communities that Defra and CLG are undertaking also highlights this concern, as does the work carried out by schools through PSHE and programmes such as SEAL, which is specifically designed to support children and young people in developing positive relationships with others. Likewise, a recognition of psychological wellbeing as a dimension of mental health is contained within overall health objectives, such as those of the child health strategy (Department of Health/DCSF, 2009), as well as in the more targeted approach of the CAMHS Review (2008).

The SEAL programme is designed to develop not only "social and emotional" but also "behavioural skills", such as those required to work, play, compete and resolve conflicts fairly and cooperatively (DfES, 2005). It was originally introduced in schools as part of a specific focus on behaviour, as a strand of the Behaviour Improvement Programme (see Hallam *et al.*, 2005), itself part of a national strategy to improve behaviour and attendance in schools. This has recently been informed by an extensive review of behaviour issues, with the final report of the review (Steer, 2009) recommending that children's trusts in all local areas ensure that children have access to "the full range of mental health and psychological wellbeing services" (p.68), in view of the links between behavioural issues and psychological wellbeing.

## 1.4 How do social, psychological and behavioural aspects of wellbeing change across childhood and adolescence?

The transition from childhood to adolescence can be challenging for many children. As they mature into adolescents, children experience a multitude of changes that exist across various contexts. Children, for example, experience puberty, cognitive growth, school transitions and changing roles within their peers and families. These changes are often accompanied by shifts in children's wellbeing. For some, the transition from childhood to adolescence may promote positive growth and adjustment. For others, the transition can be associated with negative changes in wellbeing. Nevertheless, there are documented patterns of change which vary according to the particular dimension of wellbeing examined, as well as according to the gender and age of the adolescent.

During childhood, many children experience small, yet positive changes in their wellbeing. WBL research, for example, finds that most UK primary school children report positive wellbeing and more than one-third report increases in wellbeing from ages 8 to 10 years (Gutman and Feinstein, 2008). More concerning, however, are the one in five children who experience declining or low levels of wellbeing during this period. These children are most likely to be male, from low socio-economic backgrounds, and low-achieving. Research has also documented changes in social, psychological and behavioural aspects of wellbeing during adolescence, although the nature of these changes tends to vary by the particular aspect of wellbeing examined.

For emotional and behavioural wellbeing, most research finds that there are gender differences in the incidence and rate of change from childhood to adolescence. Girls tend to suffer from more emotional difficulties, whereas boys tend to have more behavioural problems. For example, depression increases from the early teens to the mid-twenties for both girls and boys (Kessler, Avenevoli and Merikangas, 2001), but girls show larger increases than boys during this period (Hankin *et al.*, 1998). Boys, however, tend to show a greater increase in their engagement in problem behaviours than girls (Bongers *et al.*, 2004), although behavioural problems often peak in early to middle adolescence and then decline in later adolescence for both genders (Hirschi and Gottfredson, 1983). This gender difference may be due, in part, to the way in which boys and girls react to stressful periods and traumatic events. Boys are more likely to externalise their behaviours by acting up, whereas girls tend to internalise their problems, leading to depression, anxiety and other psychological problems (for a review, see Rosenfield, 1999).

For social wellbeing, most children's experience of friendship generally improves from childhood to adolescence (see Berndt, 2004). Children tend to report more satisfying friendships and greater friendship support as they grow older (Berndt, 2004; Gutman and Brown, 2008). There are also gender differences in social relationships. Girls tend to have better social relationships than males, reporting greater satisfaction and fewer experiences of bullying (Gutman and Feinstein, 2008). Family relationships, on the other hand, tend to experience negative changes during this period. Researchers have noticed, for example, that time spent with parents and emotional closeness decreases during adolescence (Steinberg, 1988). Furthermore, US research suggests that white boys tend to experience greater declines in their positive relationship with their parents than white girls or African American boys and girls (Gutman and Eccles, 2007). Family conflict, on the other hand, tends to increase during the adolescent years (Laursen, Coy and Collins, 1998), particularly for boys in later adolescence – 17 to 19 years (Gutman and Eccles, 2007).

For school wellbeing, most children find school more enjoyable as they progress through primary school, with girls generally reporting a greater liking for school than boys (Gutman and Feinstein, 2008). Recent research, however, indicates that school wellbeing may suffer during the transition from primary to secondary school (McGee *et al.*, 2004). The transition to secondary school can be stressful, and many children experience a drop in academic achievement following the transition (McGee *et al.*, 2004). There are many possible reasons for this documented decline in school wellbeing following the transition. The secondary school environment is a quite different social and learning environment compared with primary school. In primary school, most children experience most of their classes in a single room with one or two teachers. Most secondary school environments, however, are larger, with children attending classes in different rooms with various teachers throughout the day. Some students may not be ready for such changes. Research, for example, reported that 16 per cent of children did not feel ready when they started secondary school, and 3 per cent were still worried a term into their new school (Evangelou *et al.*, 2008). Experiences of bullying and worries about their ability to do the school work and whether they can make new friends have also been found to hinder a successful transition to secondary school (Evangelou *et al.*, 2008).

## **1.5 How might a resilience framework contribute to understanding changes in wellbeing?**

Recently, there has been a heightened focus on the concept of resilience and its widespread appeal for researchers, policy-makers, practitioners and the general public. Resilience – which is when children demonstrate positive outcomes despite experiencing significant risks – has important implications for promoting wellbeing. Resilience is not innate nor definite: it is not necessarily an attribute or personality trait that some children possess and others do not, but rather a developmental process; and children who meet the criteria for resilience may not necessarily be doing well continually, in every possible circumstance, and in totality. Resilience does not mean unharmed or invulnerable. Rather, resilience is demonstrated by adaptive behaviours and life patterns. In this sense, resilience does not necessarily guarantee positive wellbeing. However, resilient children will be more likely to adapt when faced with difficult circumstances. Thus, resilience is an important avenue for preventive intervention to promote positive wellbeing and resilience in children and adolescents, as well as to foster the implementation of relevant social policies (Luthar, Cicchetti and Becker, 2000).

Where resilience is a focus in recent policy documents, it is usually introduced on the basis of research evidence. For example, the Government’s Foresight project on mental capital and wellbeing is partly informed by a review of research on the neural basis of resilience (Elliot, Sahakian and Charney, 2008). This review concludes that resilience is a “relatively stable feature of personality that allows an individual to bounce back from stress or adversity” (p.2), which it might be possible to strengthen “through pharmacological and non-pharmacological means, including cognitive behavioural or other psychological therapies and education” (p.8). As indicated above, the project report itself (Foresight Mental Capital and Wellbeing Project, 2008b) takes “resilience in the face of stress” as one aspect of its definition of mental capital.

The final report of the review of child and adolescent mental health services (CAMHS Review, 2008) also makes use of a review of evidence on resilience (Newman, 2002). The

report lists resilience with some of the other components of mental health and psychological wellbeing (self-awareness, social skills and empathy) that people need in order to “form relationships, enjoy [their] own company and deal constructively with the setbacks that everyone faces from time to time” (p.15). It also makes much mention of the importance of “building resilience” in children – although how to do this is not explored in detail in the report.

The SEAL programme in schools does, however, take this up, covering resilience in both its “Managing feelings” and “Motivation” themes. Activities connected with these themes aim to teach children strategies to manage feelings such as frustration, boredom and anger, and the latter theme in particular takes as one of its target statements for children: “I can bounce back after a disappointment or when I have made a mistake or been unsuccessful” (DfES, 2005, p.42). SEAL guidance for teachers emphasises that developing social and emotional skills will help children to become more resilient, and the academic benefits of this: it will “help ... them rise to the challenges of the learning process and stick at it if things get tough” (National Strategies website<sup>16</sup>).

Elsewhere, resilience may be referred to in policy documents in passing, without a clear conceptualisation. For example, *The Children’s Plan* (DCSF, 2007a) refers to activities that can help build “social and emotional resilience” (p.28) and also states that “good social and emotional skills” build resilience (p.33). It emphasises the importance of taking part in positive activities for building resilience in young people, and adds that “these reforms must be complemented by stronger action to reduce the risks that face young people, build resilience and then intervene early when they make bad decisions and start getting into trouble” (p.135). This concept of building ‘resilience in the face of threat’ – a somewhat different idea from the usual concept of resilience as flourishing despite negative past events – is repeated in the announcement of additional funding for “building resilience at a community level ... We will consult young people including through a new youth panel on how best to support them in rejecting extremism” (p.137).

Within research, reviews examining the scientific evidence on resilience have stressed the necessity of a unifying conceptual framework across disciplines and specialised areas (Luthar, Cicchetti and Becker, 2000). A scientific basis for intervention research necessitates precise terminology to build upon earlier classifications and to ensure its continued vitality. A consistent and systematic framework is essential to facilitate the work of researchers and practitioners who pursue work in this area, to integrate findings across diverse fields, and to provide guidance for the identification and implementation of age-appropriate, optimal targets for preventive interventions. For these reasons, it is essential to delineate the main concepts involving the study of resilience, including risk factors and protective factors.

### **1.5.1 What are risk factors and how are they measured?**

Resilience occurs when children do well despite the risk factors in their lives. Risk factors are stressors that have proven or presumed effects in increasing the likelihood of maladjustment in children. Risk factors include catastrophic events such as war and natural disasters, family adversities such as bereavement and divorce, economic conditions such as poverty, and exposure to negative environments such as community violence. Risk factors pose a pervasive threat through the deprivation of children’s basic needs such as physical sustenance and protection, emotional security and attachment, and social interaction. As a result, exposure to risk factors

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<sup>16</sup> [http://nationalstrategies.standards.dcsf.gov.uk/node/66414?uc=force\\_uj](http://nationalstrategies.standards.dcsf.gov.uk/node/66414?uc=force_uj) (accessed 8 June 2009)

predicts a variety of difficulties in adjustment and adaptation across the lifespan.

Children rarely experience risk in isolation. Rather, risk tends to cluster, usually encompassing a sequence of stressful experiences instead of a single event. For example, children living in poverty are often exposed to other chronic stressors, such as family disruption, inadequate housing and community violence. Evidence also suggests that the effects of an isolated risk factor tend to be rather modest. The exposure to a specific risk factor does not necessarily cause difficulties, but rather it is a life history characterised by the accumulation of family disadvantages, social and economic life events, and adverse conditions that predicts maladjustment. For these reasons, many investigators have taken a broader perspective when examining the risk factors that impact on children's development. To accomplish this, researchers may use regression analyses with a large set of risk variables. Alternatively, a number of researchers have employed a cumulative risk model that incorporates a set of risk factors created by aggregating information about stressful life experiences or risk indices. In both instances, the cumulative risk score is calculated by dichotomising each condition into two groups, representing the presence (1) or absence (0) of an event or risk, and then adding all of the resultant scores. In general, cumulative risk models indicate that the more risks the children experience, the worse their developmental outcomes (Gutman, Sameroff and Cole, 2003; Sameroff, Gutman and Peck, 2003).

### **1.5.2 What are the risk factors which may be associated with greater declines in wellbeing from childhood to adolescence?**

In this report, we examine documented risk factors including socio-economic disadvantage, stressful life events, marital status and divorce, and parental psychological disturbances such as alcohol use and depression. Socio-economic disadvantage has been shown to increase the risk of negative child outcomes. Poverty has more detrimental effects for those children who are under the age of 5 and who live in extreme or enduring impoverished conditions. Such negative effects include: poor physical health; lower academic and school performance and attainment; and increased likelihood of social, emotional and behavioural difficulties. Other factors associated with economic circumstances exact their toll on children. Low parental education, for example, is a risk factor for children's cognitive and social development (Gutman and Feinstein, 2008). Parental education influences the educational advantages of the family and their access to key educational resources and opportunities.

Another risk factor concerns the number of stressful life events encountered by the child and/or family. Stressful life events range from the trivial to severe and from desirable to undesirable. For example, moving home may be stressful even if it is to a more desirable location. Daily hassles – or the irritating, frustrating experiences that happen nearly every single day – can also exacerbate stress. Although stressful life events may have more of an impact on parents, both major and minor events contribute to variation in children's wellbeing (Armstrong and Boothroyd, 2008; Ford *et al.*, 2007; Wells and Evans, 2003). For example, a study of 125 adolescent girls aged 13 to 17 whose mothers were involved in welfare reform in the United States found that stressful life events were a significant predictor of emotional wellbeing, even controlling for a number of other factors such as demographic characteristics, school performance, perceived safety, neighbourhood quality, religiousness, family functioning and self-esteem (Armstrong and Boothroyd, 2008). Girls who experienced more stressful life events had worse wellbeing as measured as a composite of depression, psychosocial functioning and mental health symptoms.

Family dissolution from parental divorce also increases children's risk of psychological,

behavioural, social and academic problems in comparison to two-parent, non-divorced families. Risk is greatest for children of divorced parents who experience high inter-parental conflict, loss of contact with one parent, problems with the mental health of parents, less economic stability, and multiple marital transitions. Although the intensity diminishes across time, offspring of divorced and remarried families experience difficulties that extend into adolescence and young adulthood. Nevertheless, resilience is the normative outcome for children who are faced with their parents' marital transitions and, in the absence of additional adversities, the vast majority of children of divorced parents develop into reasonably competent, well-adjusted adults.

Parental psychological disturbances such as mental health problems and drug/alcohol use have also been linked to a variety of behavioural, socio-emotional and cognitive problems in children. Many of these disorders co-exist and therefore it is often difficult to disentangle their effects on children. For instance, drug-abusing parents also tend to report a higher degree of psychological disturbances. Parental psychological disturbances interfere with interpersonal relationships within the family, as well as compromising family functioning in which daily tasks are not accomplished. These aspects of impaired functioning may be the pathways through which problems persist into adulthood.

Special educational needs (SEN) are also a risk factor for many children. Children with SEN are more likely to have worse psychological and behavioural wellbeing, which is more likely to decline as they mature into adolescents compared to other children. Ford *et al.* (2007), for example, document that psychological difficulties in children aged 5 to 15 years are more likely to increase across a three-year period if reading difficulties are present. Further evidence also suggests that SEN children may be particularly vulnerable during developmental transitions. SEN children, for instance, are particularly at risk of a poor transition from primary to secondary school (McGee *et al.*, 2004).

### **1.5.3 What are protective factors and how are they measured?**

The examination of children who experience developmental success despite adversity has led to an investigation of the mechanisms that either support or undermine resilience. For children who succeed despite less than optimal conditions, the presence of protective factors may compensate for the risks that exist in their lives and environments. Protective factors are those attributes of persons, environments, situations and events that relate to positive adaptation for children under conditions of adversity. To measure protective effects, an interactive relationship between the risk and positive factors is required, with the risk factor(s) thereby either having no effect in low-risk populations or its effect being magnified in the presence of risk is required (Rutter, 1987). A protective factor may not necessarily be a socially desirable characteristic of the individual or a positive event. Therefore, protection for a high-risk child may even come from a factor that in and of itself is a risk to the mental health or social functioning of a low-risk child.

### **1.5.4 What protective factors may promote more positive changes in wellbeing during this period?**

In his reviews of research on stress-resistant children, Garmezy (1983; 1993) identified three broad sets of variables that have been found to operate as protective factors including: (1) personal characteristics of the child, such as gender, intelligence, and personality characteristics; (2) family characteristics, such as warmth, cohesion and structure; and (3) the availability of external support systems, such as peers and schools (see Gutman, 2007, for a review).

Research has shown that children's own characteristics operate as protective factors. Children who have a positive constellation of characteristics, such as social competence, are more likely to elicit positive responses and support from other people which, in turn, may relate to their better wellbeing. In our earlier research (Gutman and Brown, 2008), for example, we found that children's social competence at age 4 predicted later involvement in bullying and/or victimisation. Children's psychological characteristics – measured by characteristics such as mood, activity level, attention span or distractibility, and adaptability or malleability – are also key protective factors. Previous research, for example, suggests that children who have more social difficulties also tend to have lower emotional wellbeing and more behavioural difficulties which, in turn, may contribute to greater problems with their peers and in school (Gutman and Feinstein, 2008). This may be especially true for a high-risk group of children, such as lower-income boys (Gutman and Brown, 2008). With this in mind, prior measures of emotional, behavioural and social wellbeing may predict subsequent wellbeing, particularly for children who face multiple adversities.

A number of studies have examined the protective effects of family characteristics. The quality of parenting plays an essential role in children's response to stressful situations. Parenting may either protect children from life circumstances or make them more vulnerable to adversities. Research suggests that authoritative parenting provides the most beneficial environment for children's development. Authoritative parents create a warm and supportive environment for their children with the appropriate amount of structure and consistent discipline. Although authoritative parenting is optimal for most children, it may serve a protective function, particularly for children who are experiencing stressful events and situations. Children who are exposed to adversities such as family dissolution are more likely to need the additional emotional support and structure that authoritative parents provide. However, there is some evidence to suggest that optimal parenting strategies may vary, depending on the specific risks to which children are exposed. Although research has found that poor families tend to engage in more controlling, harsh parenting, some have suggested that these types of strategies may be more adaptive for children living in impoverished environments. For children living in inner-city neighbourhoods, more controlling parenting behaviours may protect them from exposure to danger and violence, leading to more positive outcomes.

Family-level resources, such as cohesion, positive interactions and support, may also operate as protective factors. Adversity makes it difficult for families to maintain their normal family-level interactions and routines. For example, parental divorce disrupts family events such as outings and decreases interaction with the non-custodial parent. However, children exposed to stressful events such as family disruption may have a greater need for these family-level resources in order to maintain a sense of normality and structure. These family-level resources may also exert their protective effects by influencing children's psychological adjustment and parent-child interactions. For instance, family cohesion may enhance children's perceived internal control and their coping strategies. Alternatively, family routines, such as eating meals together, create a context where warm, supportive parenting can occur.

As children mature, external support systems play an increasingly significant role in children's development. Children's friendships are particularly important for children experiencing adverse life circumstances. Reciprocal, positive friendships may provide additional avenues of self-esteem and emotional support for children whose families offer less positive engagement and interaction. For example, studies suggest that friendships may

be particularly important for maltreated children, as they often have fewer opportunities to learn and practise social skills in their family setting (Price, 1996). A supportive relationship even with a single friend may act as a protective factor from the negative effects of both peer rejection and other adverse circumstances (Bolger and Patterson, 2003).

Teachers and school environments have also been shown to be beneficial for children experiencing risk. Supportive teachers and school environments are also important for children's development (Gutman and Midgley, 2000; Gutman, Sameroff, and Eccles, 2002). Teachers can play a crucial role as caring adults or mentors for those students who need additional support. Academic aptitude and attainment may also function as protective factors for children exposed to adverse circumstances (Masten, Best and Garmezy, 1990).

## **1.6 Research goals**

In this report, we investigate the development of social, psychological and behavioural wellbeing in young people through childhood to adolescence. The maturation of the ALSPAC data-set, making available longitudinal detail of psychological and behavioural trajectories of children to age 14, offers the opportunity to examine children's wellbeing, while taking into account other contextual dimensions.

First, we develop four dimensions of wellbeing: emotional, behavioural, social and subjective school wellbeing at three age points: age 7.5, age 10.5 and age 13.8. Indicators for the different dimensions of wellbeing are based on previous evidence as well as availability in the ALSPAC data. Emotional and behavioural wellbeing derives from the Development and Wellbeing Assessment (DAWBA) instrument. Emotional wellbeing captures children's internalising behaviours, such as their moods, fears and anxieties. Behavioural wellbeing reflects children's externalising behaviours, including their awkward, troublesome and anti-social behaviours. Social wellbeing combines the Skuse Social Cognition Scale and indicators of their peer relationships using the Strengths and Difficulties scale. Subjective school wellbeing is an assessment of children's feelings about school, including enjoyment and stimulation.

Second, we determine the patterns of change in wellbeing across mid-childhood (7.5 years to 10.5 years) and early adolescence (10.5 years to 13.8 years). We examine what percentage of children experience either positive or negative change in their wellbeing and the size of this change. We also provide an overall picture of wellbeing trajectories for the average child. Although the different dimensions are highly related, we analyse these separately to determine whether the predictors and processes vary according to the specific outcomes examined.

Third, we examine the drivers of change in wellbeing across mid-childhood (7.5 years to 10.5 years) and early adolescence (10.5 years to 13.8 years). To do this, we first look at the correlations between risk/positive factors and dimensions of wellbeing. This gives us a sense of what factors may be significant predictors. We also compare these correlations with the value-added models, to determine whether there are risk/positive factors which are associated with levels of wellbeing, but these factors do not necessarily predict change. We then model the predictors which contribute to changes in wellbeing. We examine how certain risk factors, including stressful events, indices of socio-economic disadvantage, parents' marital status and dissolution, and maternal depression and alcohol use, predict negative changes in

wellbeing. We then examine some of the factors that promote positive changes in wellbeing, including parenting practices, friendship, and teacher support, as well as earlier wellbeing in another dimension.

