

# Parental Educational Expectations of Children with Disabilities

Joanne Banks, Bertrand Maître,  
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## Table of Contents

EXECUTIVE SUMMARY .....	vii
Introduction .....	vii
Literature.....	viii
Methodology.....	viii
Findings .....	ix
Policy Implications.....	xii
CHAPTER 1 INTRODUCTION.....	1
1.1 Introduction.....	1
1.2 An Overview Of Literature.....	3
1.2.1 Parents’ Educational Expectations and Student Outcomes .....	3
1.2.2 Types of Factors Influencing Expectations .....	4
1.2.3 Parental Involvement in School.....	5
1.3 Parental Expectations of Children with Disabilities.....	6
1.4 Outline of Report.....	7
CHAPTER 2 DATA AND METHODOLOGY.....	9
2.1 Introduction.....	9
2.2 Variables and Measurement of Outcomes .....	9
2.2.1 Disability Identification.....	9
2.2.2 Parental Educational Expectations .....	13
2.2.3 The Academic Performance/Ability of 9- and 13-Year-Olds .....	14
2.2.4 School Engagement and Self-Concept at Age 9 and 13.....	15
2.2.5 The Child-Parent Relationship at 9 Years Old.....	16
2.2.6 Other Child and Family Characteristics .....	17
2.3 Analytical Approach Methodology.....	17
CHAPTER 3 PARENTAL EXPECTATIONS.....	19
3.1 Introduction.....	19
3.2 Academic Outcomes by Disability at Age 9 .....	19
3.3 Parental Expectations and Academic Outcomes At Age 9 .....	21
3.4 Parental Expectations and Disability at Age 9.....	23

3.5 Statistical Model of Parental Expectations.....	26
3.6 Some Additional Analyses on the Socio-Economic Gap.....	28
3.7 Summary.....	29
<b>CHAPTER 4 SOCIAL OUTCOMES .....</b>	<b>31</b>
4.1 Introduction.....	31
4.2 Self-Concept at Age 13 .....	31
4.2.1 Dimensions of Self-Concept .....	31
4.2.2 Self-Concept by Presence of Disability .....	32
4.3 Understanding Differences in Self-Concept .....	35
4.4 School Engagement at Age 13.....	37
4.5 Understanding Differences in School Engagement.....	39
4.6 Summary.....	41
<b>CHAPTER 5 ACADEMIC OUTCOMES .....</b>	<b>45</b>
5.1 Introduction.....	45
5.2 Academic Performance at Age 9 by Presence of a Disability .....	45
5.3 Academic Skills Age 13 by Presence of a Disability .....	46
5.4 Academic Skills at Age 13 by Presence of a Disability and Socio-Economic Characteristics .....	48
5.5 Academic Skills at Age 13 by Presence of a Disability and School Context.....	50
5.6 Changes in Academic Skills Between 9 and 13 Years .....	52
5.7 Summary.....	56
<b>CHAPTER 6 CONCLUSIONS AND IMPLICATIONS .....</b>	<b>59</b>
6.1 Introduction.....	59
6.2 Understanding Parental Expectations.....	59
6.3 Understanding Socio-Emotional Outcomes .....	60
6.4 Understanding Academic Outcomes.....	62
6.5 Implications for Policy .....	64
<b>REFERENCES .....</b>	<b>66</b>

## List of Tables

Table 2.1	Disability Categories.....	11
Table 3.1	Impact of Disability, Mother’s Own Education and Child’s Academic Performance on Mother Having Low Educational Expectations .....	28
Table A3.1	Models of Mothers’ Low Educational Expectations (Logistic Regression Model, Odds Ratios) .....	30
Table 4.1	How Does the Self-Concept of Children With a Disability Differ When We Take Account of Other Characteristics? (Based on Linear Regression Model) .....	36
Table 4.2	How Much More Likely are Children with a Disability to Dislike School? (Odds Ratios).....	40
Table A4.1	Regression Model for Self-Concept (scale = 0 to 10; Linear Regression Coefficients) .....	42
Table A4.2	Models for Disliking School (Logistic Regression Model, Odds Ratios).....	43
Table A4.3	Regression Model for Self-Concept (Negative or Positive versus Average, Odds Ratios).....	44
Table 5.1	How Much More Likely Are Children with a Disability to Perform in the Lowest Verbal Reasoning Quintile? (Odds Ratios) .....	53
Table 5.2	How Much More Likely Are Children with a Disability to Perform in the Lowest Numeric Ability Quintile? (Odds Ratios) .....	53
Table A5.1	Logistic Regression: Probability of Being in Lowest Verbal Reasoning Quintile Age 13 (Odds Ratios) .....	57
Table A5.2	Logistic Regression: Probability of Being in Lowest Numeric Ability Quintile Age 13 (Odds Ratios) .....	58