Lastly, we examine whether there are interactions among risk and positive factors, suggesting a protective effect, across mid-childhood (7.5 years to 10.5 years) and early adolescence (10.5 years to 13.8 years). To do this, we create a composite risk score using the following risk factors: stressful events, maternal depression, maternal alcoholism, low family income, and SEN for each child. Interactions between the composite risk score and positive factors are then examined to determine which positive factors are protective for children at higher levels of risk.

Since we are interested in how such pathways and their predictors may vary according to gender, we conduct our analyses separately for boys and girls. Boys and girls have been shown to have both different levels and rates of change, depending on the particular dimension of wellbeing examined. Our previous research, for example, has found that low socio-economic boys are more likely to experience a trajectory of low and declining wellbeing compared to other primary school children (Gutman and Feinstein, 2008). We might expect, therefore, that certain risk factors, including socio-economic disadvantage, may be more detrimental for boys than girls. We have also found that boys tend to have more social and behavioural difficulties which, in turn, may contribute to greater problems with their peers and in school (Gutman and Brown, 2008; Gutman and Feinstein, 2008). With this in mind, prior positive factors may be more indicative of later wellbeing for boys than girls.

In summary, our research questions are:

1. What are the patterns of change across mid-childhood and early adolescence?
2. How do established risk factors contribute to declines in wellbeing across mid-childhood and early adolescence?
3. What are the factors which promote positive changes in wellbeing for children across mid-childhood and early adolescence? Does having positive wellbeing in one dimension predict more positive changes in wellbeing in another dimension at a later point in time?
4. Do any of these positive factors have a protective effect for high-risk children across mid-childhood and early adolescence?

## **2. Method**

### **2.1 Design and sample**

The Avon cohort data (ALSPAC) is an ongoing longitudinal study of children born to mothers resident in the geographic area of Avon in the United Kingdom. ALSPAC provides good longitudinal information on a large cohort of children with a tremendous wealth of information on family background, interactions between children and other family members and the cognitive and emotional development of children. The ALSPAC data is unique among large sample UK longitudinal data-sets in surveying a cohort of children year on year.

To be eligible for the study, mothers had to be resident in Avon while pregnant. In addition,

their expected date of delivery had to lie between 1 April 1991 and 31 December 1992 inclusive. Of these, 14,541 mothers enrolled in the ALSPAC study and had either returned at least one questionnaire or attended a “Children in Focus” clinic by 19 July 1999. However, those who had completed the questionnaire scheduled for the third trimester of pregnancy before leaving the study area, have been kept in the study, even if they had not delivered at the time of moving.

Primary sources of data collection include self-completion questionnaires administered during pregnancy and at regular intervals following the birth, and direct assessment of children in a clinic-based setting. The representative nature of the ALSPAC sample was investigated by comparison with the 1991 National Census data of mothers with infants under 1 year of age who were resident in the county of Avon. The ALSPAC sample had a slightly greater proportion of mothers who were married or cohabiting, who were owner-occupiers, and who had a car in the household, and a smaller proportion of ethnic minority mothers. Ethical approval for the study was obtained from the ALSPAC Law and Ethics Committee and the local research ethics committees. More detailed information on the ALSPAC study is available at [www.alspac.bris.ac.uk](http://www.alspac.bris.ac.uk).

This project examines data collected from parents, children and school reports. Due to the nature of the data, these measures – notably the predictor variables – were gathered at different time points; however, they correspond to the following age ranges – 7 to 9 years, 9 to 11 years and 11 to 14 years. For the most part, these are mother-reported measures. Key Stage scores, however, were collected from school reports. Child-reported data include children’s perceptions of their relationship with their parents when they were 9 years of age, and children’s perceptions of their friendships at 8 and 10 years of age.

We assess attrition bias among those children who have data for the wellbeing measures at all three time points ( $n = 3481$ ), those who had data at two of the three time points ( $n = 3197$ ), and those who had data at only one time point ( $n = 2431$ ). Children who participated in one survey are more likely to live in single parent families, have parents who are divorced, and live in social housing compared to children who participated in three waves. Children who participated in three waves are more likely to have parents with higher education and higher income levels than children who participated in a single wave. There are no significant differences in the rates of maternal depression or maternal alcoholism.

## **2.2 Measures**

### **2.2.1 Dependent variables**

We examine four dimensions of wellbeing: emotional, behavioural, social, and subjective school wellbeing. Table 1 provides the means and standard deviations of wellbeing dimensions at each time period. Table 2 provides details of the measures, their indices, and examples of questions. Within each dimension of wellbeing, questions are identical across the three time periods in order to assess change. For the wellbeing measures, mothers were asked to answer questions about their child in comparison with other children their age (see the Appendix for a full description of the wellbeing measures). Unlike the predictor variables, which were collected at different time points, these measures were all collected at a specified age, as noted in Table 1.

**Table 1: Descriptive statistics of dimensions of wellbeing**

	<b>N</b>	<b>Minimum</b>	<b>Maximum</b>	<b>Mean</b>	<b>Std Deviation</b>
Emotional Wellbeing at 7.5	8175	0.00	2.00	1.72	0.14
Emotional Wellbeing at 10.5	6462	0.00	2.00	1.71	0.14
Emotional Wellbeing at 13.8	4631	0.00	2.00	1.70	0.14
Behavioural Wellbeing at 7.5	8098	0.00	2.00	1.79	0.27
Behavioural Wellbeing at 10.5	7376	0.00	2.00	1.81	0.27
Behavioural Wellbeing at 13.8	6727	0.00	2.00	1.83	0.26
Social Wellbeing at 7.5	8065	0.00	2.00	1.77	0.23
Social Wellbeing at 10.5	6954	0.00	2.00	1.78	0.25
Social Wellbeing at 13.8	6454	0.00	2.00	1.77	0.25
School Wellbeing at 7.5	8155	0.00	2.00	2.41	0.50
School Wellbeing at 9.5	7727	0.00	2.00	2.25	0.49
School Wellbeing at 13.8	6683	0.00	2.00	2.03	0.57

**Table 2: Dimensions of wellbeing, components and example questions**

<b>Emotional</b>	<b>Example questions</b>
	In the past month, compared with other children of the same age:
Separation Anxiety	Has she often worried about something unpleasant happening to someone, or about losing them?
Particular Fears	How scared is your child about any of the following: lifts, tunnels, flying, driving, trains, buses, small enclosed spaces, other specific situations?
Social Fears	Has she been particularly afraid of any of the following situations over the last month: meeting a lot of people such as at a party?
Compulsions and Obsessions	Has your child been doing any of the following things over and over: checking things, e.g. doors, locks, oven, gas taps, electric switches?
Anxiety	Does she worry a lot about: past behaviour (e.g. Did I do that wrong? Have I upset someone? Have they forgiven me?)
Moods	How many times has your study child been grumpy or irritable in a way that was out of character for her?

<b>Behavioural</b>	<b>Example questions</b>
	Compare her behaviour in the last 6 months with other children her age:
Activity	Does she find it hard to play or take part in other leisure activities without making a noise?
Attention	Does she often not listen to what people are saying to her?
Awkward	Has she taken no notice of rules, or refused to do as she is told?
Troublesome	Has she told lies to get things or favours from others, or to get out of things she was supposed to do?
<b>Social</b>	<b>Example questions</b>
	How much do the following descriptions apply to your study child:
Strengths and Difficulties	Child has at least one good friend in past 6 months
	Child is picked on or bullied by other children in past 6 months
Social Cognition	Child was unaware of other people's feelings
	Child did not realise when other people were upset or angry
<b>School</b>	<b>Example questions</b>
	Compare your child's behaviour in the last 6 months with other children her age:
	Does she look forward to going to school?
	Does she enjoy school?
	Is she stimulated by school?
	Does she talk about friends at school?
	Does she seem bored by school?

### 2.2.2 Risk variables

Table 3 provides descriptive statistics of particular risk factors (see the Appendix for a full description of risk factors).

**Table 3: Descriptive statistics of risk factors**

	<b>N</b>	<b>Minimum</b>	<b>Maximum</b>	<b>Mean</b>	<b>Standard Deviation</b>
Stressful Events at 7.5	14663	.00	2.00	.02	.10
Stressful Events at 10.5	14663	.00	2.00	.02	.10
Stressful Events at 13.8	14663	.00	2.00	.02	.10
Single Parent/Separated	7775	.00	1.00	.22	.41
Divorced/Separated at 10	7775	.00	1.00	.23	.42
Maternal Depression 10 to 12	3281	.00	1.00	.22	.42
Maternal Alcoholism 10 to 12	3298	.00	1.00	.01	.10
Low Parental Education	12511	.00	1.00	.29	.39
Low Household Income	6838	.00	1.00	.29	.45
Social Housing	7803	.00	1.00	.12	.33
Any Special Educational Needs	3519	.00	1.00	.26	.44
Specific Learning Difficulties	3510	.00	1.00	.06	.24
Emotional & Behavioural Difficulties	3514	.00	1.00	.08	.27
Speech & Language Difficulties	3517	.00	1.00	.04	.19
Sensory Impairment (hearing)	3515	.00	1.00	.01	.11
Sensory Impairment (visual)	3514	.00	1.00	.01	.07
Physical Disabilities	3515	.00	1.00	.01	.11
Medical Conditions	3514	.00	1.00	.02	.14

**2.2.3 Positive factors**

Table 4 provides descriptive statistics of particular positive factors (see the Appendix for a full description of positive factors).

**Table 4: Descriptive statistics of positive factors**

	<b>N</b>	<b>Minimum</b>	<b>Maximum</b>	<b>Mean</b>	<b>Standard Deviation</b>
Key Stage 1	11211	.00	15.00	9.12	3.77
Friendship Quality at 8	6832	1.00	16.00	12.55	2.44
Friendship Quality at 10	6998	1.00	16.00	13.05	2.13
Parents' feelings about child at 7	8304	.00	2.00	1.49	.59
Parents' feelings about child at 8	7587	.00	2.00	1.50	.58
Father's activity with child at 8.6	7732	1.00	5.00	2.65	.60
Father's activity with child at 9.6	7608	1.00	5.00	2.53	.59
Mother interested in what child does in school at 8.6	7928	.00	1.00	.90	.30
Mother interested in what child does in school at 10.6	7389	.00	1.00	.91	.28
Child's positive relationship with parents at 9.6	7647	1.00	5.00	4.63	.49

Child's positive relationship with parents at 14	5698	1.00	5.00	3.71	.53
There are rules in the home about what child can and cannot do at 9.6	7818	1.00	3.00	2.14	.42
There are rules in the home about what child can and cannot do at 11.6	7087	1.00	3.00	2.17	.46

### 2.3 Data analysis

Data analysis involved several steps. First, we developed dimensions of wellbeing. To do this, we first performed factor analysis and computed Cronbach's alphas for each of the indices of wellbeing to measure their internal consistency. As shown in Table 5, most dimensions showed a strong reliability with alpha scores higher than .6 in at least two out of the three age periods. Only anxiety showed scores of less than .6 in more than one age period and only for children older than 7 years. Mean scores were then calculated for each indicator. Only respondents who answered more than 75 per cent of questions were included. For each dimension, an overall score was calculated by averaging the mean of the indices.

**Table 5: Cronbach's alphas for each component of wellbeing**

	7.5 years	10.5 years	13.8 years
<b>Emotional</b>			
Separation			
Anxiety	0.81	0.83	0.80
Particular Fears	0.60	0.64	0.62
Social Fears	0.78	0.80	0.82
Compulsions and Obsessions	0.54	0.68	0.76
Anxiety	0.72	0.54	0.58
Moods	0.79	0.62	0.60
<b>Social</b>			
	0.85	0.85	0.85
<b>Behaviour</b>			
Activity	0.92	0.93	0.93
Attention	0.95	0.95	0.95
Awkward	0.91	0.92	0.92
Troublesome	0.88	0.58	0.69
<b>School</b>			
	0.77	0.79	0.79

Second, we examined patterns of change in dimensions of wellbeing across mid-childhood and early adolescence. We first examined the percentage of children experiencing either positive or negative change in the dimensions of wellbeing as well as the size of these changes according to standard deviations. We then examined average trajectories of wellbeing. To do this, repeated-measures analysis of variance were used with the dimension of wellbeing as the dependent variable and age as the independent variable with gender as the

between subjects factor. We also included an age by gender interaction to determine if changes in wellbeing varied according to gender. Separate analyses were carried out to examine change across the two transitions –mid-childhood and early adolescence.

We then examined the predictors of wellbeing. First, we examined correlations between risk factors and dimensions of wellbeing and between positive factors and dimensions of wellbeing. This provides an indication of the association between the risk/positive factors and the wellbeing outcomes. Second, we conducted a series of multiple regressions to determine how risk and positive factors contribute to changes in wellbeing across the two transitions – mid-childhood and early adolescence. We then conducted a series of multiple regressions to determine how risk and positive factors contribute to changes in wellbeing across the two transitions – mid-childhood and early adolescence. We first examined whether risk factors have a significant relationship with dimensions of wellbeing, controlling for prior wellbeing. We then examined the contribution of positive factors in predicting change in wellbeing across the two transitions, adding positive factors (including earlier dimensions of positive wellbeing) to the regression model.

Finally, we examined whether any of these positive factors are protective – in that they compensate for high levels of risk. To do this, a composite risk score was first created with risk factors that have high correlations with most or all of the different dimensions of wellbeing. These included: stressful events, maternal depression, maternal alcoholism, low family income, and SEN for each child. Scores range from 0 to 5, with 0 representing those children without any risks and 5 representing those children with all five risks present. Interactions between the composite risk score and positive factors were then examined to determine which positive factors are protective for children at higher levels of risk. Separate analyses were performed for boys and girls to determine whether there are gender differences.

### **3. Results**

#### **3.1 Patterns of change**

##### **3.1.1 Percentage and size of change in wellbeing**

As shown in Table 6, approximately half of the children experience stable wellbeing through mid-childhood and early adolescence, with the exception of subjective school wellbeing wherein only about 38 per cent are stable during mid-childhood and 45 per cent are stable during early adolescence. Of the dimensions, behavioural wellbeing appears to have the greatest percentage of children experiencing stability across the two time periods.

**Table 6: Change in wellbeing from mid-childhood to early adolescence**

	-2	-1	No change	1	2
<b>Mid-childhood</b>	<b>Percentage</b>				
Emotional	3	24	50	19	4
Behavioural	3	18	60	16	3
Social	3	19	52	23	3
Subjective School	2	33	38	25	2
<b>Early adolescence</b>					
Emotional	3	23	48	23	3
Behavioural	3	15	62	17	3
Social	3	20	56	18	3
Subjective School	4	26	45	23	2

Note.  $-2 \text{ SD} \leq -1.5$ ;  $-1.50 < -1 \text{ SD} \leq -.50$ ;  $-.5 < \text{no change} < .5$ ;  $.5 \leq 1 \text{ SD} < 1.5$ ;  $1.5 \leq 2 \text{ SD}$ .

Similar percentages of children experience either an increase or decrease in the different dimensions of wellbeing through mid-childhood and early adolescence, with the exception of emotional wellbeing and subjective school wellbeing. For emotional wellbeing, a greater percentage of children experience a decrease rather than an increase through mid-childhood, although there is no difference through early adolescence. Subjective school wellbeing also shows a greater percentage of children experiencing a decrease rather than an increase through mid-childhood and early adolescence.

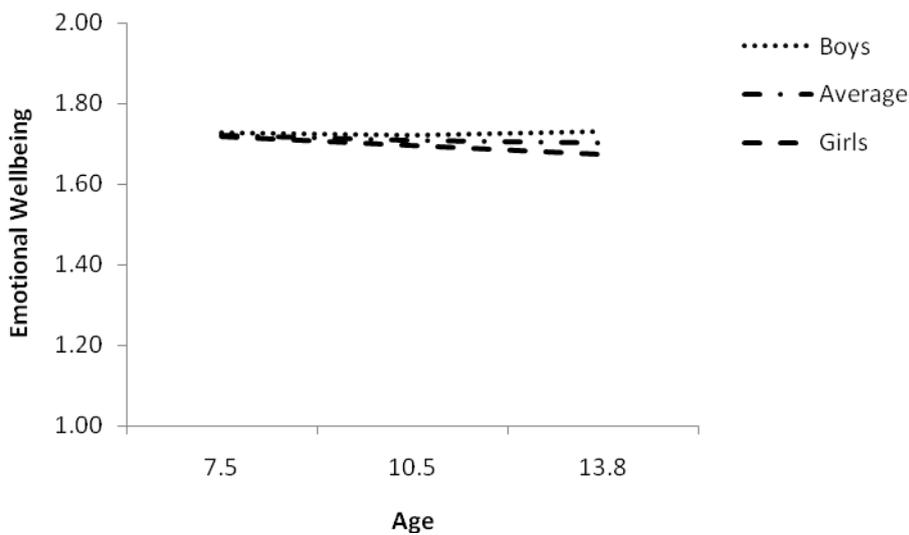
### 3.1.2 Wellbeing trajectories

For the average child, emotional and sense of school wellbeing tends to worsen through mid-childhood and early adolescence, whereas their behavioural wellbeing tends to improve. Social wellbeing increases in mid-childhood then declines through early adolescence. Girls are more likely to experience lower levels of, and greater declines in, their emotional wellbeing, whereas boys have lower behavioural wellbeing than girls. Girls have higher social wellbeing than boys, but this gap narrows during early adolescence. It is important to note that, although significant, these changes across time and gender differences are quite small.

#### *Emotional wellbeing*

As children mature into adolescents, they tend to experience more emotional problems. As shown in Figure 1, the average child experiences a significant decline in emotional wellbeing,  $F(1, 5594) = 117.06, p < .001$ . There is significant interaction between age and gender,  $F(1, 5594) = 90.45, p < .001$ . Emotional wellbeing is also significantly higher for boys than for girls,  $F(1, 3479) = 73, p < .01$ .

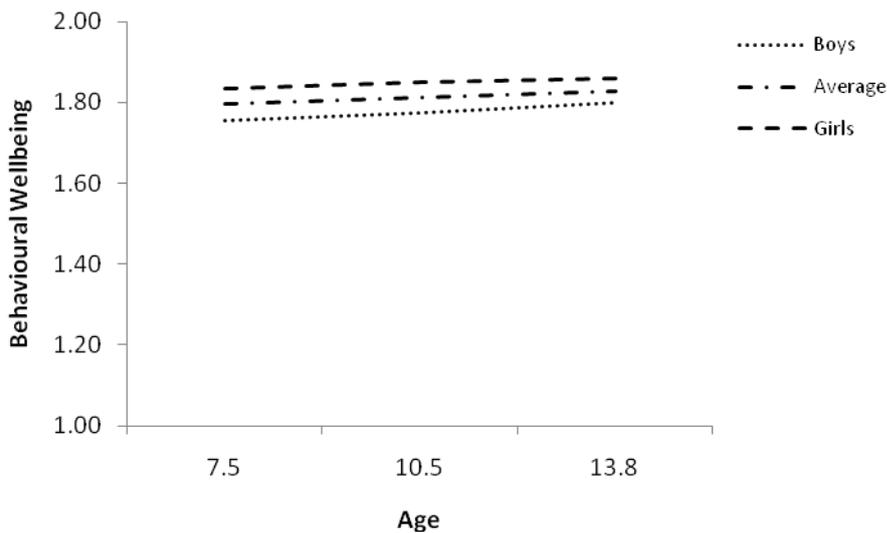
**Figure 1: Changes in emotional wellbeing**



***Behavioural wellbeing***

There is an overall improvement in behavioural wellbeing (see Figure 2). On average, children have a significant increase in behavioural wellbeing over time,  $F(2, 5434) = 52.834$ ,  $p < .01$ . Boys have significantly worse behavioural wellbeing than girls,  $F(1, 9275) = 209.675$ ,  $p < .001$ .