## List of Figures

Figure 2.1	Type of Disability at Age 9 .....	12
Figure 2.2	Type of Disability at Age 9 by Gender .....	13
Figure 2.3	Type of Disability at Age 9 by Mother’s Educational Level .....	13
Figure 3.1	Drumcondra Reading Scores at Age 9 .....	20
Figure 3.2	Drumcondra Mathematics Scores at Age 9 .....	21
Figure 3.3	Parental Educational Expectations by Drumcondra Reading Scores at Age 9 .....	22
Figure 3.4	Parental Educational Expectations (%) by Drumcondra Mathematics Scores at Age 9.....	23
Figure 3.5	Parental Educational Expectations at Age 9 by Gender and Disability Type .....	24
Figure 3.6	Parental Educational Expectations by Parents’ Own Level of Education .....	25
Figure 3.7	Parental Degree Expectations by Parents’ Level of Education and Disability Status of Child.....	26
Figure 4.1	Dimensions of Self-Concept of 13-Year-Olds and Overall Self-Concept at Age 9 .....	32
Figure 4.2	Self-Concept of 13-Year-Olds by Presence of Disability.....	33
Figure 4.3	Low Self-Concept of 13-Year-Olds by Presence of Disability .....	34
Figure 4.4	School Engagement at Age 13 by Type of Disability at Age 9 .....	38
Figure 4.5	Low School Engagement at Age 13 by Type of Disability at Age 9.....	39
Figure 5.1	Performance on Aptitude Tests at Age 13 (Percentage in Lowest and Highest Quintiles in Verbal Reasoning and Numeric Ability), by Presence of a Disability .....	47
Figure 5.2	Performance of Males on Aptitude Tests at Age 13 (Percentage in Lowest and Highest Quintiles in Verbal Reasoning and Numeric Ability), by Presence of a Disability .....	47
Figure 5.3	Performance of Females on Aptitude Tests at Age 13 (Percentage in Lowest and Highest Quintiles in Verbal Reasoning and Numeric Ability), by Presence of a Disability .....	48
Figure 5.4	Performance on Verbal Reasoning Aptitude Tests at Age 13 (Percentage in Lowest and Highest Quintiles), by Presence of a Disability and Economic Vulnerability of the Household .....	49
Figure 5.5	Performance on Numeric Ability Aptitude Tests at Age 13 (Percentage in Lowest and Highest Quintiles), by Presence of a Disability and Economic Vulnerability of the Household .....	49
Figure 5.6	Of Those in the Lowest Performing Quintiles Age 13, Percentage Expected by Parents to Achieve a Degree by Presence of a Disability .....	50
Figure 5.7	Percentage in the Lowest Performing Verbal Reasoning Quintile by Presence of a Disability and School DEIS Status .....	51
Figure 5.8	Percentage in the Lowest Performing Numeric Ability Quintile by Presence of a Disability and School DEIS Status .....	52



## Glossary

DEIS	Delivering Equality of Opportunity in Schools
GUI	<i>Growing Up in Ireland</i>
PCG	Primary care-giver, usually the mother. The terms 'mother' and 'parent' are used interchangeably
SDQ	'Strengths and Difficulties' scale
SEN	Special Educational Needs
SES	Socio-Economic Status
STRS	Student Teacher Relationship Scale

# Executive Summary

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## INTRODUCTION

In 2015, the Government published a ten-year comprehensive employment strategy for people with disabilities. This emphasises the importance of minimising the entry of young people into a life outside the workforce, and one of the actions under the strategy is to raise expectations that education and employment are real options after school.

In that context, the National Disability Authority wanted to explore the role of parental expectations for children with disabilities and the factors shaping such expectations, given that data on parental education expectations are available from the *Growing Up in Ireland* Survey. Parental expectations at the crucial stage of transition to second-level school may have long-lasting implications.

It is well recognised in educational literature that parental expectations play a significant role in shaping young people's academic outcomes (Davis-Kean, 2005; Benner and Mistry, 2007; Goodman and Gregg, 2010). In turn, academic outcomes affect future employment and earnings. To date, much of the research on parental expectations has focussed on parents of children from marginalised groups such as ethnic minorities or disadvantaged backgrounds (Benner and Mistry, 2007; Stevenson et al., 1990). Less is known about whether parents of children with disabilities hold lower educational expectations and whether these expectations impact on student outcomes. What we do know is that the social and academic outcomes of this group are lower than their peers, particularly in relation to their academic test scores, the qualifications achieved in school and their access to employment (Humphrey et al., 2012; Bouck, 2012; Watson et al., 2015).

This research provides a longitudinal examination of parental expectations for children and young people with disabilities relative to those without a disability. We adopt a broad approach to the understanding of disability, including specific learning disabilities such as dyslexia, as well as general learning/intellectual, emotional or behavioural and physical disability. Using data on 9- and 13-year-old children from the *Growing Up in Ireland* (GUI) study – the National Longitudinal Study of Children in Ireland (Williams et al., 2009) – this study assesses parental expectations by addressing the following research questions:

1. What factors influence parental educational expectations for children with disabilities?
2. To what extent do parental expectations of children in primary school impact on young people's socio-emotional outcomes at age 13?
3. To what extent do parental expectations at primary level influence the development of academic skills by age 13?

## LITERATURE

Research in this area has shown that the expectations that parents hold for their children influence children's actual academic outcomes as much if not more than previous academic performance (Jacobs, 1991). Much of the focus has been on research findings which show how parents of children from disadvantaged backgrounds and those from minority racial or ethnic groups tend to hold lower educational expectations regardless of the child's actual ability in school (Alexander et al., 1994; Trusty, 2000; Goldenberg et al., 2001). Other research has sought to examine the factors influencing parental expectations such as the structure and composition of the household, the home climate, and the level of education of the parents themselves. Parental education has also been linked to differences in parenting behaviours, parents' capacity to interact with their child's school or schoolwork and their accuracy in assessing their child's ability (Seigner, 1983; Spera, 2006; Yamamoto and Holloway, 2010).