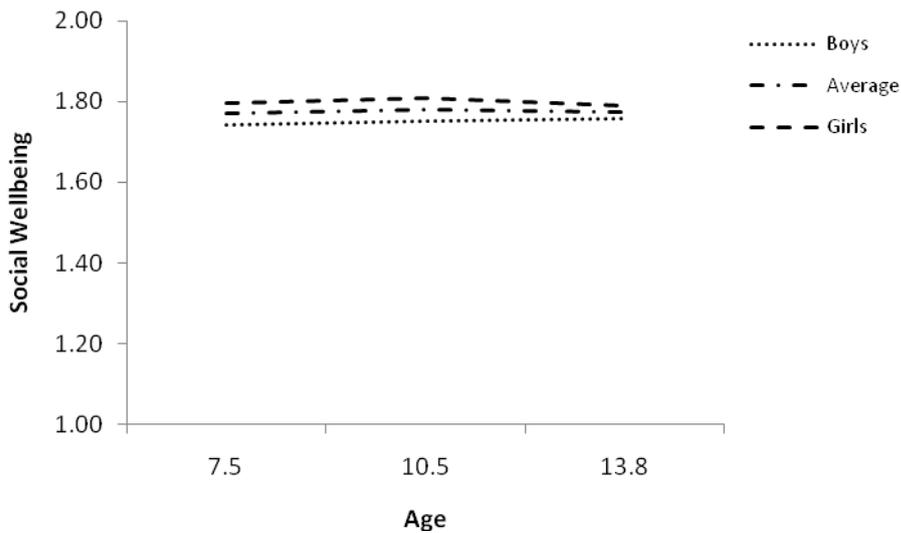
**Figure 2: Changes in behavioural wellbeing**



***Social wellbeing***

In mid-childhood, most children experience an increase in social wellbeing, which then falls slightly in early adolescence (see Figure 3). Girls have higher social wellbeing than boys,  $F(1, 5631) = 202.783$ ,  $p < .001$ , but experience a greater decline in social wellbeing during early adolescence than do boys,  $F(1, 5631) = 7.151$ ,  $p < .01$ .

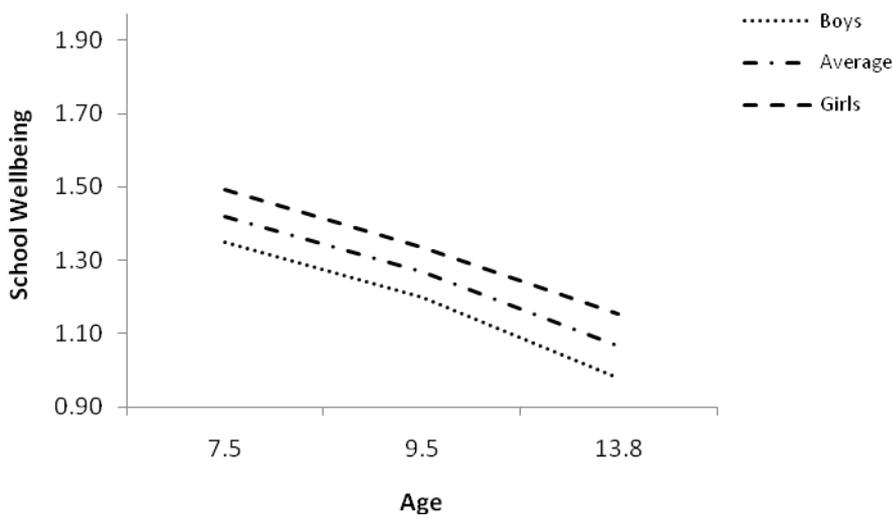
**Figure 3: Changes in social wellbeing**



**Subjective school wellbeing**

Children’s subjective school wellbeing declines through mid-childhood and early adolescence,  $F(1, 5924) = 2447.71, p < .001$  (see Figure 4). The decline in children’s school wellbeing during early adolescence is greater than during mid-childhood,  $F(1, 5485) = 48.348, p < .001$ , suggesting that children’s positive feelings about school decrease at a faster rate when children are in secondary school. Girls report more positive feelings about school than boys,  $F(1, 5485) = 215.93, p < .001$ . Although girls and boys experience a similar decline in school wellbeing through mid-childhood, boys have a greater decline during early adolescence than do girls,  $F(1, 5908) = 7.26, p < .01$ .

**Figure 4: Changes in subjective school wellbeing**



**3.2 Risk factors**

**3.2.1 Associations with wellbeing**

Tables 7 to 10 show the correlation coefficients between risk factors and dimensions of wellbeing, for boys and girls during mid-childhood and early adolescence. The correlations

demonstrate the relationship between factors, but do not give the independent net effects of variables concerned.

In general, risk factors are associated with lower levels of emotional, behavioural, social, and subjective school wellbeing with a few exceptions. Maternal alcoholism is not related to social and subjective school wellbeing for boys and girls. Maternal alcoholism, however, is associated with lower levels of emotional and behavioural wellbeing for boys, but not for girls.

There are a few other differences that vary across developmental periods, gender and dimensions of wellbeing. For example, for boys, having divorced parents is associated with lower social wellbeing in mid-childhood, but not in early adolescence. For girls, on the other hand, having divorced parents is associated with lower emotional wellbeing in mid-childhood, but not in early adolescence.

SEN also is not associated with emotional wellbeing in early adolescence for girls. In another example, parental education is not associated with the subjective school wellbeing of either boys or girls, but is a significant risk factor in other dimensions of wellbeing. Similarly, stressful events are not related to subjective school wellbeing for either boys or girls in early adolescence. Furthermore, few risk factors, with the exception of low household income, are associated with subjective school wellbeing for girls in early adolescence.

**Table 7: Emotional wellbeing**

Risk Factors	Mid-Childhood		Early Adolescence	
	Boys	Girls	Boys	Girls
Stressful Events	-.11**	-.12**	-.14**	-.11**
Not Married?	-.09**	-.08**	-.06**	-.04*
Divorced?	-.09**	-.07**	-.05*	-.02
Depression	-.17**	-.17**	-.11**	-.14**
Alcoholism	-.07**	-.00	-.08*	.03
Low Income	-.10**	-.08**	-.08**	-.06*
Low Education	-.05**	-.03	-.08**	-.05*
Social Housing	-.06**	-.04*	-.05*	-.08**
SEN	-.17**	-.10**	-.17**	-.07

Note. \*\*\*p<.001, \*\*p<.01, \*p<.05

**Table 8: Behavioural wellbeing**

Risk Factors	Mid-Childhood		Early Adolescence	
	Boys	Girls	Boys	Girls
Stressful Events	-.10**	-.11**	-.16**	-.10**
Not Married?	-.10**	-.09**	-.09**	-.11**
Divorced?	-.06**	-.08**	-.06**	-.07**
Depression	-.14**	-.14**	-.12**	-.14**
Alcoholism	-.05*	-.01	-.06*	-.02

Low Income	-.11**	-.10**	-.09**	-.12**
Low Education	-.10**	-.09**	-.11**	-.09**
Social Housing	-.12**	-.11**	-.12**	-.12**
SEN	-.34**	-.20**	-.29**	-.18**

Note. \*\*\*p<.001, \*\*p<.01, \*p<.05

**Table 9: Social wellbeing**

Risk Factors	Mid-Childhood		Early Adolescence	
	Boys	Girls	Boys	Girls
Stressful Events	-.09**	-.08**	-.16**	-.08**
Not Married?	-.08**	-.05**	-.06**	-.06**
Divorced?	-.07**	-.07**	-.04	-.06**
Depression	-.14**	-.11**	-.12**	-.10**
Alcoholism	-.04	-.02	-.04	-.02
Low Income	-.11**	-.07**	-.09**	-.10**
Low Education	-.10**	-.07**	-.06**	-.04*
Social Housing	-.11**	-.08**	-.08**	-.07**
SEN	-.27**	-.15**	-.18**	-.10**

Note. \*\*\*p<.001, \*\*p<.01, \*p<.05

**Table 10: Subjective school wellbeing**

Risk Factors	Mid-Childhood		Early Adolescence	
	Boys	Girls	Boys	Girls
Stressful Events	-.07**	-.04*	-.02	-.02
Not Married?	-.07**	-.05**	-.09**	-.03
Divorced?	-.01	-.01	-.04*	.01
Depression	-.06*	-.06*	-.09**	-.03
Alcoholism	-.02	-.02	-.05*	.04
Low Income	-.07**	-.08**	-.08**	-.07**
Low Education	-.02	-.01	-.02	-.03
Social Housing	-.03	-.07**	-.04*	-.02
SEN	-.21**	-.07*	-.12**	.00

Note. \*\*\*p<.001, \*\*p<.01, \*p<.05

### 3.2.2 Changes in wellbeing

A summary of significant relationships between risk factors and dimensions of wellbeing are presented in Table 11 below. See Tables A1–A16 in the Appendix for the full regression models.

Of the risk factors, special educational needs (SEN) are consistently the most powerful predictors of change in wellbeing for both boys and girls, affecting all dimensions of

wellbeing, particularly social and behavioural aspects. For these analyses, we examine whether children had ever been labelled as SEN (i.e. one in four children) and, more specifically, their particular type of SEN. There is variation in different types of SEN according to the particular dimension of wellbeing as well as the developmental period and gender of the child (see Tables A1–A16 in the Appendix for specific findings). Specific types of SEN are more predictive of changes in wellbeing than overall SEN, with the exception of a few cases (i.e. boys' emotional wellbeing in early adolescence and boys' school wellbeing in mid-childhood). For the most part, emotional and behavioural difficulties followed by specific learning difficulties are the most frequent predictors of poor outcomes, although other types of SEN emerge as significant. For example, boys with behavioural and emotional difficulties experience greater declines in behavioural wellbeing in mid-childhood than boys without behavioural and emotional difficulties. Girls with physical difficulties suffer greater declines in wellbeing during mid-childhood compared to girls without physical difficulties.

In general, children with SEN experience greater declines in their emotional, behavioural, social and school wellbeing than children without SEN. However, there are a few exceptions regarding the direction of the effect, depending on the type of SEN and developmental period. Through mid-childhood, SEN contributes to overall declines in wellbeing, with the exception of girls with speech and language difficulties who experience an increase in their social wellbeing during this period. Through early adolescence, however, children experience both positive and negative changes in their wellbeing depending on the type of SEN, specific measure of wellbeing, and gender of the adolescent. In general, girls with medical or physical conditions and boys with visual problems appear to experience some improvement in their behavioural and social wellbeing. We also have a few signs of hope for children with learning difficulties, particularly in early adolescence. Girls with specific learning difficulties show improvements in their school wellbeing, whereas boys with emotional and behavioural difficulties have improved emotional and social wellbeing in early adolescence. Such positive changes may be due to better consolidation of coping strategies and maturational changes as children become adolescents.

Maternal depression appears to be one of the more detrimental risk factors for children's wellbeing. Boys and girls with depressed mothers experience a greater decline in their emotional wellbeing in mid-childhood compared to children whose mothers do not report being depressed. The social wellbeing of girls also suffers in mid-childhood. However, maternal depression does not contribute to declines in early adolescence. This may suggest that children are particularly vulnerable to negative changes in their wellbeing due to maternal depression in mid-childhood, but may also reflect the timing of data collection for maternal depression, which measured maternal depression when the children were aged from 10 to 12 years. Therefore, some mothers may have experienced positive changes in their maternal mental health, which our measurement does not capture.

Maternal alcoholism does not appear to be a significant factor for the wellbeing of girls, but it is predictive for the emotional and behavioural wellbeing of boys. This follows the correlations which show significant relationships for boys, but not for girls. Boys with alcoholic mothers experience a greater decline in their emotional and behavioural wellbeing during the transition through mid-childhood compared to boys without alcoholic mothers. This suggests that, although significantly related ( $r = .13, p < .01$ ), maternal depression and alcoholism do have separate, independent effects on boy's wellbeing, particularly during mid-childhood. This finding, however, should be interpreted in light of the small incidence of maternal alcoholism, with only 1 per cent of mothers admitting to an alcohol problem for the

last two years, when their child was aged from 10 to 12 years old.

Stressful events predict declines in behavioural and social wellbeing for boys during early adolescence, but do not predict declines in emotional, behavioural, social and school wellbeing for girls. This is contrary to the correlations which show they are related to lower levels of wellbeing for boys and girls. This suggests that the negative effect of stressful events may lessen across time – they are correlated with lower levels of, but do not predict changes in, wellbeing for girls. However, stressful events appear to have a lasting impact on the wellbeing of boys during early adolescence.

Socio-economic disadvantage does not appear to be as important for children’s wellbeing relative to other risk factors such as stressful events and maternal depression. Low parental education, low parental income, parental divorce and social housing are not associated with any dimensions of children’s wellbeing. Since these socio-economic factors are related to lower levels of wellbeing for both boys and girls in the correlations, this suggests that they are not significant independent factors, controlling for other risks, when examined in a full model predicting change in wellbeing.

Overall, these findings highlight that more ‘proximal’ factors – those that involve children’s everyday lives such as their mothers’ mental health or their own learning and physical difficulties – play a more important role in sustaining their wellbeing from mid-childhood to early adolescence than more ‘distal’ factors such as socio-demographics.

**Table 11: Risk factors as predictors of change in wellbeing**

Change in:	Emotional Wellbeing				Behavioural Wellbeing				Social Wellbeing				School Wellbeing			
	Mid-childhood		Early adolescence		Mid-childhood		Early adolescence		Mid-childhood		Early adolescence		Mid-childhood		Early adolescence	
	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls
Stressful Events							x				x					
Not Married																
Divorced																
Depressed	x	x								x						
Alcoholism	x				x											
Low Income																
Low Education																
Social Housing																
SEN	x		x	x	x	x	x	x	x	x	x	x	x			x
R-Squared	.28	.24	.35	.28	.60	.50	.55	.42	.05	.45	.50	.37	.32	.23	.23	.17

### 3.3 Positive factors

#### 3.3.1 Associations with wellbeing

Tables 12 to 15 show the correlation coefficients between positive factors and dimensions of wellbeing, for boys and girls during mid-childhood and early adolescence. The correlations demonstrate the relationship between factors, but do not give the independent net effects of variables concerned.

Positive factors are significantly associated with higher levels of at least one or more dimensions of wellbeing, with the exception of household rules, which are associated with lower levels of wellbeing. Household rules are not significantly associated with emotional wellbeing for either boys or girls. Household rules are also not associated with subjective school wellbeing, with the exception of boys' subjective school wellbeing in mid-childhood. In this instance, however, more household rules are associated with lower subjective school wellbeing. Although household rules are included as a measure of structure which is usually associated with more positive wellbeing, this question may reflect more harsh and strict parenting strategies.

For gender differences, there are not significant correlations between friendship quality and behavioural wellbeing and between mothers' interest in schooling and social wellbeing for boys in early adolescence, but these associations are significant for girls. For emotional wellbeing, there are several gender differences. Fathers' involvement in activities is only significant for boys in mid-childhood. Child's relationship with parents is not significant for girls in mid-childhood and boys in early adolescence.

**Table 12: Emotional wellbeing positive factors**

Positive Factors	Mid-Childhood		Early Adolescence	
	Boys	Girls	Boys	Girls
Key Stage Score	.16**	.14**	.12**	.13**
Parents' feelings	.18**	.20**	.16**	.13**
Friendship Quality	.05**	.06**	.08**	.12**
Father takes child to activities	.06**	.02	-.00	.00
Mother interested in child's school	.00	.03	-.00	.02
Child's relationship with parents	.04*	.02	-.01	.07**
Household Rules	-.01	-.01	-.02	.01
Behavioural Wellbeing	.35**	.35**	.24**	.22**
Social Wellbeing	.32**	.27**	.24**	.22**
School Wellbeing	.21**	.21**	.17**	.16**

Note. \*\*\*p<.001, \*\*p<.01, \*p<.05

**Table 13: Behavioural wellbeing positive factors**

Positive Factors	Mid-Childhood		Early Adolescence	
	Boys	Girls	Boys	Girls
Key Stage Score	.28**	.29**	.28**	.23**
Parents' feelings	.38**	.36**	.36**	.34**
Friendship Quality	.10**	.06**	.02	.06**
Father takes child to activities	.13**	.14**	.10**	.09**
Mother interested in child's school	.06**	.08**	.06**	.09**
Child's relationship with parents	.18**	.14**	.17**	.25**
Household Rules	-.09**	-.05**	-.07**	-.04*
Emotional Wellbeing	.35**	.35**	.24**	.27**
Social Wellbeing	.77**	.69**	.59**	.49**
School Wellbeing	.29**	.21**	.22**	.17**

Note. \*\*\*p<.001, \*\*p<.01, \*p<.05

**Table 14: Social wellbeing positive factors**

Positive Factors	Mid-Childhood		Early Adolescence	
	Boys	Girls	Boys	Girls
Key Stage Score	.22**	.20**	.18**	.16**
Parents' feelings	.38**	.37**	.38**	.39**
Friendship Quality	.13**	.11**	.06**	.06**
Father takes child to activities	.12**	.17**	.09**	.11**
Mother interested in child's school	.06**	.08**	.02	.08**
Child's relationship with parents	.18**	.17**	.12**	.22**
Household Rules	-.06**	-.06**	-.07**	-.05**
Emotional Wellbeing	.32**	.27**	.24**	.23**
Behavioural Wellbeing	.77**	.69**	.59**	.49**
School Wellbeing	.27**	.23**	.22**	.19**

Note. \*\*\*p<.001, \*\*p<.01, \*p<.05

**Table 15: Subjective school wellbeing positive factors**

Positive Factors	Mid-Childhood		Early Adolescence	
	Boys	Girls	Boys	Girls
Key Stage Score	.17**	.09**	.14**	.07**

Parents' feelings	.21**	.20**	.18**	.18**
Friendship Quality	.11**	.14**	.05*	.04*
Father takes child to activities	.17**	.17**	.17**	.13**
Mother interested in child's school	.10**	.11**	.11**	.14**
Child's relationship with parents	.20**	.17**	.25**	.26**
Household Rules	-.03*	-.01	-.01	-.01
Emotional Wellbeing	.21**	.21**	.19**	.18**
Behavioural Wellbeing	.29**	.21**	.27**	.19**
Social Wellbeing	.27**	.23**	.25**	.22**

Note. \*\*\* $p < .001$ , \*\* $p < .01$ , \* $p < .05$

### 3.3.2 Changes in wellbeing

A summary of significant relationships between positive factors and dimensions of wellbeing are presented in Table 16 below. See Tables A1–A16 in the Appendix for full regression models.

Of the positive factors, those which pertain to children's relationship with their family are the most highly predictive of changes in wellbeing. The positive association between family relationships and children's wellbeing is evident for both sexes, though perhaps somewhat more evident for girls, and for both time periods. Children's report of their positive relationship with their parents is associated more positive changes in behavioural (early adolescence) and school wellbeing for boys and girls, and social wellbeing for girls. Similarly, parents' feelings about their child are associated with behavioural and social wellbeing for boys and girls, emotional wellbeing for boys (early adolescence) and girls (mid-childhood), and school wellbeing (mid-childhood) for girls. Together, these findings emphasise the importance of family relationships for the wellbeing of children as they mature into adolescents. This is demonstrated further by the lack of significance for fathers' involvement in activities and mothers' interest in school, which is significantly associated with wellbeing in the correlations but not in the full models. This highlights that feelings of closeness are key aspects of the parent–child relationship that predict changes in children's wellbeing, rather than more mundane behaviours involving activities and school involvement.

Children's satisfaction with their friendships also appears to be an important positive factor, with boys experiencing improvement in their social wellbeing and girls experiencing improvement in their school wellbeing with supportive friendships during mid-childhood. This indicates that having good friends who are supportive contributes to positive changes in wellbeing, particularly in the social and school domains.

Attainment is another significant positive factor, chiefly for girls in mid-childhood, for whom higher Key Stage 1 scores predict better than average changes in their emotional, behavioural and social wellbeing in mid-childhood compared to girls with lower scores. Boys with higher Key Stage 1 scores also experienced more positive changes in their behavioural wellbeing in early adolescence. This finding is significant even though the different measures of SEN are taken into account, suggesting that attainment and SEN have independent effects on children's wellbeing.

There are also associations between the different dimensions of wellbeing, with high prior measures on one dimension being predictive of better than average changes on another. Unlike the correlations, however, prior measures of wellbeing do not predict more positive changes across the board for both boys and girls. This is particularly the case for emotional wellbeing, which predicts positive changes in social wellbeing for girls in mid-childhood only. School wellbeing, on the other hand, is particularly important for the emotional wellbeing of boys and girls and the social wellbeing of girls through mid-childhood. High prior measures of behavioural wellbeing are also associated with more positive changes in social outcomes for both boys and girls across both time periods. The reverse association, however – high social wellbeing with later behavioural wellbeing – only holds for boys in mid-childhood. Together, these findings support our earlier work demonstrating that early behavioural difficulties may contribute to a greater escalation of problems in social relationships as children mature (Gutman and Feinstein, 2008; Gutman and Brown, 2008).