Some of the literature specifically focuses on the impact of parental expectations on outcomes for children with disabilities (Rutchick et al., 2009; Cosgrove et al., 2014). Many of the family and social background factors influencing parental expectations also apply for this group. Some studies have, however, focussed on the additional impact of the stigma associated with having a disability. The type of disability also plays a role, with parents of children with specific learning disabilities more likely to hold higher expectations compared with parents of children with more severe intellectual disabilities, autism or multiple disabilities (Newman, 2005).

## METHODOLOGY

The GUI questionnaires at age 9 and again, for the same children, at age 13 provide detailed information on various aspects of parental expectations of their children as they make the transition from primary school to mainstream second-level or special school settings. These data allow us to measure the extent to which social and academic outcomes over the period from 9 to 13 years of age are shaped by the assessments, expectations, attitudes and behaviours of parents. Most importantly, the GUI data provide an opportunity to examine

whether parental educational expectations differ in relation to children with different types of disability.

We distinguished between four types of disability:

- General learning/intellectual disability
- Specific learning disability (such as dyslexia, dyspraxia)
- Socio-emotional or behavioural disability, and
- Physical disability (including mobility, visual and hearing disability).

Where the child had more than one type of disability, we classified them according to the disability which was likely to be most consequential, on average, for their school work, according to the order of the list above. For instance, if a child had both a general learning/intellectual and physical disability, they were classified as having a general learning/intellectual disability. Children with autistic spectrum disorders who did not have an intellectual or learning disability were classified as having an emotional or behavioural disability.

The analysis firstly examines the extent to which parental educational expectations are shaped by individual child and family factors in addition to children's academic ability at age 9.

The second major focus of this study examines the extent to which parental expectations of children at age 9 impact on social outcomes at age 13. Here we focus on two social outcome measures at age 13, namely student engagement with school and the young person's self-concept.

The final set of analysis examines the role of parental expectations in influencing children's academic skills at age 13. This provides a valuable insight into whether parents underestimate the academic ability of children with disabilities at age 9, and the extent to which this impacts on later academic skills at age 13.

## **FINDINGS**

### **What Factors Shape Parental Expectations for Children With Disabilities?**

Before focussing on the extent to which parental expectations impact on students' social and academic development, we firstly examine the factors influencing parents who have low expectations for children with disabilities, controlling for other factors. As we might expect in line with research findings internationally, multivariate analysis shows that parental educational

expectations are influenced by the child's actual academic performance. Using test scores from the Drumcondra Reading and Mathematics tests, we find that parents of children in the lowest 20 per cent of scores (quintiles) for reading and mathematics tests are more likely to have lower expectations for their child compared to parents of children in the top 20 per cent (quintiles).

The analyses also show that having a disability, and in particular having a general learning/intellectual disability, impacts on the long-term educational expectations parents hold for their child. Parents of children with general learning/intellectual disabilities are far less likely to expect their child to go beyond the Leaving Certificate compared to parents of children with no disabilities, even after taking into account family characteristics and the child's actual ability on reading and mathematics tests. Parental expectations are also lower for children with specific learning difficulties and emotional or behavioural difficulties compared to parents of children without disabilities.

The child's sex also appears to play a role with parents of girls more likely than parents of boys to expect their child to attain higher education qualifications, all else being equal.

The findings also show that the primary caregiver's educational level (in the vast majority of cases this is the mother, so henceforth 'mother' is used) is a major driver of the educational expectations they hold for their child. Mothers with Leaving Certificate (or lower) qualifications are 12 times more likely than mothers with a degree to hold lower expectations for their children. We also found a relationship between the nature of the parent-child relationship and educational expectations. Notably, parents who reported high levels of conflict with their child, or those who reported not being 'close' to their child, had lower educational expectations for their child.

### To What Extent do Parental Educational Expectations Influence Social Outcomes for Children With Disabilities?

One of the main aims of this study is to examine the impact of parental expectations and disability on student outcomes. We firstly focus on social outcomes for children at age 13 using measures of self-concept and school engagement. The Piers-Harris Children's Self-Concept scale is used to measure self-perception across a number of different domains: physical appearance and attributes, freedom from anxiety, intellectual and school status, behavioural adjustment, happiness and satisfaction, and popularity. School engagement is a measure of the extent to which the adolescent likes school at age 13.

The findings show that young people with general learning/intellectual disabilities and those with emotional/behavioural disabilities were most likely to have a poor self-concept even after taking into account parental expectations. Much of their self-concept at age 13 appears to have been influenced by low self-concept at the age of 9, even after taking account of individual and family background characteristics. Young people with general learning/intellectual disabilities were also more likely to dislike school compared to those with no disability.

The findings show that parental academic expectations are important for both young people's self-concept and the extent to which they dislike school. Where parental academic expectations were lower, the student had a lower probability of liking school and a poorer self-concept, even when other characteristics are accounted for in the statistical model. This influence applies to those with and without disabilities. Further, for those with general learning/intellectual and emotional/behavioural disabilities, lower parental expectations partly explain their poorer social outcomes.

### To What Extent Do Parental Educational Expectations Influence Academic Development among Children with Disabilities?

Examining young people's academic development in the early years of second-level education was a key focus of the study. We focused on the probability of a young person performing in the bottom fifth of the distribution (at the lowest quintile level) in verbal reasoning or numeric ability aptitude tests. We found that young people with general learning/intellectual and emotional/behavioural disabilities are significantly more likely to be in this group relative to those without disabilities. Interestingly, those with physical/visual/speech and specific learning disabilities are not statistically more likely to be low performers. These results hold when we take account of academic performance at 9 years of age. Hence, in terms of development over the four years (9 to 13 years of age), students with general learning/intellectual and emotional/behavioural disabilities are faring less well than other groups of young people.

Among the family characteristics examined, and across all young people, mother's educational level is by far the strongest predictor of low performance at age 13. Adolescents whose mothers achieved lower secondary education or less are between 2.2 and 2.4 times as likely to be low performers in numeric ability at age 13, even taking account of their performance at age 9. In other words, parental education is a strong predictor of academic development over the primary to second-level school transition period. Interestingly, family

relationships (such as the parent-child relationship or the relationship between partners in a couple) are generally not significant predictors of academic development over this period. However, for both verbal reasoning and numeric ability, parental expectations are significant in shaping both academic skills at age 13 and changes in academic skills between 9 and 13 years, across all young people. Where the primary caregiver expects their son/daughter to achieve not more than Leaving Certificate education, young people are significantly more likely to be low performers in both verbal reasoning and numeric ability at age 13. These findings persist once we take account of the child's academic performance at age 9, gender, parental education and family socio-economic characteristics. Further, young people with general learning/intellectual and emotional/behavioural disabilities are faring less well than other groups of young people partly as a result of lower parental expectations.

Finally, in line with recent research (McCoy et al., 2014), the models examine the extent to which academic development is shaped by school context – in particular the socio-economic composition of the school, as measured by school status under the Delivering Equality of Opportunity in Schools (DEIS) scheme. The results show a significant contextual effect – students who attended the most disadvantaged school contexts (Urban Band 1 and 2 schools) are twice as likely to be low performers in verbal reasoning, all else being equal. Taking account of school context, as well as performance at 9 years and the host of individual and family characteristics, young people with general learning/intellectual and emotional/behavioural disabilities remain more likely to be low academic performers at 13 years of age, while those with specific learning disabilities and physical/visual/speech disabilities do not differ from those without disabilities in their academic development.

### **POLICY IMPLICATIONS**

The findings point to a number of implications for policy. The role of parental expectations in inhibiting young people from maximising their potential is likely to stem from what parents see in terms of opportunities for young people in further and higher education. This highlights the need to continue to promote equality of educational opportunity at all educational levels. It also highlights the centrality of information and guidance for all young people and their parents in relation to the range of potential post-school education and training options available. The findings also illustrate the importance of regular feedback on the child's development from the school to parents, so that difficulties, progress and expectations can be fully understood and supported.

The results also suggest that young people who have difficulties with school work need other opportunities to excel and to feel good about themselves. This is particularly the case for children with general learning/intellectual and emotional/behavioural disabilities who fare less well in terms of both social and academic outcomes. The research finding that expectations for young people with a disability are lower than we would expect based on their academic performance points to the potential dangers inherent in the disability 'label' in itself. This suggests a need to promote positive role models of people with all the different kinds of disability leading full and satisfying lives. The impact of socio-economic disadvantage on young peoples' social and educational development also emerges strongly in the findings, both in terms of the impact of disadvantage at the household level and also in terms of the social context of the school attended. This highlights the importance of a range of social and educational supports targeted at those from the most socio-economically disadvantaged families.

Parental expectations clearly play an important role for children's educational and social development. The finding that parents have lower expectations for children and young people with general learning/intellectual, specific learning and emotional/behavioural disabilities is a significant one; their expectations for their children's future education lag behind their children's actual performance. These lowered expectations partly explain poorer social and educational development among these young people. It seems that the disability 'label' has a range of negative implications. However, there is no expectation gap in the case of children with physical or sensory difficulties. The high levels of disadvantage and greater complexity of need in urban DEIS school contexts highlights the need for further debate on the appropriate types and levels of supports that the students attending these schools, and their families, may need – particularly those students with disabilities.



# Chapter 1

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## Introduction

### 1.1 INTRODUCTION

In 2015, the Government published a ten-year comprehensive employment strategy for people with disabilities. This emphasises the importance of minimising the entry of young people into a life outside the workforce, and one of the actions under the strategy is to raise expectations that education and employment are real options after school.

In that context, the National Disability Authority wanted to explore the role of parental expectations for children with disabilities and the factors shaping such expectations, given that data on parental education expectations are available from the GUI survey. Parental expectations at the crucial stage of transition to second-level school may have long-lasting implications.