**Table 16: Positive factors as predictors of change in wellbeing**

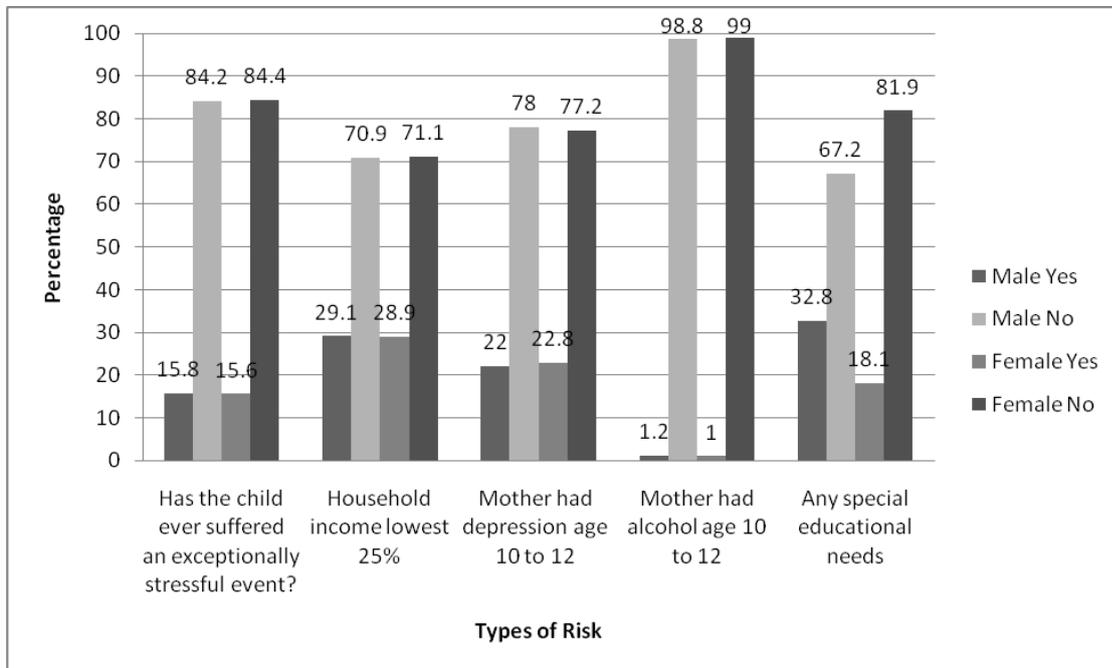
Change in:	Emotional Wellbeing				Behavioural Wellbeing				Social Wellbeing				School Wellbeing			
	Mid-childhood		Early adolescence		Mid-childhood		Early adolescence		Mid-childhood		Early adolescence		Mid-childhood		Early adolescence	
	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls
Parent Feelings	x	x			x	x		x	x	x	x			x		
Parent Activities																
School Interest																
Rules																
Relationship							x	x		x		x	x	x	x	x
Friendship									x					x		
Attainment		x				x	x			x						
Emotional Wellbeing										x						x
Behavioural Wellbeing									x	x	x	x				
Social Wellbeing					x											
School Wellbeing	x	x								x						
R-Squared	.29	.27	.36	.30	.62	.52	.57	.46	.54	.51	.52	.42	.34	.26	.28	.24

### 3.4 Risk score

Risk scores (with stressful events, maternal depression, maternal alcoholism, low family income, and SEN) range from 0 to 5, with 0 representing those children without any risks and 5 representing those children with all five risks present. For individual indices of risk, the likelihood of experiencing any individual risk varies from one to 32 per cent, depending on the gender of the child (see Figure 5). While boys and girls are equally likely to experience

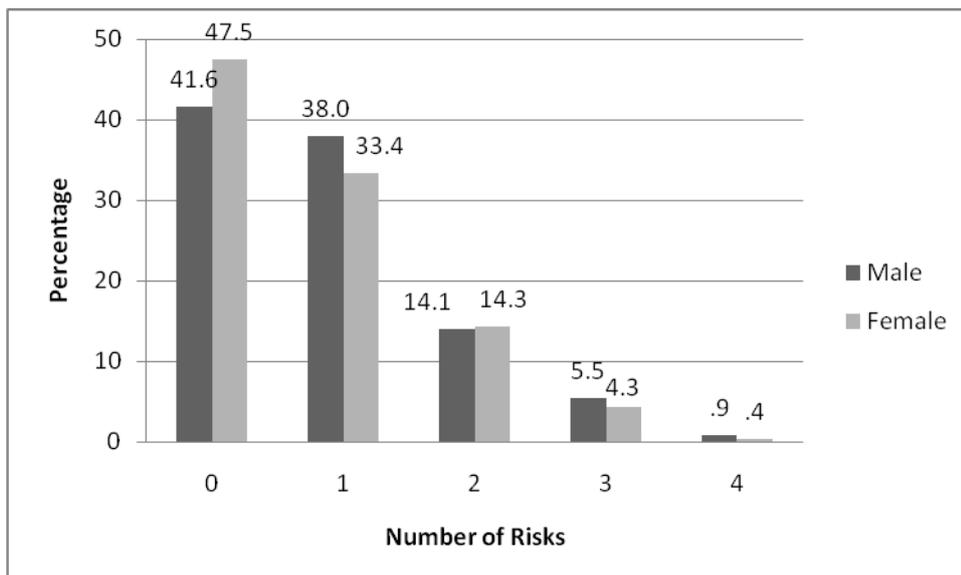
stressful events, maternal depression, maternal alcoholism, and low income, boys are more likely to have SEN compared to girls.

**Figure 5: Percentages of individual indices of risk factors by gender**



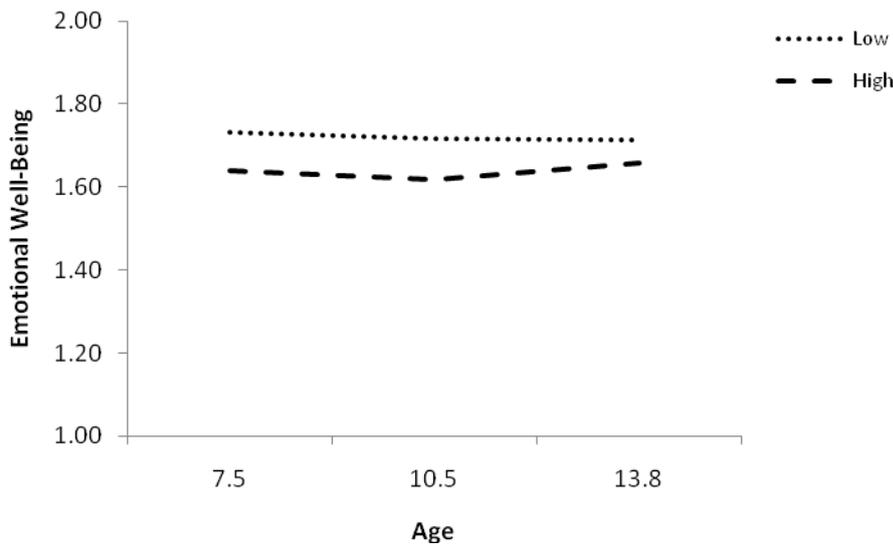
We find that children, on average, experience one risk with a standard deviation (SD) of .90. Approximately 45 per cent of children experience zero of the selected risk variables, with girls more likely to experience zero risks than boys (see Figure 6). Both boys and girls, however, are equally likely to experience more than one risk, although there is some variation based on the exact number of risks experienced by gender. Together, 14 per cent of children experience two risks and 6 per cent experience three or more risks.

**Figure 6: Percentage of risk factors for boys and girls**



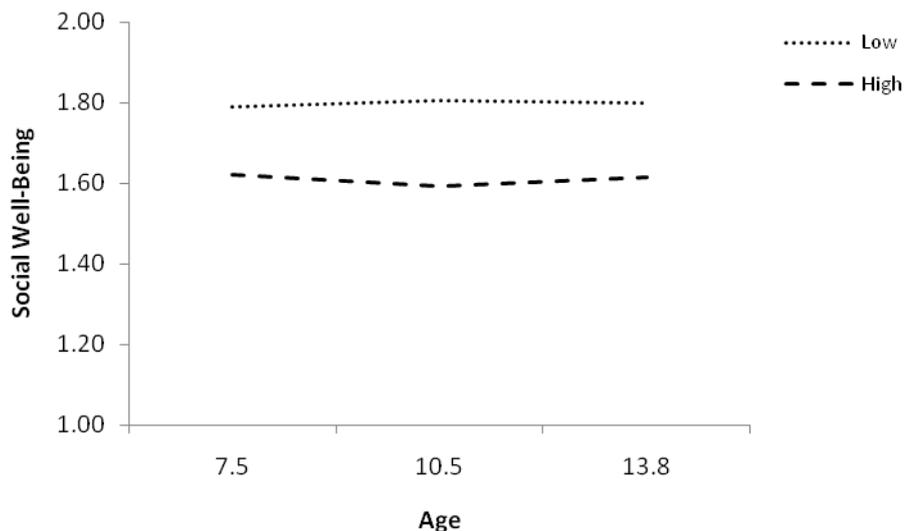
We then examine the course of wellbeing from mid-childhood to early adolescence for high- and low-risk children. We identify high-risk children as those who are two SDs above the mean on a composite risk score (equivalent to three or more risks) and low-risk children as those who have zero risks. High-risk children have much lower levels of wellbeing at every age point compared to low-risk children. However, their trajectories somewhat differ, depending on the dimension of wellbeing. In Figure 7, high-risk children demonstrate a slight increase in emotional wellbeing, particularly through early adolescence.

**Figure 7: Changes in emotional wellbeing for high- and low-risk children**



Social wellbeing remains fairly stable for both high- and low-risk children from mid-childhood to early adolescence, although there is a slight increase for low-risk children and a slight decrease for high-risk children through early adolescence.

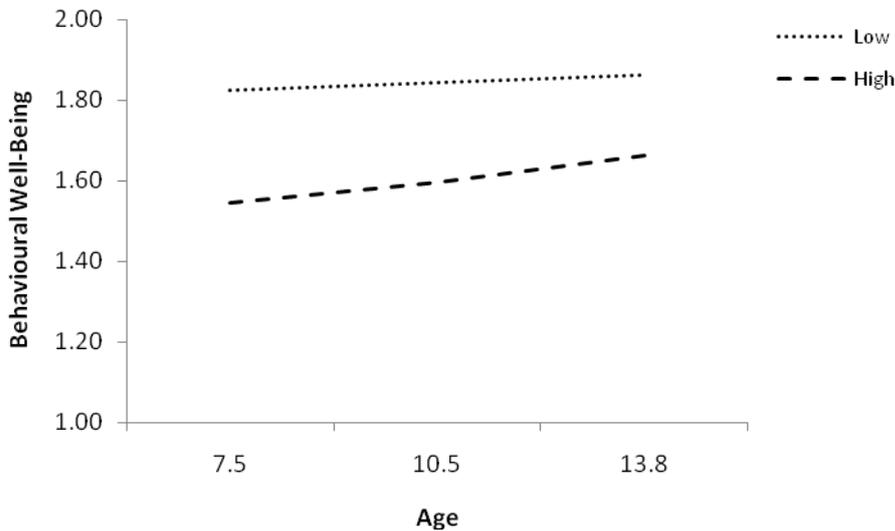
**Figure 8: Changes in social wellbeing for high- and low-risk children**



Both high- and low-risk children experience an increase in behavioural wellbeing, but the increase is somewhat sharper for high-risk children (see Figure 9). Therefore, although high-risk children have lower levels of wellbeing from mid-childhood to early adolescence, there

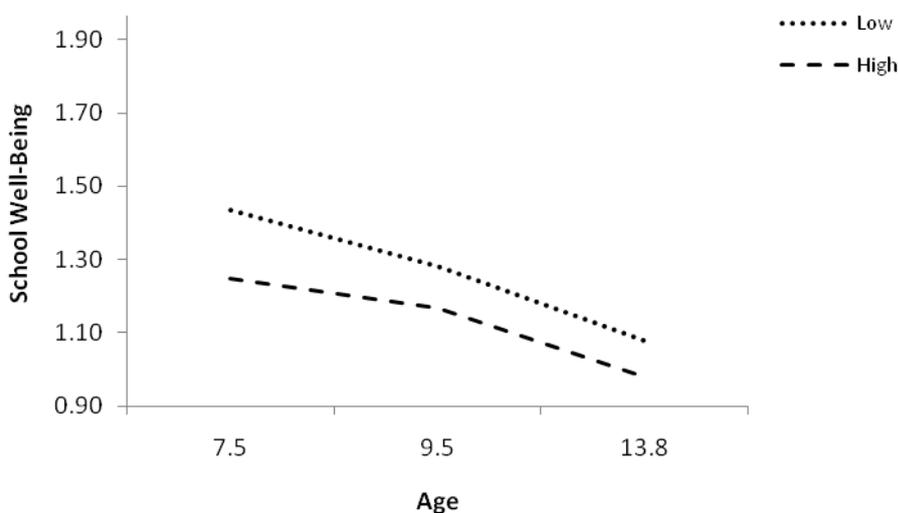
is some indication that high-risk children may experience some improvements in their wellbeing as they mature into adolescence.

**Figure 9: Changes in behavioural wellbeing for high- and low-risk children**



As shown in Figure 10, subjective school wellbeing declines from mid-childhood to early adolescence, with a steeper descent through early adolescence for both groups perhaps due to the transition from primary to secondary school.

**Figure 10: Changes in subjective school wellbeing for high- and low-risk children**



### 3.5 Protective effects

There are several significant interactive associations between positive factors and the risk score (see Tables A17–A19 in the Appendix). Most of these interactions demonstrate that positive factors have stronger effects on the wellbeing of high-risk than low-risk children.

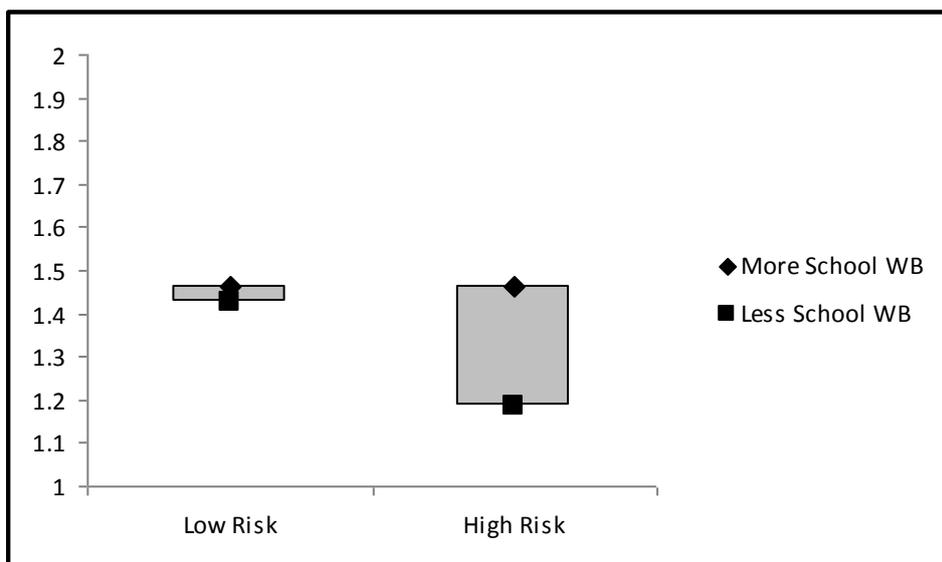
However, not all of these interactive effects are protective – i.e. having no effect for low-risk children but magnified for high-risk children. Figures are shown calculated for low-risk children (zero risks) and high-risk children (two SDs above the mean; three or more risks) at different levels of the positive factors which are described as low (two SDs below the mean) and high (two SDs above the mean).

### 3.5.1 Prior wellbeing

School wellbeing is an important protective factor for high-risk boys and girls through mid-childhood and early adolescence. Although the wellbeing of low-risk children does not differ based on their prior levels of school wellbeing, there are significant differences for high-risk children.

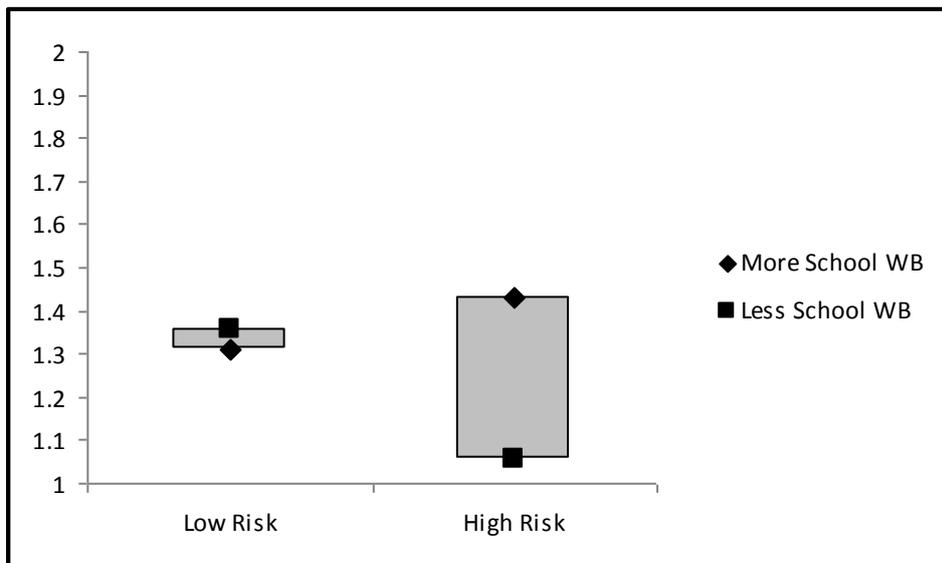
During mid-childhood, for example, high-risk girls with higher levels of prior school wellbeing experience more positive changes in their social wellbeing compared to their high-risk peers with lower levels of prior school wellbeing (see Figure 11). There is only a small difference, however, for low-risk girls.

**Figure 11: Girls' social wellbeing in mid-childhood**



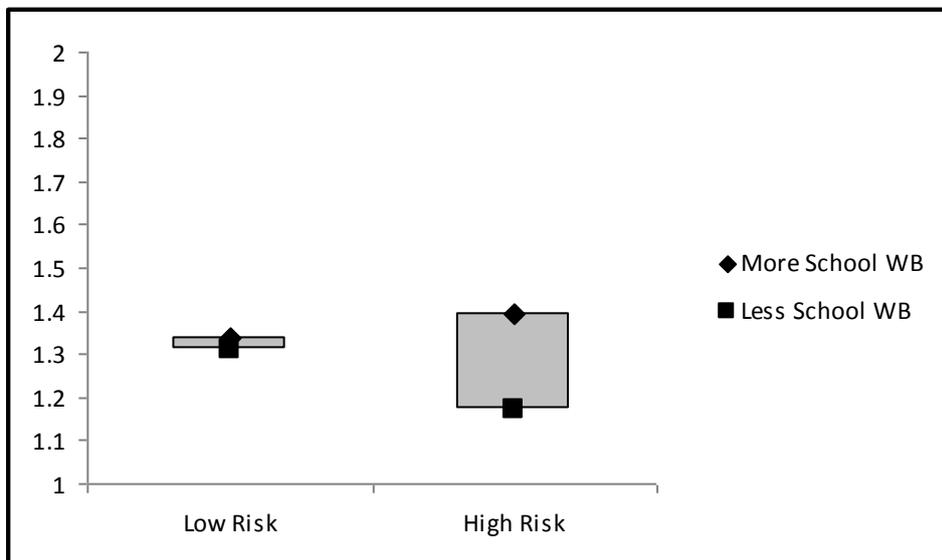
Similar protective effects of prior school wellbeing are also shown when examining the social wellbeing of high-risk boys during early adolescence (see Figure 12).