Parental educational expectation refers to the anticipation that parents have for their children to successfully progress in school work (Yamamoto and Holloway, 2010). Their role in shaping children's self-perception and achievement is well recognised in the literature with studies indicating that parental expectations play a key role in children's academic success (Davis-Kean 2005; Benner and Mistry 2007; Goodman and Gregg 2010). There is some discussion, however, over what factors influence expectations, such as parents' own experiences in school, feedback provided by their child's school, informal networks of parents and even the media (Russell 2003). Although research shows the importance of students' academic ability in determining educational outcomes, studies increasingly show how the social and economic characteristics of the home can influence children's educational outcomes (Benner and Mistry 2007). Overall the findings show that students whose parents have high expectations achieve higher results in school, attain higher scores on standardised tests, and remain longer in education than those whose parents hold relatively low expectations (Davis-Kean 2005).

To date research on parental educational expectations of children with a disability has been limited although it is recognised that they play a crucial role in influencing the educational outcomes and success of their children (Roth and Salikutluk, 2012). Much of the research to date has focused on the impact of low parental expectations for students from marginalised groups, ethnic minorities or

from disadvantaged backgrounds (Benner and Mistry, 2007; Stevenson et al., 1990). Partly reflecting the lack of appropriate data, there has been relatively little attention paid to the way in which parental expectations of children's 'ability', particularly children with different types of disabilities, influence their academic and social outcomes and also their longer-term outcomes when they leave school (with the exception of Shandra and Hogan, 2009). Research has sought to examine the extent to which young people with disabilities and special educational needs continue their education after school or enter the labour market (Blackorby and Wagner, 1996). Findings show, however, that students with disabilities are at greater risk of poorer academic outcomes than their peers (Humphrey et al., 2012; Bouck, 2012), have fewer qualifications when they leave school, and are at greater risk of unemployment (Watson et al., 2015).

This research study examines whether the influence of parental expectations may also hold for students identified with different types of disabilities; that is parents may hold lower expectations for such students than for students without a disability and these expectations may in turn affect student achievement. Using longitudinal data on 9- and 13-year-old children from the *Growing Up in Ireland* study – the National Longitudinal Study of Children in Ireland (Williams et al., 2009), we examine the factors influencing parental expectations for children with and without disability in Ireland. As outlined in the review of literature below, existing research tends to be either cross-sectional focussing either on long term parental expectations around their child's highest level of education (Doren et al., 2012; Shandra and Hogan, 2009) or more short-term expectations around what results they expect their child will get that year (Yamamoto and Holloway 2010). This research assesses both long and short term parental expectations with the following research questions:

1. What are the factors influencing the academic expectations that parents hold for their children?
2. To what extent do parental expectations of children in primary school impact on young people's socio-emotional outcomes at age 13?
3. To what extent do parental expectations at primary level influence academic development at age 13?

In this chapter, we provide an overview of literature in the area of expectations; firstly discussing the conceptual framework for research in this area. We then focus on previous studies which have sought to measure the impact of parental expectations on children's outcomes before focussing specifically on research on children with disabilities.

## 1.2 AN OVERVIEW OF LITERATURE

Theoretical understandings of parental expectations have been debated for over 30 years from both sociological and psychological standpoints. The idea of expectations acting as a self-fulfilling prophecy was first introduced by Rosenthal (1974) who argued that expectations teachers held for children's academic achievement boosts the child's motivation and expectations which then leads to higher achievement in school (Rosenthal, 1974). Dumais (2006) developed these arguments in relation to parental expectations by examining how students' own understanding of their parents' expectations was the internalisation of a social structure that 'forms one's world view and serves as a guide throughout an individual's life' (Dumais, 2006, p.85). The psychology literature has used a similar conceptual framework in the development of 'expectancy-value' theories which explore the process by which parental expectations may influence children and young people's educational outcomes (Bandura 2006; Eccles and Wigfield, 2002, cited in Doren et al., 2012). Known as the 'expectancy socialiser model' (Eccles et al., 1983), this research argues that parents convey their expectations for their child by giving messages concerning their beliefs about the child's abilities. Doren et al. (2012) described how these messages can be transmitted by parents in both covert and overt behaviours. These patterns of behaviour are then internalised by their children and shape their own 'beliefs, values, attitudes and behaviours that then ultimately impact on the outcomes achieved' (Doren et al., 2012, p. 8).

### 1.2.1 Parents' Educational Expectations and Student Outcomes

There is a large literature concerned with parental influence on educational expectations and attainment (Kirk et al., 2011). Research by Jacobs (1991) in relation to mathematics performance highlights how parents' beliefs about their children's abilities have an even greater influence on achievement than previous performance (Jacobs 1991). Parental expectations have been reported to be the strongest family-level predictor of student achievement outcomes, exceeding the variance accounted for by other parental beliefs and behaviours (Jeynes, 2007).

Parental expectations literature is often divided into research on longer-term post-school expectations (Doren et al., 2012; Shandra and Hogan 2009) and short term expectations around student results or test scores for children (Yamamoto and Holloway 2010) although there is often a strong relationship between the two. In line with research by Yamamoto and Holloway, we focus solely on parents' expectations for what they anticipate their children will achieve in education, up to the achievement of higher education. This is distinct from aspirations which parents have for their children, which refers to desires, wishes or goals in the longer term or over the life course (Yamamoto and Holloway 2010).

### 1.2.2 Types of Factors Influencing Expectations

Much of the research around parental educational expectations has come from the United States where the focus has been on differences in parental expectations by demographic variables such as race or ethnicity (Goldenberg et al., 2001). Immigrant parents, for example, tend to have higher expectations for their children than Caucasian parents (Hossler and Stage, 1992; Stevenson et al., 1990). In a meta-analysis of parental expectations literature, Yamamoto and Holloway (2010) identified research showing Asian American parents holding higher educational expectations than parents of other social groups (Yamamoto and Holloway 2010). In addition to the impact of the 'socio-cultural group' to which parents belong (Yamamoto and Holloway 2010), socio-economic status (SES) has been linked to educational expectations (Trusty, 2000). One U.S. study has shown the impact of household income on parental expectations: low income parents are eight times more likely than the high income group to expect that their children will progress no further than high school (ChildTrends, 2012). Roth and Salikutluk (2012) examined the factors influencing mothers' educational ambitions for their children in Germany. They found that the composition of mothers' networks had a significant influence on their educational expectations. This research found a relationship between mothers' social networks (which included knowing people with high prestige occupations) and high expectations, controlling for social background and cultural capital in the home (Roth and Salikutluk, 2012).

Parental expectations have also been linked to parents' own level of education and behaviours in the home. A key study by Davis-Kean (2005) focussed on the extent to which their own level of education impacts on their beliefs and behaviours in the home and the expectations they hold for their children (p.294). This study also relates levels of parental education to the way in which they interact with their children and promote academic achievement. She found that

*home activities that encourage academic competence such as homework monitoring, assistance with school work, or going to science museums or libraries, will have stronger relations with achievement (Davis-Kean, 2005, p 301).*

Overall this research found that the relation of parents' educational attainment to children's academic achievement is indirectly related through parents' educational expectations and specific parenting behaviours (Davis-Kean, 2005, p.303).

Parents' social class, income or level of education has also been linked to the role of differential understanding of academic progress in influencing expectations. One longitudinal study, for example, found that the expectations of higher socio-economic status (SES) parents were closer to actual results than those of lower socio-economic status parents. They found that recall of previous year's results in reading and mathematics was more accurate among higher SES parents than lower SES parents (Alexander et al., 1994). Finally, some research points to gender bias in parent assessments of, and expectations regarding, children's performance, particularly in domains like Mathematics. McCoy et al. (forthcoming) found that parents and teachers tend to underestimate girls' performance in mathematics, particularly for high performing girls.

### 1.2.3 Parental Involvement in School

Several studies, however, suggest that demographic characteristics and the child's previous performance at school do not solely influence parental expectations (Englund et al., 2004; Jacobs and Harvey, 2005). Psychology literature tends to focus more on the combination of individual and school-level factors in influencing parental expectations. Seigner (1983) stresses how parental expectations are formed through a combination of feedback from schools about children's performance and parents' own assessments of their child's academic ability. School feedback about academic performance can, however, be influenced by the nature of the relationships that parents have with staff at their child's school (Yamamoto and Holloway 2010). Lower SES parents may be more likely to mistrust the school or have feelings that the school has not accurately or fairly assessed their child leading them to use their own evaluation rather than that of the schools (Yamamoto and Holloway 2010). This may be connected with the lack of efficacy that lower SES parents, parents with limited education and those with fewer economic resources may have around helping their children succeed in school and interacting with teachers and other school personnel (Zhan 2005). Spera (2006) also suggests that parents' socialisation goals, which include the expectations they have for their child, can influence the way they involve themselves in their children's education including their level of engagement with the school, attendance at parent-teacher meetings or helping their child with homework. Parents can therefore influence their children's academic outcomes through a range of parenting processes which can include general parental support, their expectations and the level of school-specific parental involvement which are shown to affect children's academic outcomes in varying degrees (Gordon and Cui, 2012).

### 1.3 PARENTAL EXPECTATIONS OF CHILDREN WITH DISABILITIES

There has been comparatively little research on parental expectations of children and young people with disabilities (with the exception of Masino and Hodapp, 1996; Doren et al., 2012; Wagner et al., 2007; Rutchick et al., 2009; Rimkute et al., 2014; Cawthon et al., 2014; Newman, 2005). Literature in the area of expectations for children with disabilities has tended to focus on the expectations of teachers and the issue of stigma or group stigmatisation around certain types of disabilities (Hornstra et al., 2010). Stigma research suggests that being labelled as having a disability or special educational need can lead to a change in the behaviour of adults who may encourage 'learned helplessness' (Thomas, 1979) or a belief among children (or their parents) that their behaviour does not influence their outcomes.

Similar to research on parental expectations more generally, family factors appear to play an important role in understanding differences in parental expectations and academic performance of students with disabilities (Blackorby and Wagner, 1996). This research finds a relationship between children's academic outcomes and both household income and expectations for educational attainment. However, Blackorby et al. (2010) acknowledge that these factors are intertwined. Families that can afford post-secondary education are more likely to hold expectations that their children would pursue such education. In addition, these two factors each have systematic and significant relationships with the academic performance of students with disabilities (Blackorby et al., 2010, Ch. 5, p. 9). Similarly, research by Newman (2005) found that parents of children with disabilities from low income households held significantly lower expectations than high income parents for their child's educational and occupational attainment (Newman 2005).