**Figure 12: Boys' social wellbeing in early adolescence**

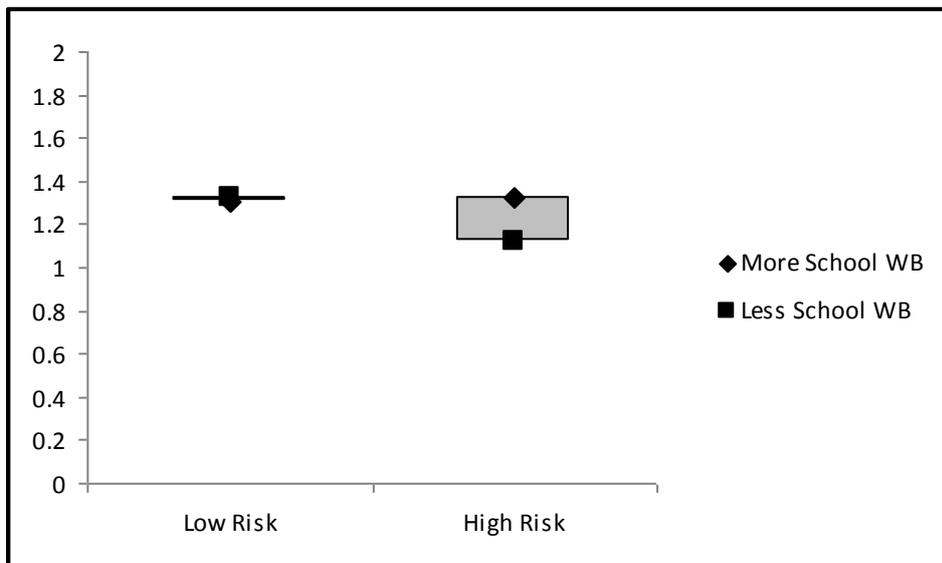


High-risk boys and girls with higher levels of prior school wellbeing also experience more positive changes in their behavioural wellbeing during early adolescence than their high-risk peers with lower levels of prior school wellbeing. Changes in the behavioural wellbeing of low-risk children, on the other hand, are very slight, based on their prior levels of school wellbeing (see Figures 13 and 14).

**Figure 13: Boys' behavioural wellbeing in early adolescence**

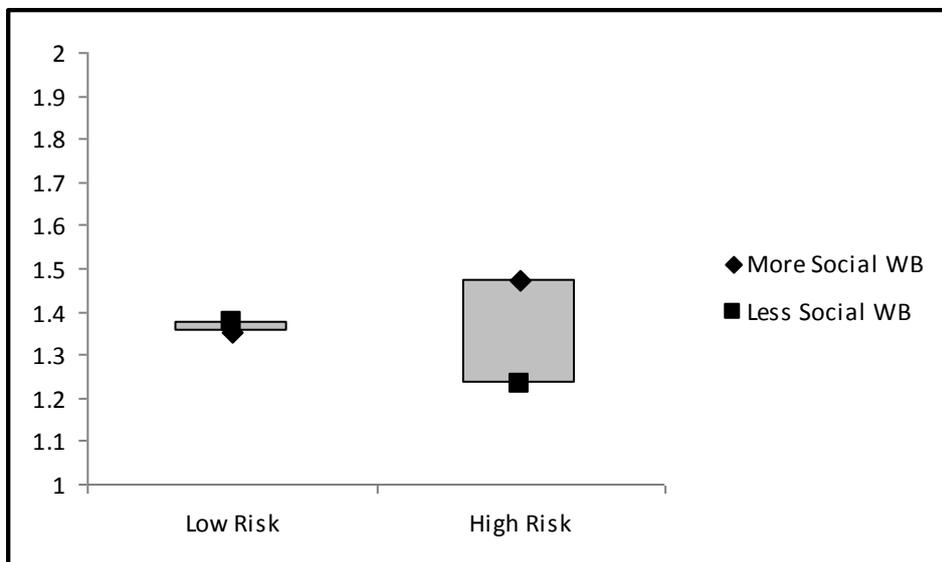


**Figure 14: Girls' behavioural wellbeing in early adolescence**



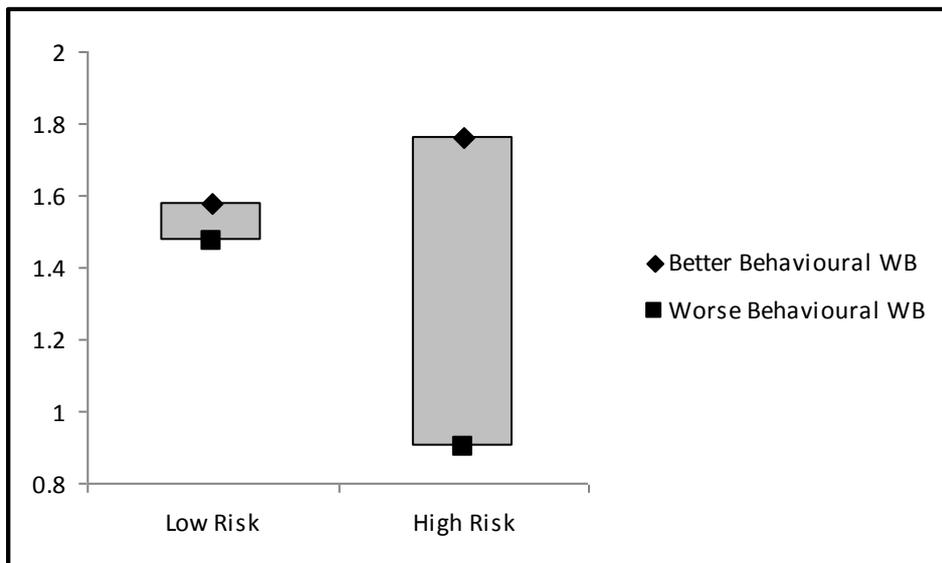
A similar protective effect is also found for other dimensions of wellbeing, particularly for girls. High-risk girls who have higher levels of prior social wellbeing experience more positive changes in their behavioural wellbeing during early adolescence compared to their high-risk peers with lower levels of prior social wellbeing (see Figure 15).

**Figure 15: Girls' behavioural wellbeing in early adolescence**



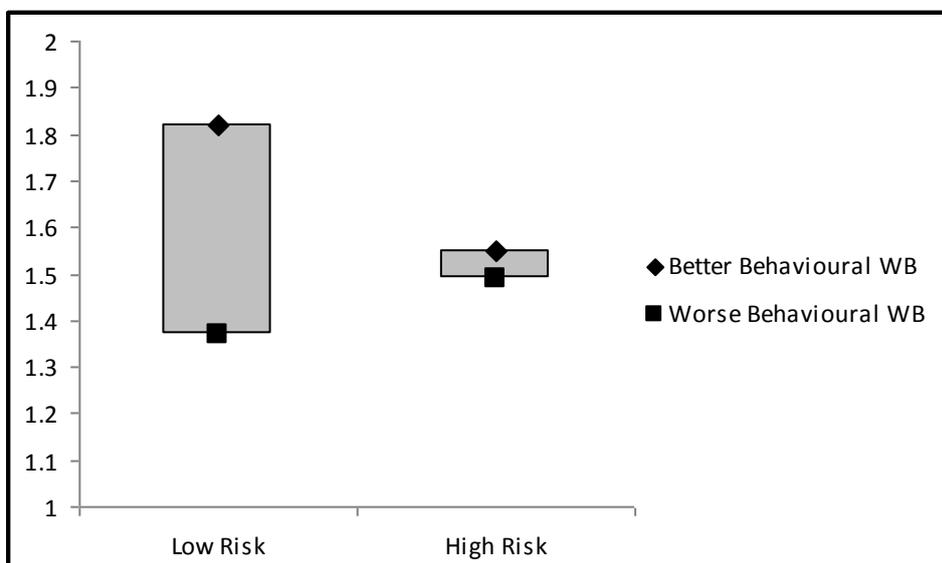
There is also a similar protective effect of prior behavioural wellbeing for high-risk girls. When examining changes in school wellbeing in early adolescence, the differences due to prior behavioural wellbeing are particularly striking (see Figure 16).

**Figure 16: Girls' school wellbeing in early adolescence**



However, there is an opposite pattern when examining whether behavioural wellbeing is a protective factor for high-risk boys in mid-childhood. As shown in Figure 17, low-risk boys with higher levels of prior behavioural wellbeing experience more positive changes in their school wellbeing than low-risk boys with lower levels of prior behavioural wellbeing. However, prior behavioural wellbeing does not appear to be a protective factor bolstering the school wellbeing of high-risk boys.

**Figure 17: Boys' school wellbeing in mid-childhood**

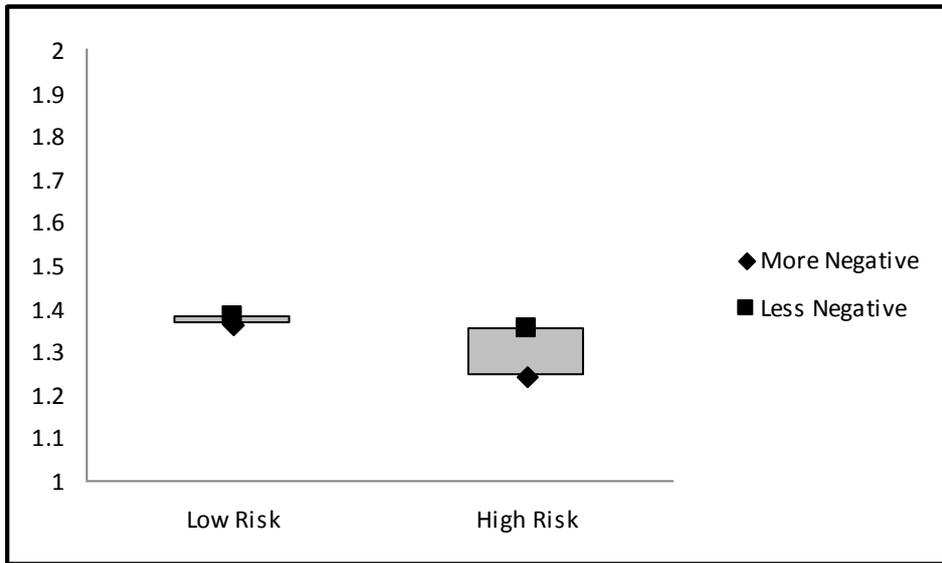


### 3.5.2 Parents' feelings

Parents' feelings about their child also appear to be an important factor in the wellbeing of high-risk children, particularly girls. As shown in Figure 18, high-risk girls whose parents report fewer negative feelings about them have more positive changes in their behavioural

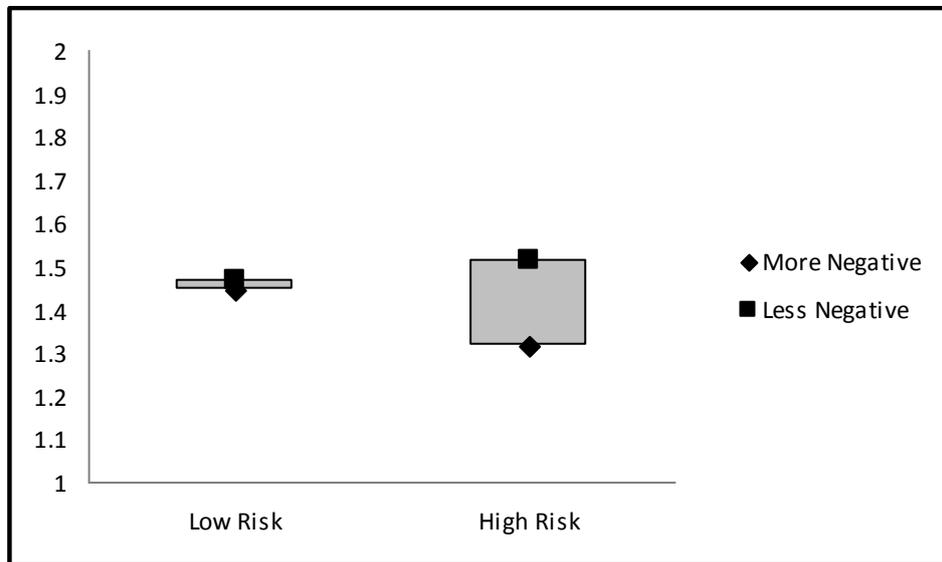
wellbeing during mid-childhood than their high-risk peers whose parents report more negative feelings. There is very little difference, however, for low-risk girls.

**Figure 18: Girls' behavioural wellbeing in mid-childhood**



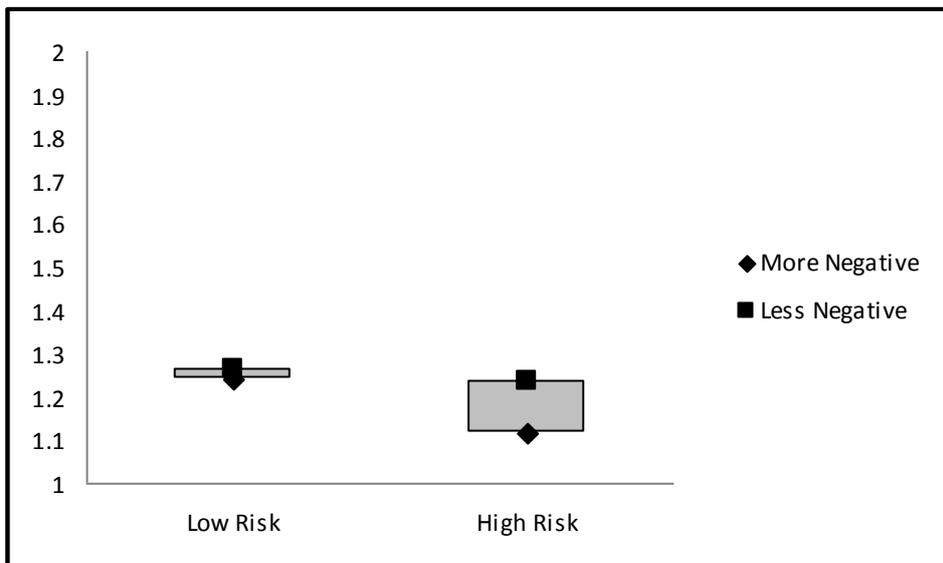
Similar findings are shown in Figure 19 when examining changes in girls' social wellbeing during mid-childhood.

**Figure 19: Girls' social wellbeing in mid-childhood**



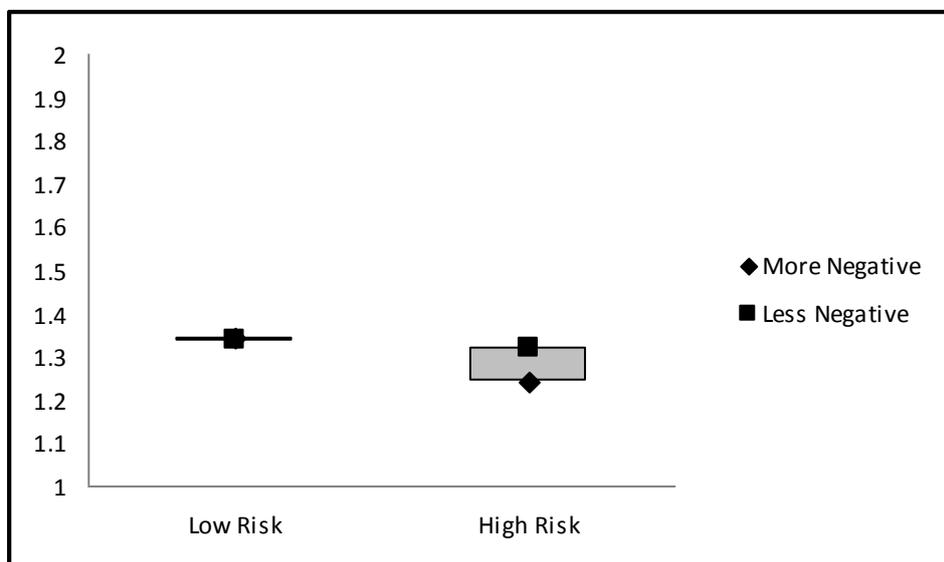
Similar to girls, high-risk boys whose parents report fewer negative feelings also have more positive changes in their social wellbeing in mid-childhood compared to high-risk boys whose parents report more negative feelings (see Figure 20). There is very little difference for low-risk boys, however.

**Figure 20: Boys' social wellbeing in mid-childhood**

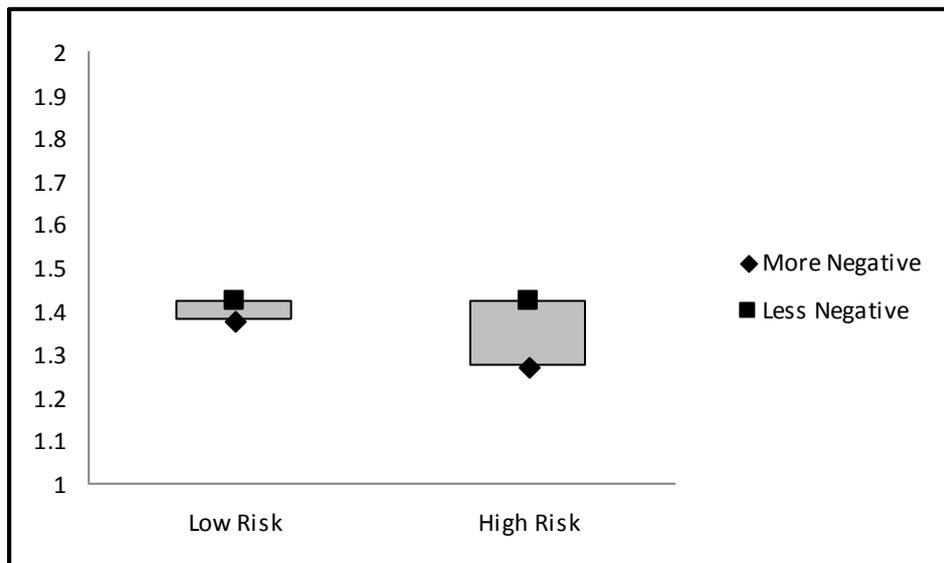


In early adolescence, a similar pattern is found for girls. High-risk girls whose parents report fewer negative feelings about them have more positive changes in their behavioural, social, and school wellbeing compared to their high-risk peers whose parents report more negative feelings, as shown in Figures 21 to 23. Again, there are only slight differences for low-risk girls.

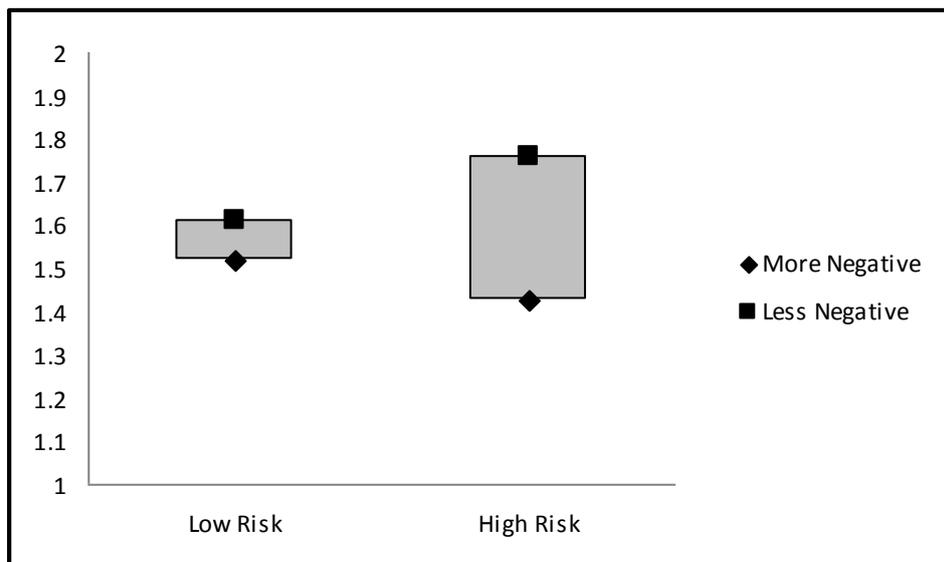
**Figure 21: Girls' behavioural wellbeing in early adolescence**



**Figure 22: Girls' social wellbeing in early adolescence**



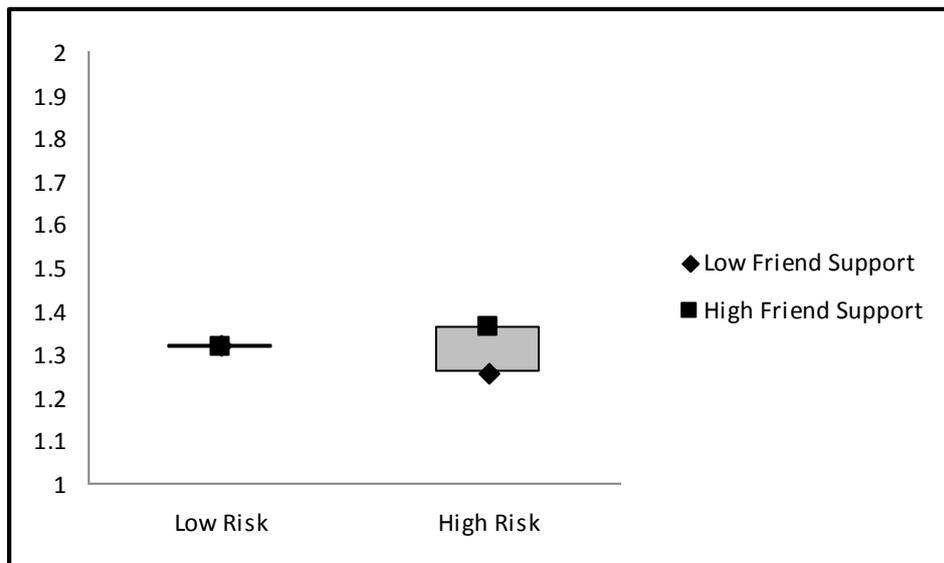
**Figure 23: Girls' subjective school wellbeing in early adolescence**



### 3.5.3 Friendship support

Friendship support is also an important protective factor for boys in early adolescence (see Figure 24). High-risk boys who report more friendship support have more positive changes in their social wellbeing than high-risk boys with lower levels of friendship support. There is no difference, however, for low-risk boys.