Doren et al. (2012) examined the extent to which parental expectations of young people with disabilities impacted on the actual outcomes achieved. The findings here show that parental expectations predict outcomes, but that the type of disability moderates the relationship between parents' expectations and outcomes (Doren et al., 2012). The study by Newman (2005) also found that expectations differed by the type of disability with parents of children with specific learning difficulties holding higher expectations (both educational and occupational) than parents of children with intellectual disabilities, autism, or multiple disabilities (Newman 2005). Rutchick et al. (2009) focussed specifically on educational expectations for children with behavioural problems and found that parental expectations were reduced in response to these kinds of problems even after taking into account the child's actual academic performance (Rutchick et al., 2009). Other research has focussed on key transition points in the lives of

young people with disabilities as they move from a school environment to work or adult life more generally. Blacher et al. (2010) compared the expectations of parents of young people with autism and Down Syndrome. They found that the parents of young people with Down Syndrome were more likely to expect them to move into work while there were more restrictive expectations among parents of young adults with autism (p.3).

Recent Irish research by Cosgrove et al. (2014) used cross-sectional GUI data to examine parental expectations of 9-year-old children with different disabilities. In particular this research focussed on the extent to which parents felt their children would continue their education to degree level. They identified some differences by disabilities even after controlling for a range of individual and household characteristics. With the exception of children with specific learning disabilities and physical and sensory disabilities, this research found that parents of children with disabilities are significantly less likely to expect them to obtain a degree-level qualification.

This report builds on previous research findings to examine the extent to which parental expectations and child disability status at age 9 have consequences for children's academic and social wellbeing at age 13. In this, we make use of the longitudinal nature of the data. Our conceptual framework assumes that parental expectations at age 9 will be influenced by both the child's disability and child's academic achievement at that stage, as well as being influenced by other factors such as parent's own education, family economic vulnerability and family structure. Therefore, it is important to take these factors into account in tracing the consequences of parental expectations at age 9 on academic and social outcomes at age 13. In examining educational outcomes at age 13, we also take account of the social context of the school the child attended at 9 years of age, as measured by the DEIS status of the school. Research has shown contextual effects in the Irish context (McCoy et al., 2012; McCoy et al., 2014), with students in the most socio-economically disadvantaged schools performing less well, all else being equal. The inclusion of school composition in the models allows us to examine if such school characteristics mediate the relationship between parental expectations and academic outcomes.

#### **1.4 OUTLINE OF REPORT**

Chapter 2 outlines the data and methodology used in the report. Chapter 3 examines the factors that predict parental educational expectations for children. Chapter 4 examines the extent to which parental expectations of children in primary school impact on young peoples' social outcomes at age 13. Chapter 5

examines the extent to which parental expectations at primary school level influence academic development at age 13. Finally, in Chapter 6, we summarise the results of the analysis and draw out the implications for disability policy.



# Chapter 2

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## Data and Methodology

### 2.1 INTRODUCTION

Much of the literature in the area of parental expectations and children's outcomes has relied on cross-sectional data. A number of longitudinal studies, however, have shown how parental expectations are a causal determinant of academic outcomes (Blackorby and Wagner 1996; Bouck 2012; Mistry et al., 2009). This research draws on data from the two waves of the GUI Child Cohort to explore parental expectations, attitudes and behaviours for children with (different types of) disability relative to those without a disability. Using longitudinal data on 9- and 13-year-old children we measure the extent to which social and academic outcomes over the period from 9 to 13 years of age are shaped by the assessments, expectations, attitudes and behaviours of parents.

Between September 2007 and May 2008, *Growing Up in Ireland* interviewed 8,578 nine-year-olds, their parents and their teachers on a wide range of issues. Here we use the school-based and household-based components of the Wave 1 study. Wave 2 of the study took place in 2011/2012 and included 7,423 of the children who had participated in Wave 1. Both GUI questionnaires at 9 and 13 collected detailed information on various aspects of parental expectations of their children as they make the transition to mainstream second-level or special school settings. These data include short-term evaluations of their child's reading and mathematics ability, and longer-term expectations around their child's education or training pathways. Information was also gathered about parenting behaviours around education such as formal support for their child's education in terms of attendance at parent-teacher meetings, in addition to informal support such as helping their child with homework or reading. Using GUI data it is possible to examine whether academic expectations differ in relation to types of disability such as learning, emotional/behavioural and physical disabilities, and whether aspirations for these children change over time.

### 2.2 VARIABLES AND MEASUREMENT OF OUTCOMES

#### 2.2.1 Disability Identification

Irish policy around special education has resulted in greater numbers of students with disability attending mainstream schools than before. The prevalence of disability for children aged nine used in this research is based on the broad

definition of special educational needs (SEN) and disability in the EPSEN Act (2014) whereby SEN is defined as:

*A restriction in the capacity of the person to participate in and benefit from education on account of an enduring physical, sensory, mental health or learning disability, or any other condition which results in a person learning differently from a person without that condition (EPSEN Act, 2004).*

We adopt a broad approach to the understanding of disability, therefore, including specific learning disabilities such as dyslexia, as well as general learning/intellectual, emotional/behavioural and physical disability. This is a broader definition of disability than used in the *Disability Act 2005*, or than used in Census 2011. Given the broadness of the definition, the estimated prevalence of disability/special educational needs is higher than the prevalence of childhood disability from the Census, and is of the order of 23 to 28 per cent. This is in line with recent prevalence estimates of special education needs (Banks and McCoy 2011; Cosgrove et al., 2014).