**Figure 24: Boys' social wellbeing in early adolescence**



## 4. Discussion

### 4.1 Summary

Our report documents significant changes in the course of wellbeing from mid-childhood to early adolescence for boys and girls, and the factors which may either support or undermine these changes. We also investigate the factors which may buffer the negative effects of risk on children's wellbeing.

We find that change in wellbeing varies according to numerous factors, including the particular dimension of wellbeing and the age and gender of the child. Our findings highlight the importance of children's environments – particularly in terms of their relationships with parents, and to a lesser extent their friends, and school – as well as their experiences and capabilities in terms of attainment and SEN. By contrast, with the exception of gender, background factors such as income and where they live, although correlated with levels of wellbeing, do not predict change in wellbeing. Given that in a previous report we identified lower-income boys as more likely to have declining wellbeing from the ages of 8 to 10 (Gutman and Feinstein, 2008) these findings may at first appear surprising. However, it is important to note that the group differences identified in our earlier report were not independent effects. In this report, our findings highlight the importance of exploring the relationships between different aspects of children's lives, particularly if we are to understand how children's wellbeing can best be supported and sustained.

Parents are a potential source of both risk and protection. Children whose mothers who have psychological issues such as depression and alcoholism experience more negative changes in their wellbeing, whereas positive relationships with parents boost positive changes. For high-risk girls, parents' feelings about them are particularly important – associated with changes in their behavioural, social and school wellbeing – while making no difference to the wellbeing of low-risk girls. High-risk girls whose parents do not have negative feelings about them

show equivalent or even more positive changes in wellbeing compared to their low-risk peers, whereas high-risk girls whose parents report negative feelings tend to experience fewer positive changes in their wellbeing. This supports previous research indicating that relationships with parents are more important for girls than boys (Geuzaine, Debry, and Liesens, 2000), highlighting the vulnerability of girls who are exposed to life's stresses and who are in greater need of support than others. Further research may wish to determine how other sources of support provided through the school, for example, may be able to compensate for such vulnerable children.

Friendships are also important sources of support for both low-risk and high-risk children. Boys experience more positive changes in their social wellbeing, and girls have more positive changes in their school wellbeing from mid-childhood when they have supportive friendships. Furthermore, high-risk boys experience more positive changes in their social wellbeing in early adolescence when they report more supportive friendship, whereas there is no difference for low-risk boys. Together, these findings indicate that friendships can boost levels of wellbeing, particularly in the realms which involve peers – social and school wellbeing.

Children's own capabilities – in terms of their Key Stage attainment – contribute to positive changes in the wellbeing of both low- and high-risk children. Likewise, children with SEN were more likely to experience negative changes in their wellbeing, particularly through mid-childhood. Interestingly, specific types of SEN were more predictive of changes in wellbeing than overall SEN. Furthermore, overall SEN was non-significant in many cases when particular forms of SEN were significant. This highlights the importance of differentiating between particular forms of SEN, and perhaps also reinforces the point more generally that many SEN effects may only become apparent in finer-grained analysis. This suggests that such differentiation is important in future research in this (and other) areas as significant effects might not be found in some analyses simply because the approach is too broad-brush or fails to consider salient sub-groups.

Nevertheless, we find that children with particular types of SEN may experience positive changes in their wellbeing, particularly through early adolescence. Even those children who we might think more unlikely to have a boost in wellbeing compared to other children – such as boys with emotional and behavioural difficulties in mid-childhood, demonstrate positive changes in their wellbeing in early adolescence. This may be the reflection of several factors, such as cognitive maturation, integration of greater coping strategies, and/or additional support received in school. More research is warranted to determine when, how, and which children with SEN experience positive changes in their wellbeing, in order to gain a better understanding of how parents, practitioners and schools may buffer the potential risks associated with SEN.

Prior wellbeing is also an important factor relating to changes in other dimensions of children's wellbeing – but prior measures of wellbeing do not predict changes in other dimensions across the board; rather, key associations are highlighted. Our findings firstly underline the importance of children's experiences in school for their wellbeing – having positive associations for the emotional wellbeing of both low- and high-risk children and protective effects for the social and behavioural wellbeing of high-risk children. Secondly, we find a strong association between behavioural and social wellbeing for boys and girls, as well as a protection relationship of prior social wellbeing for the behavioural wellbeing of high-risk girls, supporting our earlier work which reported an association between earlier social

competence and later behavioural problems during childhood (Gutman and Feinstein, 2008; Gutman and Brown, 2008). Lastly, our finding that prior emotional and behavioural wellbeing has a positive relationship with school wellbeing for low- but not high-risk boys may reflect the higher proportion of boys with SEN. Considering the significance of the school environment, further investigation should examine why and when the school environment provides protection for high-risk children – and how these children may be either supported or hindered by their own prior levels of wellbeing. For instance, children with different types of SEN are likely to receive varying levels of provision, which may contribute to more positive changes for some children in comparison to others.

In conclusion, we find a number of factors which are associated with positive and negative change in wellbeing. Our models suggest that these have particular importance for social and behavioural wellbeing, where our identified risk and positive factors explain a much greater proportion of the variance than is the case for emotional and school wellbeing. For emotional wellbeing, our measure is based on more serious indicators of psychopathology; therefore, changes in emotional wellbeing may be better explained by unobserved variables, such as genetic factors and cognitive processes. School wellbeing and changes therein, on the other hand, are likely to be influenced by school contextual factors, which were not included in the model.

## **4.2 Policy implications**

While in the past, schools might have been primarily concerned with children's attainment, and their wellbeing only as it related to school, the emphasis now being placed by the DCSF on the role of the school in caring for the whole child – as the universal public service that has the most contact with most children – means that these findings may be useful in highlighting areas on which schools might wish to concentrate their efforts. The findings may also be of interest to other organisations and services concerned with children and young people. It should be borne in mind, however, that the findings are principally concerned with factors relating to increases and decreases in wellbeing over time, rather than absolute levels of wellbeing.

The realm of the family is one area where the findings suggest attention might usefully be focused – both in terms of promoting positive relationships between family members, and in addressing specific problems such as depression and alcohol abuse. In the case of these problems, it seems that intervening when children are younger might have the most benefit. Bearing in mind that younger children may be less able than teenagers to identify when their parents are experiencing such problems or to ask for help, staff in schools and other services that have contact with children and families have a vital role in spotting where families might be facing serious problems and taking appropriate action, as well as in providing an environment in which children feel able to share any worries that they might have. This might entail a greater degree of communication and working together with other agencies than has been the case in the past, rather than schools relying on health or other services to notice such problems. Collaborative working of this kind is provided for at local level through extended schools and children's trusts.

While parenting is an issue that has received significant attention and investment in recent years, the findings concerning the association between a positive parent-child relationship and children's wellbeing, while perhaps not surprising, underline the importance of continuing to find effective, easily accessible, attractive and non-stigmatising ways of

supporting parents in their role. This might include ways as simple as promoting the messages from these findings that taking part in activities with your son might help him to enjoy school more. Parenting providers working with parents of children at high risk may also wish to note the finding regarding the significance for wellbeing of parents' feelings about their daughters in particular. It should be noted that while we do not find a significant relationship between children's wellbeing and parents' behaviours, such as the use of rules at home and interest in school, other evidence points to the benefits that such behaviours can bring in other dimensions, particularly in terms of attainment at school and for children's general development (see, for example, Gutman, Brown and Akerman, 2009 for the importance of authoritative parenting styles, and Desforges and Abouchaar, 2003 for parental involvement in schooling).

The finding that having supportive friendships in childhood is predictive of greater wellbeing later, especially for high-risk boys, underlines the important role of programmes such as SEAL in helping children to form positive relationships with their peers. The related findings that higher social wellbeing can predict improvements in boys' behavioural wellbeing, and that the reverse is also true for both boys and girls, with higher behavioural wellbeing predicting higher social wellbeing, underlines the importance of taking a broad approach to efforts to improve behaviour in schools and addressing social relationships alongside behaviour itself. Meanwhile, in view of the evidence showing a decline in social wellbeing in early adolescence, it is possible that offering additional support to young people in these years could also be beneficial.

With regard to the relationship between children's wellbeing and their own capabilities, these findings offer interesting evidence of the link between wellbeing and prior attainment. Although it might seem common sense that doing well in school can help a child to feel better about themselves, this finding highlights the need to consider the case of children who are **not** achieving so well. Schools may wish to ensure that they are vigilant in their approach to such children, in terms of helping them to continue to enjoy school and respond positively even if they do receive low results in assessments, as well as being aware of the messages the school gives out, whether intentionally or not, about what it means to score well or poorly in assessments.

The findings also highlight the area of SEN, which are thought to affect one in five children at some point in their school careers (DCSF, 2008b), and are correlated with declining wellbeing in all dimensions. While we have not considered overall levels of wellbeing in children with SEN compared with other children, our findings support the case for ensuring that these needs are identified and addressed effectively, in that this might also help to improve children's wellbeing. Moreover, the finding that children with some kinds of SEN experience more positive changes in wellbeing as they grow older is a hopeful result, indicating that it is worth taking a positive approach to addressing SEN and having high expectations of and for children with additional needs. While policies are in place in schools to address SEN – and a welcome high profile is being given to the issue through the current Lamb Inquiry into increasing parental confidence in the SEN system, through the additional investment announced in *The Children's Plan: One Year On* (DCSF, 2008b), and through initiatives such as the Aiming High for Disabled Children agenda – SEN is a far-reaching issue and it seems that focusing more attention on it could be beneficial.

It is encouraging that the findings relating to changes in wellbeing suggest that efforts to boost wellbeing in primary school – perhaps, again, through the kinds of activities

incorporated in the SEAL programme, as well as through normal classroom practice – might have lasting benefits, if they are successful at this earlier stage, in terms of improved wellbeing later. In particular, the finding that for children at high risk, enjoying school at a younger age is predictive of higher wellbeing later implies that these kinds of programmes might be particularly beneficial for such children. Evaluations of the programmes may be able to confirm this in time, and could consider whether they are effective in helping to reduce inequalities between high-risk children and others. The finding that emotional wellbeing is less stable in mid-childhood than it is in early adolescence also implies that interventions in the primary school years might be of particular value, while the evidence concerning declines in wellbeing around the time of transition to secondary school underlines what is already known about this often difficult time, which can involve a ‘dip’ in attainment, and the continuing need for measures to support children during this transition.

In terms of gender differences, we find that boys and girls often tend to experience different levels of wellbeing across the different dimensions – with girls, for example, tending to have lower emotional wellbeing, and boys to have lower behavioural wellbeing and to feel less positive about school. While it may not always be practicable or desirable for schools to concentrate efforts to improve wellbeing on one sex rather than the other, and while it is the staff leading such programmes who will know the needs of the children in their own contexts, it can be expected that staff will wish to be alert to which children are most likely to benefit from which activities taking place as part of any programme. The findings in this report can offer some help in pointing out which children these might be: while it is common for boys to exhibit poorer behaviour than girls, for example, it is less obvious that girls who have experienced stressful events might particularly benefit from attempts to improve their social wellbeing.

### **4.3 Limitations**

A number of limitations must be taken into consideration. First, our study relies upon parents’ reports of their child’s wellbeing rather than children’s reports, as these are the available data. Therefore, the measures are hence subject to mothers’ perceptions of their children’s wellbeing.

Second, there are a number of factors not included in the analyses that may influence the course of children’s wellbeing from mid-childhood to early adolescence, such as the school environment, including teacher support.

Third, predictive measures were gathered at different time points from parents and children. This needs to be considered when interpreting the findings. For example, maternal alcoholism and maternal depression were assessed when the child was aged 10 to 12 years. Although they are used as a predictor for mid-childhood and early adolescence, some mothers may have experienced positive changes after age 12 which these would not capture.

Lastly, and perhaps more importantly, we cannot determine causality given the nature of our analysis. A reasonable argument could be made that outcomes may be associated with, rather than being the result of, these factors. For example, having fewer positive changes in behavioural wellbeing for children with behavioural and emotional difficulties may be somewhat tautological. Nonetheless, boys with behavioural and emotional difficulties do show greater improvements in their emotional and social wellbeing during early adolescence

– suggesting that examining changes in, rather than levels of, wellbeing provides some assurance regarding the direction of causality.

#### **4.4 Conclusion**

This report documents wellbeing from mid-childhood to early adolescence. While trajectories are reported for the average child, our findings suggest that the course of wellbeing for the individual child is varied. For example, similar percentages of children experience increases and decreases in their emotional, social and behavioural wellbeing, particularly in early adolescence. Further factors either support or undermine changes in wellbeing; while some appear universal for both high- and low-risk children, others are differentiated by risk level and/or gender.

These findings together underline the complexity involved in understanding the factors which comprise children's wellbeing. Nonetheless, a few key factors are highlighted, including the importance of children's environments – in terms of their relationships with parents, friends and school – as well as their experiences and capabilities in terms of attainment and SEN, rather than their social background and where they live.

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## Appendix: Measures and regression tables

### Measures

#### Wellbeing

*Emotional wellbeing* includes indices from the Development of Wellbeing Assessment (DAWBA) selected on the basis that they measured emotional and internal states of psychological distress and abnormal symptoms (Goodman *et al.*, 2000). The selected indices were: Separation Anxiety, Particular Fears, Social Fears, Compulsions and Obsessions, Anxiety, and Moods. All were measured on a three-point scale: 0 = No more than others, 1 = A little more than others, and 2 = A lot more than others.

*Behavioural wellbeing* includes indices from the DAWBA selected on the basis that they measured behavioural and external states of wellbeing. The selected indices were: Activity, Attention, Awkward, and Troublesome behaviour. All were measured on a three-point scale: 0 = No more than others, 1 = A little more than others, and 2 = A lot more than others. The standardised DAWBA questionnaire includes questions concerning running away from home for children older than 10 years; these were omitted as they were not asked of younger children, and factor analysis revealed that they were not correlated with other items.

*Social wellbeing* consists of the Skuse Social Cognition Scale (Skuse 1997), which asks how well the child interprets the experience of others and takes others' rights and feelings into account in their own actions. Additionally, four questions from the Strengths and Difficulties questionnaire were also added, because they provided information about children's peer relationships. Social wellbeing was coded positively so that higher scores recorded higher social competence on a three-point scale: 0 = No more than others, 1 = A little more than others, and 2 = A lot more than others.

*Subjective school wellbeing* consists of five items related to children's feelings about school, as reported by their mothers. All were measured on a three-point scale: 0 = No more than others, 1 = A little more than others, and 2 = A lot more than others. Some items were re-coded so that higher scores indicate more positive feelings about school.

#### Risk factors

*Stressful Events* was taken from the DAWBA from the section of questions concerning psychological mental health, which asked the mother to report any incidences in the child's past that upset them a great deal and invoked stress-related responses, such as loss of sleep, inconsolable distress and withdrawal from normal activity. Mothers were first asked whether the child had experienced any major stressful events in recent years, to which only 12.3 per cent of mothers reported a traumatic event affecting their child. The group with a recent stressful event was then asked more detailed questions about the degree to which the child: relived the stressful event with vivid memories in the past month; had repeated bad dreams of the stressful event in the past month; got upset by reminders of the stressful event in the past month; avoided talking about the stressful event in the past month; avoided activities/places/people related to the stressful event in the past month; blocked out details of the stressful event from memory in the past month; had reduced interest in activities in the past month; expressed a reduced range of feelings in the past month; had problems sleeping in the past month; seemed irritable/angry in the past month; had difficulty concentrating in the past month; was always alert for possible dangers in the past month; and was easily

startled in the past month. The questions were answered: 0 = Not at all, 1 = A little, and 2 = A lot. The same questions were asked at three time periods in the child's development, aged 7.5, 10.5 and 13.8.

*Not Married* was created by recoding marital status reported by the mother when the child was aged 10 years (122 months), which was originally coded as 1 = Never married, 2 = Widowed, 3 = Divorced, 4 = Separated, 5 = Married first time, and 6 = Married not first time, where 'Married for the first time' and 'Married not for the first time' were recoded to equal 0 and all other values recoded to equal 1.

*Divorced or Separated* was based on the same original variable as 'Married'; however, it was recoded so that 'Widowed' or 'Separated' and 'Married not for the first time' equalled 1 and all other values equalled 0.

*Maternal Depression* was created from the mother's report of her own welfare when the child was aged 12 (145 months). The mother was asked if she had had depression in the last two years. This was coded according to whether the mother had sought medical assistance, where 2 = Yes, consulted a doctor, 1 = Yes, but did not consult a doctor, and 0 = No.

*Maternal Alcoholism* was recorded from the same set of questions for depression, where mothers were asked whether they had had a problem with alcohol in the last two years, where 2 = Yes, consulted a doctor, 1 = Yes, but did not consult a doctor, and 0 = No.

*Low Family Income* was measured from the mother's report of the family's average income each week, including social benefits, when the child was aged 11. This variable was recorded in bands: 9 = < £120, 8 = £120–£189, 7 = £190–£239, 6 = £240–£289, 5 = £290–£359, 4 = £360–£429, 3 = £430–£479, 2 = £480–£559, 1 = £560–£799 and 0 = £800 or more.

*Low Household Education* was measured by calculating the average of the mother's and father's level of education, where CSE/none = 4, Vocational = 3, O level = 2, A level = 1 and Degree = 0.

*Social Housing* was measured from a variable comprising the mother's report of home ownership status when the child was aged 10 years (122 months). The variable was originally coded as follows: 0 = Being bought/mortgaged, 1 = Being bought from council, 2 = Owned – no mortgage, 3 = Rented from council, 4 = Rented privately – furnished, 5 = Rented privately – unfurnished, 6 = Rented – housing association, and 7 = Other. To create a variable for social housing, this was recoded so that 'Rented from council', 'Rented privately – furnished' and 'Rented privately – unfurnished' were recoded to equal 1 and all other values were recoded to equal 0.

*Special Educational Needs (SEN) Status* was recorded by the teacher's report of SEN in Year 6 when the child was 10 to 11 years old. Firstly, teachers were asked whether or not the 'Child has ever been recognised as having special educational needs' which was recorded as Yes = 1 and No = 0 (all following SEN questions were also recorded with these values). The teacher was then asked about the type of SEN: whether child has ever been recognised as having special educational needs, child has ever had specific learning difficulties, child has ever had emotional and behavioural difficulties, child has ever had speech and language difficulties, child has ever had sensory impairment (hearing), child has ever had sensory impairment (visual), child has ever had physical disabilities, and child has ever had medical

conditions.

### **Positive factors**

*Parent Feelings about Child* was created from the average of four questions asked of both the mother and father when the child was aged 7 and again at age 8. These were: partner/mother often gets irritated by child, partner/mother dislikes mess and noise surrounding child, partner/mother has frequent battles of will with child, and child gets on partner's/mother's nerves. They were coded Yes = 0; sometimes = 1; and No = 2.

*Fathers' Activities with Child* was measured from the mother's report of 9 questions asked when the child was aged 8 and 9, as to whether he: helps child with homework, makes things with child, sings to or with child, reads to or with child, plays with child with toys, cuddles child, plays actively with child, takes child to the park, puts child to bed, takes child swimming or fishing, draws or paints with child, prepares food with child, takes child to classes, takes child shopping, takes child to watch sports, has conversations with child, helps child prepare things for school, and does other things with child. These were each coded: 0 = Never, 1 = Less than once a week, 2 = Once a week, 3 = 2–5 times a week, and 4 = Nearly every day.

*Mother's Interest in Child's School* was measured by the mother's report of her interest in her child's activities at school, asked when the child was aged 8.6 years (103 months) and again at 10.6 years (128 months), and was coded: 2 = Yes, very, 1 = Yes, mostly, and 0 = No, not really.

*Household Rules* was measured using the question 'Are there rules in the home about what child can and cannot do?' asked at age 9 and again at 11. This was coded: 0 = No, not at all, 1 = Yes, for some things, and 2 = Yes, for many things.

*Child's Perception of Relationship with Parents* was measured by nine questions asked of the study child at age 9.6. The questions asked whether the: child is liked by parent(s), child is understood by parent(s), parent(s) are unhappy/disappointed with what child does, child likes their parent(s), child wants to bring their own children up in the same way, child and parent(s) have a lot of fun together, parent(s) and child spend a lot of time together, child finds parent(s) easy to talk to, and child gets along well with parent(s). At 14 years a separate set of 18 questions was asked, including whether the child: spoke to mother about how things are going with friends in the last month, spoke to mother about their plans for the future in the last month, tells parents which friends they hang out with during their free time, tells parents when they get home at night what they have been doing, doesn't like parents coming to school even if they are not in trouble, likes parent(s) to meet their friends, thinks their family is very different from other families, likes parent(s) to see what they are doing at school, and sees home life and school life as two different worlds. These questions were coded: 5 = True, 4 = Mostly true, 3 = Partly true, 2 = Mostly untrue, and 1 = Not true.

*Child's Perception of Friendship Support* was estimated from a series of five questions based on questions from the Cambridge Hormones and Moods Project Friendship Questionnaire (Goodyer, Wright and Altham, 1989, 1990). These questions ask: whether child is happy with their number of friends, frequency child sees friends outside school, whether friends understand child, whether child can talk to friends about problems, and whether child is happy with friends overall. These scores were summed to create an overall score.

*Child School Attainment* is the total score on Key Stage 1 Reading, Writing and Maths.

## Regression models

### Risk and positive factors

**Table A1: Predictors of boys' emotional wellbeing in mid-childhood**

Boys	(1)	(2)	(3)
(Constant)	.94	1.02	.99
Emotional Wellbeing at 7.5	.45 (.47) ***	.42 (.44) ***	.39 (.41) ***
Any Stressful Events at 7.5		-.01 (-.02)	-.01 (-.02)
Single Parent/Separated		-.01 (-.01)	.00 (-.01)
Divorced/Separated at 10		-.01 (-.04)	-.01 (-.04)
Maternal Depression at 10 to 12		-.03 (-.08) *	-.02 (-.07) *
Maternal Alcoholism at 10 to 12		-.07 (-.06) *	-.08 (-.06) *
Low Parental Education		.00 (.00)	.00 (-.01)
Low Household Income		-.01 (-.04)	-.01 (-.04)
Social Housing		.01 (.01)	.01 (.01)
Any special educational needs		.00 (.00)	.00 (.01)
Specific learning difficulties		-.03 (-.07) *	-.03 (-.07) *
Emotional & behavioural difficulties		-.04 (-.09) *	-.03 (-.07)
Speech & language difficulties		-.03 (-.04)	-.03 (-.05)
Sensory impairment (hearing)		-.07 (-.05)	-.07 (-.05)
Sensory impairment (visual)		-.01 (-.01)	-.02 (-.01)
Physical disabilities		-.05 (-.04)	-.05 (-.04)
Medical conditions		-.01 (-.01)	-.01 (-.01)
Key stage 1			.00 (-.02)
Friendship Quality at 8			.00 (.03)
Parents' feelings about child at 7			.02 (.07) *
Frequency father/step-father activities			.00 (.01)
Mother interested in child's school at 8.6			-.01 (-.03)
Child's relationship with parents at 9.6			.00 (-.01)
There are rules in the home at 9.6			.00 (.00)
Behavioural Wellbeing at 7.5			.04 (.09)
Social competence at 7.5			-.02 (-.04)
Subjective School Wellbeing at 7.5			.02 (.06) *
<i>Rsq</i>	.22	.28	.29

Note. \*\*\* $p < .001$ , \*\* $p < .01$ , \* $p < .05$   
 B (standardised Beta)

**Table A2: Predictors of girls' emotional wellbeing in mid-childhood**

Girls	(1)	(2)	(3)
(Constant)	.91	.98	.88
Emotional Wellbeing at 7.5	.46 (.46) ***	.43 (.43) ***	.38 (.38) ***
Any Stressful Events at 7.5		-.02 (-.06)	-.02 (-.04)
Single Parent/Separated		-.01 (-.02)	-.01 (-.02)
Divorced/Separated at 10		-.01 (-.03)	-.01 (-.03)
Maternal Depression at 10 to 12		-.03 (-.10) **	-.03 (-.09) **
Maternal Alcoholism at 10 to 12		.03 (.02)	.03 (.02)
Low Parental Education		-.01 (-.02)	.00 (.00)
Low Household Income		.00 (-.01)	.00 (.00)
Social Housing		.01 (.01)	.01 (.02)
Any special educational needs		-.02 (-.05)	.00 (.01)
Specific learning difficulties		-.05 (-.07)*	-.05 (-.07) *
Emotional & behavioural difficulties		.00 (.00)	.02 (.02)
Speech & language difficulties		.03 (.03)	.03 (.04)
Sensory impairment (hearing)		.05 (.04)	.06 (.04)
Sensory impairment (visual)		-.07 (-.03)	-.06 (-.03)
Physical disabilities		.03 (.02)	.03 (.02)
Medical conditions		.01 (.01)	.02 (.02)
Key stage 1			.00 (.07) *
Friendship Quality at 8			.00 (.02)
Parents' feelings about child at 7			.02 (.07) *
Frequency father/step-father activities			.00 (.01)
Mother interested in child's school at 8.6			.00 (.01)
Child's relationship with parents at 9.6			-.01 (-.04)
There are rules in the home at 9.6			.00 (.01)
Behavioural Wellbeing at 7.5			.05 (.08)
Social competence at 7.5			.03 (.04)
Subjective School Wellbeing at 7.5			.02 (.08) *
<i>Rsq</i>	.21	.24	.27

Note. \*\*\*p<.001, \*\*p<.01, \*p<.05  
B (standardised Beta)

**Table A3: Predictors of boys' emotional wellbeing in early adolescence**

Boys	(1)	(2)	(3)
(Constant)	.78	.87	.87
Emotional Wellbeing at 10.5	.55 (.58) ***	.53 (.55) ***	.5 (.53) ***
Any Stressful Events at 10.5		-.01 (-.03)	-.01 (-.02)
Single Parent/Separated		.00 (.00)	-.01 (-.02)
Divorced/Separated at 10		.00 (.01)	.00 (.00)
Maternal Depression at 10 to 12		.00 (.00)	.00 (.00)
Maternal Alcoholism at 10 to 12		-.04 (-.03)	-.03 (-.03)
Low Parental Education		-.01 (-.04)	-.02 (-.05)
Low Household Income		.00 (-.01)	-.01 (-.02)
Social Housing		.00 (.00)	.00 (.00)
Any special educational needs		-.03 (-.10) *	-.03 (-.10) *
Specific learning difficulties		.00 (.00)	.00 (-.01)
Emotional & behavioural difficulties		.03 (.08) *	.04 (.10) *
Speech & language difficulties		-.01 (-.02)	-.01 (-.02)
Sensory impairment (hearing)		.04 (.03)	.03 (.02)
Sensory impairment (visual)		-.04 (-.03)	-.05 (-.03)
Physical disabilities		-.05 (-.05)	-.05 (-.05)
Medical conditions		-.04 (-.04)	-.03 (-.04)
Key stage 1			.00 (-.05)
Friendship Quality at 10			.00 (.03)
Parents' feelings about child at 8			.01 (.03)
Frequency father/step-father activities			-.01 (-.06)
Mother interested in child's school at 10.6			0 (-.01)
Child's relationship with parents at 14			-.01 (-.02)
There are rules in the home at 12			.00 (.00)
Behavioural Wellbeing at 10.5			.00 (-.01)
Social competence at 10.5			.02 (.05)
Subjective School Wellbeing at 10.5			.02 (.06)
<i>Rsq</i>	.33	.35	.36

Note. \*\*\*p<.001, \*\*p<.01, \*p<.05  
B (standardised Beta)

**Table A4: Predictors of girls' emotional wellbeing in early adolescence**

Girls	(1)	(2)	(3)
(Constant)	.76	.78	.62
Emotional Wellbeing at 10.5	.54 (.51) ***	.53 (.50) ***	.48 (.46) ***
Any Stressful Events at 10.5		.00 (-.01)	-.01 (-.01)
Single Parent/Separated		.00 (.01)	.00 (.00)
Divorced/Separated age 10		.01 (.03)	.01 (.02)
Maternal Depression at 10 to 12		-.02 (-.06)	-.02 (-.05)
Maternal Alcoholism at 10 to 12		.05 (.03)	.06 (.04)
Low Parental Education		-.01 (-.02)	.00 (.00)
Low Household Income		0 (.01)	.01 (.02)
Social Housing		-.02 (-.04)	-.02 (-.04)
Any special educational needs		.00 (.00)	.01 (.02)
Specific learning difficulties		.04 (.05)	.04 (.05)
Emotional & behavioural difficulties		-.07 (-.08) *	-.05 (-.06)
Speech & language difficulties		.01 (.01)	.02 (.02)
Sensory impairment (hearing)		.04 (.03)	.04 (.03)
Sensory impairment (visual)		-.06 (-.03)	-.06 (-.03)
Physical disabilities		.06 (.04)	.09 (.06)
Medical conditions		-.06 (-.05)	-.05 (-.04)
Key stage 1			.00 (.03)
Friendship Quality at 10			.00 (.05)
Parents' feelings about child at 8			.00 (-.02)
Frequency father/step-father activities			-.02 (-.06)
Mother interested in child's school at 10.6			-.01 (-.01)
Child's relationship with parents at 14			.01 (.06)
There are rules in the home at 12			.01 (.02)
Behavioural Wellbeing at 10.5			.03 (.05)
Social competence at 10.5			.04 (.05)
Subjective School Wellbeing at 10.5			.02 (.06)
<i>Rsq</i>	.26	.28	.30

Note. \*\*\*p<.001, \*\*p<.01, \*p<.05  
B (standardised Beta)

**Table A5: Predictors of boys' behavioural wellbeing in mid-childhood**

Boys	(1)	(2)	(3)
(Constant)	.46	.49	.49
Behavioural Wellbeing at 7.5	.75 (.75) ***	.68 (.69) ***	.58 (.59) ***
Any Stressful Events at 7.5		.01 (.01)	.01 (.01)
Single Parent/Separated		-.01 (-.01)	-.01 (-.01)
Divorced/Separated at 10		.01 (.01)	.01 (.01)
Maternal Depression at 10 to 12		-.02 (-.02)	-.01 (-.02)
Maternal Alcoholism at 10 to 12		-.12 (-.04) *	-.13 (-.05) *
Low Parental Education		-.01 (-.01)	-.02 (-.02)
Low Household Income		-.01 (-.02)	-.01 (-.02)
Social Housing		-.01 (-.01)	-.01 (-.01)
Any special educational needs		-.03 (-.05)	-.03 (-.05)
Specific learning difficulties		-.06 (-.05) *	-.06 (-.06) *
Emotional & behavioural difficulties		-.12 (-.13) ***	-.12 (-.13) ***
Speech & language difficulties		.08 (.06) *	.08 (.06) *
Sensory impairment (hearing)		-.22 (-.07) **	-.22 (-.08) **
Sensory impairment (visual)		.05 (.01)	.07 (.02)
Physical disabilities		.08 (.03)	.09 (.04)
Medical conditions		.01 (.01)	.01 (.01)
Key stage 1			.00 (-.01)
Friendship Quality at 8			.00 (.02)
Parents' feelings about child at 7			.03 (.05) *
Frequency father/step-father activities			.01 (.02)
Mother interested in child's school at 8.6			.01 (.01)
Child's relationship with parents at 9.6			.03 (.04)
There are rules in the home at 9.6			-.03 (-.04)
Emotional Wellbeing at 7.5			-.04 (-.02)
Social competence at 7.5			.11 (.09) **
Subjective School Wellbeing at 7.5			.01 (.02)
<i>Rsq</i>	.57	.60	.62

Note. \*\*\*p<.001, \*\*p<.01, \*p<.05  
B (standardised Beta)

**Table A6: Predictors of girls' behavioural wellbeing in mid-childhood**

Girls	(1)	(2)	(3)
(Constant)	.68	.65	.53
Behavioural Wellbeing at 7.5	.68 (.70) ***	.65 (.67) ***	.55 (.57) ***
Any Stressful Events at 7.5		-.02 (-.03)	-.02 (-.02)
Single Parent/Separated		.00 (-.01)	-.01 (-.02)
Divorced/Separated at 10		-.02 (-.03)	-.02 (-.03)
Maternal Depression at 10 to 12		-.01 (-.02)	-.01 (-.02)
Maternal Alcoholism at 10 to 12		-.03 (-.01)	-.02 (-.01)
Low Parental Education		-.01 (-.02)	.00 (.00)
Low Household Income		.00 (-.01)	.00 (.00)
Social Housing		.00 (.00)	.01 (.01)
Any special educational needs		.00 (.00)	.02 (.04)
Specific learning difficulties		-.04 (-.03)	-.03 (-.03)
Emotional & behavioural difficulties		-.07 (-.06) *	-.06 (-.05)
Speech & language difficulties		.03 (.02)	.03 (.02)
Sensory impairment (hearing)		-.06 (-.03)	-.06 (-.03)
Sensory impairment (visual)		-.02 (-.01)	-.04 (-.01)
Physical disabilities		-.15 (-.06) *	-.17 (-.07) **
Medical conditions		.00 (.00)	-.02 (-.01)
Key stage 1			.01 (.11) ***
Friendship Quality at 8			0 (-.02)
Parents' feelings about child at 7			.03 (.07) **
Frequency father/step-father activities			-.01 (-.03)
Mother interested in child's school at 8.6			.00 (.00)
Child's relationship with parents at 9.6			.01 (.02)
There are rules in the home at 9.6			-.01 (-.01)
Emotional Wellbeing at 7.5			.05 (.03)
Social competence at 7.5			.06 (.06)
Subjective School Wellbeing at 7.5			.01 (.02)
<i>Rsq</i>	.49	.50	.52

Note. \*\*\*p<.001, \*\*p<.01, \*p<.05  
B (standardised Beta)

**Table A7: Predictors of boys' behavioural wellbeing in early adolescence**

Boys	(1)	(2)	(3)
(Constant)	.62	.72	.66
Behavioural Wellbeing at 10.5	.67 (.72) ***	.62 (.67) ***	.54 (.59) ***
Any Stressful Events at 10.5		-.06 (-.07) **	-.06 (-.08) **
Single Parent/Separated		.00 (.01)	.01 (.01)
Divorced/Separated at 10		.01 (.01)	.01 (.01)
Maternal Depression at 10 to 12		.00 (.00)	.00 (.01)
Maternal Alcoholism at 10 to 12		-.05 (-.02)	-.07 (-.03)
Low Parental Education		-.02 (-.03)	-.01 (-.02)
Low Household Income		.01 (.01)	.01 (.02)
Social Housing		-.01 (-.01)	-.01 (-.01)
Any special educational needs		-.03 (-.04)	.00 (.00)
Specific learning difficulties		.02 (.02)	.02 (.02)
Emotional & behavioural difficulties		-.04 (-.04)	-.04 (-.04)
Speech & language difficulties		.07 (.06) *	.08 (.06) *
Sensory impairment (hearing)		.10 (.04)	.07 (.03)
Sensory impairment (visual)		.22 (.06) *	.21 (.06) *
Physical disabilities		-.01 (.00)	.00 (.00)
Medical conditions		-.20 (-.11) ***	-.19 (-.11) ***
Key stage 1			.01 (.08) *
Friendship Quality at 10			.00 (-.03)
Parents' feelings about child at 8			.02 (.05)
Frequency father/step-father activities			.00 (.00)
Mother interested in child's school at 10.6			.01 (.01)
Child's relationship with parents at 14			.03 (.06) *
There are rules in the home at 12			.00 (.00)
Behavioural Wellbeing at 10.5			-.08 (-.04)
Social competence at 10.5			.07 (.07)
Subjective School Wellbeing at 10.5			.03 (.05)
<i>Rsq</i>	.53	.55	.57

Note. \*\*\*p<.001, \*\*p<.01, \*p<.05  
B (standardised Beta)

**Table A8: Predictors of girls' behavioural wellbeing in early adolescence**

Girls	(1)	(2)	(3)
(Constant)	.66	.75	.51
Behavioural Wellbeing at 10.5	.65 (.63) ***	.61 (.60) ***	.53 (.52) ***
Any Stressful Events at 10.5		-.01 (-.01)	-.01 (-.01)
Single Parent/Separated		-.02 (-.03)	-.01 (-.01)
Divorced/Separated at 10		.01 (.01)	.01 (.02)
Maternal Depression at 10 to 12		-.02 (-.04)	-.02 (-.04)
Maternal Alcoholism at 10 to 12		-.02 (-.01)	-.02 (-.01)
Low Parental Education		-.01 (-.01)	.00 (.00)
Low Household Income		-.02 (-.04)	-.01 (-.03)
Social Housing		-.01 (-.01)	-.01 (-.01)
Any special educational needs		-.03 (-.04)	-.02 (-.03)
Specific learning difficulties		.03 (.02)	.03 (.03)
Emotional & behavioural difficulties		-.13 (-.10) **	-.11 (-.08) **
Speech & language difficulties		.00 (.00)	-.02 (-.01)
Sensory impairment (hearing)		.05 (.02)	.07 (.03)
Sensory impairment (visual)		-.09 (-.03)	-.09 (-.03)
Physical disabilities		-.09 (-.04)	-.06 (-.03)
Medical conditions		.11 (.06) *	.11 (.06) *
Key stage 1			.00 (.01)
Friendship Quality at 10			.00 (-.01)
Parents' feelings about child at 8			.03 (.09) **
Frequency father/step-father activities			.00 (.01)
Mother interested in child's school at 10.6			-.02 (-.02)
Child's relationship with parents at 14			.07 (.16) ***
There are rules in the home at 12			.01 (.01)
Behavioural Wellbeing at 10.5			-.02 (-.01)
Social competence at 10.5			.06 (.05)
Subjective School Wellbeing at 10.5			.02 (.03)
<i>Rsq</i>	.40	.42	.46

Note. \*\*\*p<.001, \*\*p<.01, \*p<.05  
B (standardised Beta)

**Table A9: Predictors of boys' social wellbeing in mid-childhood**

Boys	(1)	(2)	(3)
(Constant)	.47	.63	.41
Social competence at 7.5	.74 (.68) ***	.67 (.62) ***	.47 (.43) ***
Any Stressful Events at 7.5		-.01 (-.01)	.00 (.01)
Single Parent/Separated		.01 (.01)	.02 (.02)
Divorced/Separated at 10		-.02 (-.03)	-.02 (-.03)
Maternal Depression at 10 to 12		-.03 (-.04)	-.02 (-.03)
Maternal Alcoholism a 10 to 12		-.05 (-.02)	-.07 (-.03)
Low Parental Education		-.02 (-.03)	-.03 (-.05)
Low Household Income		-.02 (-.03)	-.01 (-.02)
Social Housing		-.02 (-.02)	-.02 (-.02)
Any special educational needs		-.02 (-.03)	-.01 (-.02)
Specific learning difficulties		-.04 (-.04)	-.05 (-.05)
Emotional & behavioural difficulties		-.10 (-.12) ***	-.09 (-.11) ***
Speech & language difficulties		.01 (.01)	-.01 (-.01)
Sensory impairment (hearing)		-.05 (-.02)	-.07 (-.02)
Sensory impairment (visual)		.15 (.04)	.11 (.03)
Physical disabilities		-.06 (-.03)	-.08 (-.03)
Medical conditions		.03 (.02)	.05 (.03)
Key stage 1			.00 (-.05)
Friendship Quality at 8			.01 (.05) *
Parents' feelings about child at 7			.04 (.08) **
Frequency father/step-father activities			.01 (.03)
Mother interested in child's school at 8.6			.01 (.01)
Child's relationship with parents at 9.6			.02 (.04)
There are rules in the home at 9.6			-.01 (-.02)
Emotional Wellbeing at 7.5			.00 (.00)
Behavioural Wellbeing at 7.5			.20 (.21) ***
Subjective School Wellbeing at 7.5			.01 (.02)
<i>Rsq</i>	.47	.50	.54

Note. \*\*\*p<.001, \*\*p<.01, \*p<.05  
B (standardised Beta)

**Table A10: Predictors of girls' social wellbeing in mid-childhood**

Girls	(1)	(2)	(3)
(Constant)	.74	.84	.53
Social competence at 7.5	.6 (.58) ***	.56 (.54) ***	.34 (.33) ***
Any Stressful Events at 7.5		-.02 (-.03)	-.01 (-.01)
Single Parent/Separated		.01 (.01)	.01 (.02)
Divorced/Separated at 10		-.02 (-.04)	-.02 (-.03)
Maternal Depression at 10 to 12		-.03 (-.07) *	-.02 (-.03)
Maternal Alcoholism at 10 to 12		-.05 (-.03)	-.05 (-.02)
Low Parental Education		-.02 (-.04)	-.02 (-.03)
Low Household Income		-.01 (-.02)	.00 (.00)
Social Housing		.01 (.02)	.02 (.03)
Any special educational needs		.03 (.05)	.06 (.11) **
Specific learning difficulties		-.01 (-.01)	.00 (.00)
Emotional & behavioural difficulties		-.20 (-.16) ***	-.19 (-.15) ***
Speech & language difficulties		.13 (.09) **	.13 (.09) **
Sensory impairment (hearing)		-.14 (-.07) **	-.14 (-.08) **
Sensory impairment (visual)		-.26 (-.08) **	-.23 (-.07) **
Physical disabilities		-.46 (-.20) ***	-.46 (-.21) ***
Medical conditions		-.15 (-.09) **	-.16 (-.10) ***
Key stage 1			.00 (.07) *
Friendship Quality at 8			.00 (.02)
Parents' feelings about child at 7			.05 (.13) ***
Frequency father/step-father activities			.00 (.00)
Mother interested in child's school at 8.6			-.01 (-.01)
Child's relationship with parents at 9.6			.02 (.05) *
There are rules in the home at 9.6			-.01 (-.03)
Emotional Wellbeing at 7.5			.08 (.05) *
Behavioural Wellbeing at 7.5			.17 (.18) ***
Subjective School Wellbeing at 7.5			.02 (.05) *
<i>Rsq</i>	.33	.45	.51

Note. \*\*\*p<.001, \*\*p<.01, \*p<.05  
B (standardised Beta)

**Table A11: Predictors of boys' social wellbeing in early adolescence**

Boys	(1)	(2)	(3)
(Constant)	.61	.60	.52
Social competence at 10.5	.66 (.69) ***	.66 (.70) ***	.52 (.55) ***
Any Stressful Events at 10.5		-.06 (-.08) **	-.05 (-.07) *
Single Parent/Separated		.00 (.00)	.00 (.01)
Divorced/Separated at 10		.02 (.03)	.02 (.02)
Maternal Depression at 10 to 12		-.01 (-.02)	-.01 (-.01)
Maternal Alcoholism at 10 to 12		-.01 (.00)	.00 (.00)
Low Parental Education		.00 (.00)	.01 (.01)
Low Household Income		-.01 (-.02)	.00 (-.01)
Social Housing		.01 (.01)	.01 (.01)
Any special educational needs		-.03 (-.05)	.00 (.00)
Specific learning difficulties		.01 (.01)	.01 (.01)
Emotional & behavioural difficulties		.08 (.10) **	.10 (.12) **
Speech & language difficulties		.05 (.04)	.03 (.02)
Sensory impairment (hearing)		.01 (.00)	.01 (.00)
Sensory impairment (visual)		.26 (.08) **	.26 (.08) **
Physical disabilities		-.02 (-.01)	-.04 (-.02)
Medical conditions		-.14 (-.09) **	-.12 (-.07) *
Key stage 1			.00 (.05)
Friendship Quality at 10			.00 (.01)
Parents' feelings about child at 8			.04 (.09) **
Frequency father/step-father activities			.00 (.00)
Mother interested in child's school at 10.6			-.03 (-.03)
Child's relationship with parents at 14			.01 (.02)
There are rules in the home at 12			-.01 (-.01)
Behavioural Wellbeing at 10.5			.13 (.15) **
Emotional wellbeing at 10.5			-.03(-.02)
Subjective School Wellbeing at 10.5			.03 (.05)
<i>Rsq</i>	.48	.50	.52

Note. \*\*\*p<.001, \*\*p<.01, \*p<.05  
B (standardised Beta)

**Table A12: Predictors of girls' social wellbeing in early adolescence**

Girls	(1)	(2)	(3)
(Constant)	.65	.60	.37
Social competence at 10.5	.63 (.59) ***	.66 (.62) ***	.48 (.45) ***
Any Stressful Events at 10.5		-.01 (-.02)	-.01 (-.01)
Single Parent/Separated		.00 (.00)	.01 (.03)
Divorced/Separated at 10		-.01 (-.01)	.00 (-.01)
Maternal Depression at 10 to 12		-.01 (-.02)	-.01 (-.01)
Maternal Alcoholism at 10 to 12		.00 (.00)	-.01 (.00)
Low Parental Education		.02 (.03)	.02 (.03)
Low Household Income		-.02 (-.04)	-.02 (-.04)
Social Housing		-.01 (-.01)	.00 (.00)
Any special educational needs		-.02 (-.04)	.00 (.00)
Specific learning difficulties		-.02 (-.02)	-.01 (-.01)
Emotional & behavioural difficulties		.01 (.01)	-.01 (-.01)
Speech & language difficulties		-.05 (-.04)	-.05 (-.03)
Sensory impairment (hearing)		.05 (.02)	.04 (.02)
Sensory impairment (visual)		.02 (.01)	-.01 (.00)
Physical disabilities		.17 (.07) *	.12 (.05)
Medical conditions		.17 (.10) **	.13 (.08) **
Key stage 1			.00 (.02)
Friendship Quality at 10			.00 (-.02)
Parents' feelings about child at 8			.05 (.13) ***
Frequency father/step-father activities			.00 (.01)
Mother interested in child's school at 10.6			-.02 (-.03)
Child's relationship with parents at 14			.06 (.14) ***
There are rules in the home at 12			.00 (.00)
Behavioural Wellbeing at 10.5			.11 (.11) **
Emotional Wellbeing at 10.5			.03 (.02)
Subjective School Wellbeing at 10.5			.02 (.05)
<i>Rsq</i>	.35	.37	.42

Note. \*\*\*p<.001, \*\*p<.01, \*p<.05  
B (standardised Beta)

**Table A13: Predictors of boys' school wellbeing in mid-childhood**

Boys	(1)	(2)	(3)
(Constant)	.51	.60	-.19
Subjective School Wellbeing at 7.5	.51 (.54) ***	.49 (.52) ***	.45 (.47) ***
Any Stressful Events at 7.5		-.02 (-.02)	-.01 (.00)
Single Parent/Separated		-.05 (-.05)	-.04 (-.03)
Divorced/Separated at 10		.03 (.02)	.03 (.03)
Maternal Depression at 10 to 12		.01 (.01)	.02 (.02)
Maternal Alcoholism at 10 to 12		-.06 (-.01)	-.09 (-.02)
Low Parental Education		-.01 (-.01)	-.01 (-.01)
Low Household Income		-.04 (-.04)	-.03 (-.03)
Social Housing		.03 (.02)	.04 (.02)
Any special educational needs		-.14 (-.14) ***	-.12 (-.12) **
Specific learning difficulties		.00 (.00)	.00 (.00)
Emotional & behavioural difficulties		-.03 (-.02)	-.02 (-.01)
Speech & language difficulties		-.05 (-.03)	-.07 (-.03)
Sensory impairment (hearing)		.24 (.05)	.24 (.05)
Sensory impairment (visual)		.10 (.02)	.12 (.02)
Physical disabilities		.16 (.04)	.16 (.04)
Medical conditions		.00 (.00)	.04 (.01)
Key stage 1			.00 (.01)
Friendship Quality at 8			.01 (.02)
Parents' feelings about child at 7			.05 (.06)
Frequency father/step-father activities			.05 (.06)
Mother interested in child's school at 8.6			.04 (.03)
Child's relationship with parents at 9.6			.08 (.09) **
There are rules in the home at 9.6			-.04 (-.04)
Emotional Wellbeing at 7.5			.10 (.03)
Behavioural Wellbeing at 7.5			.02 (.01)
Social competence at 7.5			.03 (.02)
<i>Rsq</i>	.29	.32	.34

Note. \*\*\*p<.001, \*\*p<.01, \*p<.05  
B (standardised Beta)

**Table A14: Predictors of girls' school wellbeing in mid-childhood**

Girls	(1)	(2)	(3)
(Constant)	.63	.66	.43
Subjective School Wellbeing at 7.5	.48 (.47) ***	.47 (.47) ***	.43 (.42) ***
Any Stressful Events at 7.5		-.02 (-.01)	-.01 (-.01)
Single Parent/Separated		-.03 (-.02)	-.01 (-.01)
Divorced/Separated at 10		.01 (.01)	.02 (.02)
Maternal Depression at 10 to 12		-.02 (-.02)	-.02 (-.01)
Maternal Alcoholism at 10 to 12		.07 (.01)	.05 (.01)
Low Parental Education		-.01 (-.01)	.00 (.00)
Low Household Income		-.03 (-.03)	-.01 (-.01)
Social Housing		-.06 (-.04)	-.06 (-.04)
Any special educational needs		-.01 (-.01)	.02 (.02)
Specific learning difficulties		-.08 (-.04)	-.08 (-.04)
Emotional & behavioural difficulties		.01 (.00)	.03 (.01)
Speech & language difficulties		.10 (.03)	.08 (.03)
Sensory impairment (hearing)		.07 (.02)	.11 (.03)
Sensory impairment (visual)		.24 (.03)	.22 (.03)
Physical disabilities		.00 (.00)	-.03 (-.01)
Medical conditions		-.04 (-.01)	-.07 (-.02)
Key stage 1			.00 (.03)
Friendship Quality at 8			.01 (.08) *
Parents' feelings about child at 7			.06 (.08) *
Frequency father/step-father activities			.04 (.05)
Mother interested in child's school at 8.6			.05 (.03)
Child's relationship with parents at 9.6			.08 (.08) **
There are rules in the home at 9.6			.00 (.00)
Emotional Wellbeing at 7.5			.11 (.03)
Behavioural Wellbeing at 7.5			-.04 (-.02)
Social competence at 7.5			.02 (.01)
<i>Rsq</i>	.22	.23	.26

Note. \*\*\*p<.001, \*\*p<.01, \*p<.05  
 B (standardised Beta)

**Table A15: Predictors of boys' school wellbeing in early adolescence**

Boys	(1)	(2)	(3)
(Constant)	.38	.50	-1.02
Subjective School Wellbeing at 9.5	.51 (.46) ***	.5 (.45) ***	.42 (.38) ***
Any Stressful Events at 10.5		.05 (.03)	.07 (.05)
Single Parent/Separated		-.06 (-.05)	-.02 (-.01)
Divorced/Separated at 10		-.02 (-.01)	.00 (.00)
Maternal Depression at 10 to 12		-.07 (-.06)	-.06 (-.05)
Maternal Alcoholism at 10 to 12		-.22 (-.05)	-.26 (-.05)
Low Parental Education		.00 (.00)	.03 (.02)
Low Household Income		-.03 (-.02)	.00 (.00)
Social Housing		.00 (.00)	.01 (.01)
Any special educational needs		-.07 (-.07)	-.04 (-.03)
Specific learning difficulties		.05 (.02)	.08 (.04)
Emotional & behavioural difficulties		.09 (.06)	.14 (.09) *
Speech & language difficulties		.00 (.00)	-.03 (-.01)
Sensory impairment (hearing)		-.13 (-.03)	-.09 (-.02)
Sensory impairment (visual)		-.04 (-.01)	-.06 (-.01)
Physical disabilities		.28 (.07)	.32 (.08) *
Medical conditions		.03 (.01)	.12 (.04)
Key stage 1			.01 (.06)
Friendship Quality at 10			.00 (-.01)
Parents' feelings about child at 8			.05 (.05)
Frequency father/step-father activities			.06 (.06)
Mother interested in child's school at 10.6			.09 (.05)
Child's relationship with parents at 14			.18 (.17) ***
There are rules in the home at 12			-.03 (-.03)
Emotional Wellbeing at 10.5			.18 (.05)
Behavioural Wellbeing at 10.5			.01 (.01)
Social competence at 10.5			.12 (.07)
<i>Rsq</i>	.21	.23	.28

Note. \*\*\*p<.001, \*\*p<.01, \*p<.05  
B (standardised Beta)

**Table A16: Predictors of girls' school wellbeing in early adolescence**

Girls	(1)		(2)		(3)	
(Constant)	.58		.58		-1.03	
Subjective School Wellbeing at 9.5	.43 (.39)	***	.43 (.39)	***	.35 (.31)	***
Any Stressful Events at 10.5			.02 (.01)		.03 (.02)	
Single Parent/Separated			-.01 (-.01)		.03 (.02)	
Divorced/Separated at 10			.04 (.04)		.06 (.05)	
Maternal Depression at 10 to 12			-.02 (-.02)		.01 (.01)	
Maternal Alcoholism at 10 to 12			.25 (.05)		.24 (.05)	
Low Parental Education			-.01 (-.01)		.02 (.01)	
Low Household Income			-.05 (-.05)		-.04 (-.03)	
Social Housing			.04 (.03)		.04 (.02)	
Any special educational needs			-.01 (-.01)		.00 (.00)	
Specific learning difficulties			.25 (.10)	**	.27 (.11)	**
Emotional & behavioural difficulties			-.15 (-.05)		-.08 (-.03)	
Speech & language difficulties			-.19 (-.06)		-.21 (-.06)	
Sensory impairment (hearing)			.35 (.08)	*	.44 (.10)	**
Sensory impairment (visual)			.19 (.03)		.18 (.02)	
Physical disabilities			-.18 (-.03)		-.04 (-.01)	
Medical conditions			.15 (.04)		.14 (.04)	
Key stage 1					.00 (.00)	
Friendship Quality at 10					.00 (-.01)	
Parents' feelings about child at 8					.05 (.06)	
Frequency father/step-father activities					.04 (.04)	
Mother interested in child's school at 10.6					.10 (.06)	
Child's relationship with parents at 14					.19 (.20)	***
There are rules in the home at 12					.00 (.00)	
Emotional Wellbeing at 10.5					.28 (.08)	*
Behavioural Wellbeing at 10.5					-.01 (-.01)	
Social competence at 10.5					.18 (.07)	
<i>Rsq</i>	.15		.17		.24	

Note. \*\*\*p<.001, \*\*p<.01, \*p<.05  
B (standardised Beta)

## Interactions between risk and positive factors

**Table A17: Interactions between risk and prior wellbeing**

Dependent Variable: Social wellbeing at 10.5

		<i>B (Beta)</i>	<i>Sig</i>
Female	(Constant)	.93	
	Risk*School wellbeing at 7.5	.04 (.29)	**
	Social wellbeing at 7.5	.49 (.46)	***
	School wellbeing at 7.5	.02 (.04)	
	Risk	-.08 (-.36)	***

Note. \*\*\*p<.001, \*\*p<.01, \*p<.05

Dependent Variable: Social wellbeing at 13.8

		<i>B (Beta)</i>	<i>Sig</i>
Male	(Constant)	.76 (.00)	
	Risk*School wellbeing at 9.5	.08 (.36)	***
	Social wellbeing at 10.5	.60 (.66)	***
	School wellbeing at 9.5	-.03 (-.05)	
	Risk	-.10 (-.39)	***

Note. \*\*\*p<.001, \*\*p<.01, \*p<.05

Dependent Variable: Behavioural wellbeing at 13.8

		<i>B (Beta)</i>	<i>Sig</i>
Male	(Constant)	.66 (.00)	***
	Risk*School wellbeing at 9.5	.03 (.25)	*
	Behavioural wellbeing at 10.5	.64 (.68)	***
	School wellbeing at 9.5	.01 (.02)	
	Risk	-.08 (-.29)	*
Female	(Constant)	.68 (.00)	***
	Risk*School wellbeing at 9.5	.04 (.41)	**
	Behavioural wellbeing at 10.5	.67 (.66)	***
	School wellbeing at 9.5	-.02 (-.04)	
	Risk	-.11 (-.48)	***

Note. \*\*\*p<.001, \*\*p<.01, \*p<.05

Dependent Variable: Behavioural wellbeing at 13.8

		<i>B (Beta)</i>	<i>Sig</i>
Female	(Constant)	.79 (.00)	***
	Risk*Social wellbeing at 10.5	.09 (.69)	**
	Behavioural wellbeing at 10.5	.62 (.60)	***
	Social wellbeing at 10.5	-.02 (-.02)	
	Risk	-.18 (-.80)	***

Note. \*\*\*p<.001, \*\*p<.01, \*p<.05

Dependent Variable: School wellbeing at 13.8

		<i>B (Beta)</i>	<i>Sig</i>
Female	(Constant)	.76 (.00)	
	Risk*Behavioural wellbeing at 10.5	.08 (.36)	***
	School wellbeing at 9.5	.60 (.66)	***
	Behavioural wellbeing at 10.5	-.03 (-.05)	
	Risk	-.10 (-.39)	***

Note. \*\*\*p<.001, \*\*p<.01, \*p<.05

Dependent Variable: School wellbeing at 9.5

		<i>B (Beta)</i>	<i>Sig</i>
Male	(Constant)	.09 (.00)	
	Risk*Behavioural wellbeing at 7.5	-.13 (-.44)	**
	School wellbeing at 7.5	.47 (.51)	***
	Behavioural wellbeing at 7.5	.30 (.19)	***
	Risk	.18 (.37)	*

Note. \*\*\*p<.001, \*\*p<.01, \*p<.05

### Table A18: Interactions between risk and parents' feelings

Dependent Variable: Behavioural wellbeing at 10.5

		<i>B (Beta)</i>	<i>Sig</i>
Female	(Constant)	.83	
	Risk*Parents' feelings about child at 7	-.03 (-.23)	**
	Risk	.02 (.09)	
	Parents' feelings about child at 7	-.02 (-.05)	
	Behavioural wellbeing at 7.5	.58 (.60)	***

Note. \*\*\*p<.001, \*\*p<.01, \*p<.05

Dependent Variable: Social wellbeing at 10.5

		<i>B (Beta)</i>	<i>Sig</i>
Male	(Constant)	.57	
	Risk *Parents' feelings about child at 7	-.03 (-.21)	*
	Risk	.02 (.08)	
	Parents' feelings about child at 7	-.03 (-.05)	
	Social wellbeing at 7.5	.72 (.62)	***
Female	(Constant)	1.03	
	Risk*Parents' feelings about child at 7	-.06 (-.48)	***
	Risk	.07 (.33)	***
	Parents' feelings about child at 7	-.03 (-.07)	
	Social wellbeing at 7.5	.46 (.3)	***

Note. \*\*\*p<.001, \*\*p<.01, \*p<.05

Dependent Variable: Behavioural wellbeing at 13.8

		<i>B (Beta)</i>	<i>Sig</i>
Female	(Constant)	.68	
	Risk *Parents' feelings about child at 8	-.03 (-.23)	**
	Risk	.02 (.10)	
	Parents' feelings about child at 8	.01 (.02)	
	Behavioural wellbeing at 10.5	.65 (.63)	***

Note. \*\*\*p<.001, \*\*p<.01, \*p<.05

Dependent Variable: Social wellbeing at 13.8

		<i>B (Beta)</i>	<i>Sig</i>
Female	(Constant)	.96	
	Risk*Parents' feelings about child at 8	-.04 (-.29)	**
	Risk	.03 (.15)	
	Parents' feelings about child at 8	-.05 (-.14)	**
	Social wellbeing at 10.5	.51 (.50)	***

Note. \*\*\*p<.001, \*\*p<.01, \*p<.05

Dependent Variable: School Wellbeing at 13.8

		<i>B (Beta)</i>	<i>Sig</i>
Female	(Constant)	1.27	
	Risk*Parents' feelings about child at 8	-.08 (-.25)	*
	Risk	.13 (.21)	*
	Parents' feelings about child at 8	-.09 (-.10)	
	Positive feelings about school score at 9.5	.43 (.37)	***

Note. \*\*\*p<.001, \*\*p<.01, \*p<.05

**Table A19: Interactions between risk and friendship support**

Dependent Variable: Social Wellbeing at 13.8

		<i>B (Beta)</i>	<i>Sig</i>
Male	(Constant)	.72	
	Risk*Friendship support at 10	.01 (.41)	*
	Risk	-.12 (-.45)	*
	Friendship support at 10	-.00 (-.01)	
	Social wellbeing at 10.5	.61 (.63)	***

Note. \*\*\*p<.001, \*\*p<.01, \*p<.05

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