In line with the methodology adopted by Banks and McCoy (2011), this report draws on three sources to identify children with a disability. The first is the teacher responses to the question on whether each child experienced one of four main disabilities – physical, speech, learning and emotional/behavioural – from which we derive a baseline disability estimate. The second source is the parent questionnaire and adds children not identified by teachers but identified by their parent as having a learning difficulty or communication or co-ordination disorder, speech difficulties or a chronic physical or mental health problem, illness or disability which hampers their daily activities.

The third source involves adding children with mental health or emotional/psychological difficulties. Here we use the ‘strengths and difficulties’ (SDQ) scale which taps into the child’s emotional/behavioural wellbeing (see Banks and McCoy, p.88 for detailed information about this measure). The SDQ is divided into five scales: emotional symptoms scale; conduct problems scale; hyperactivity scale; peer problems scale; and pro-social scale. The first four combine to generate a total difficulty score ranging from 0 to 40. These results are used to derive a ‘high risk’ group of children with significant emotional and behavioural difficulties.

Where the child had more than one type of disability, we classified them according to the disability which was likely to be most consequential, on average,

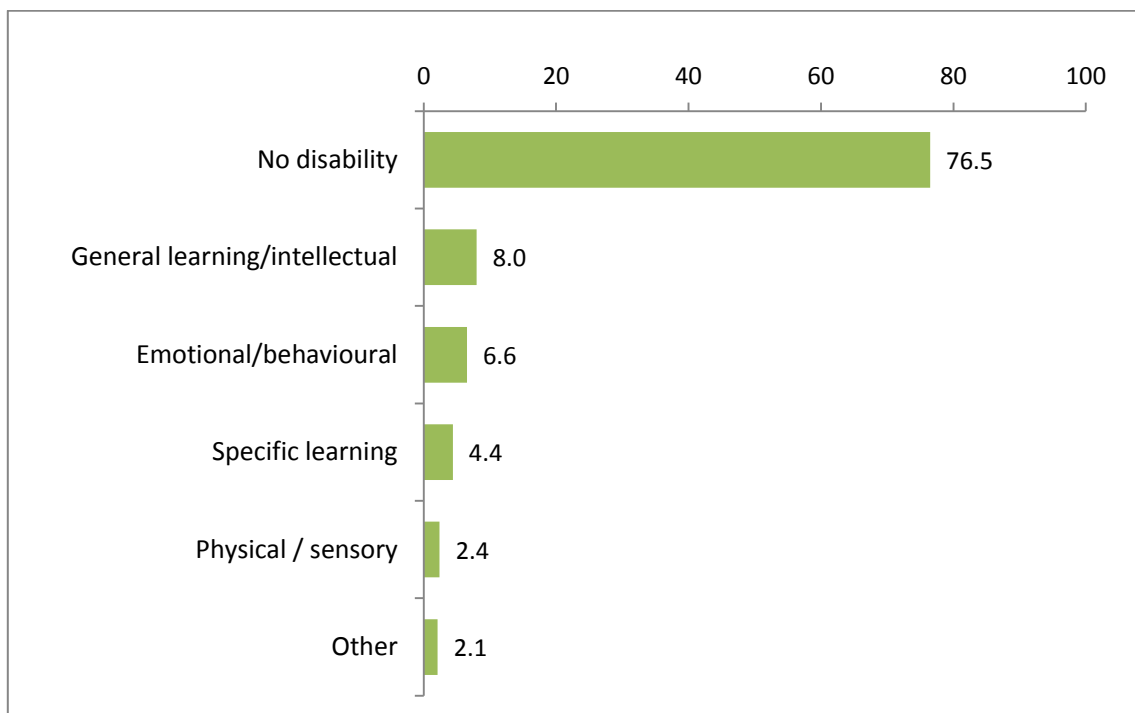
for their school work, according to the order of the list above. For instance, if a child had both a general learning/intellectual and physical disability, they were classified as having a general learning/intellectual disability. Children with autistic spectrum disorders who did not have an intellectual or learning disability were classified as having a socio-emotional or behavioural disability.

**TABLE 2.1** Disability Categories

Disability Categories	
<b>1 General learning/intellectual</b>	Identified by teacher as having a learning disability, excluding those identified by parents as having dyslexia or dyspraxia.
<b>2 Specific learning</b>	Identified by teacher as having a learning disability, AND identified by parents as having dyslexia or dyspraxia.
<b>3 Emotional/behavioural</b>	Identified by teacher as having emotional or behavioural problem or identified by parent as having ADHD or autism or Asperger syndrome or in top 10% on Strengths and Difficulties questionnaire – Excluding those classified under 1 or 2 above.
<b>4 Physical disability (including visual, hearing or speech impairment)</b>	Identified by teacher as having ‘physical disability or visual or hearing impairment’ or ‘speech impairment’ or identified by parent as having speech and language difficulty – Excluding those classified under 1 or 2 or 3 above.
<b>5 Other (including chronic illness)</b>	Identified by parent as having ‘other’ condition or ‘slow progress’.

Note that the classification of disability adopted here is not the same as the classification used by the National Council for Special Education (NCSE). It also groups together children with intellectual disabilities that range from mild through to profound.

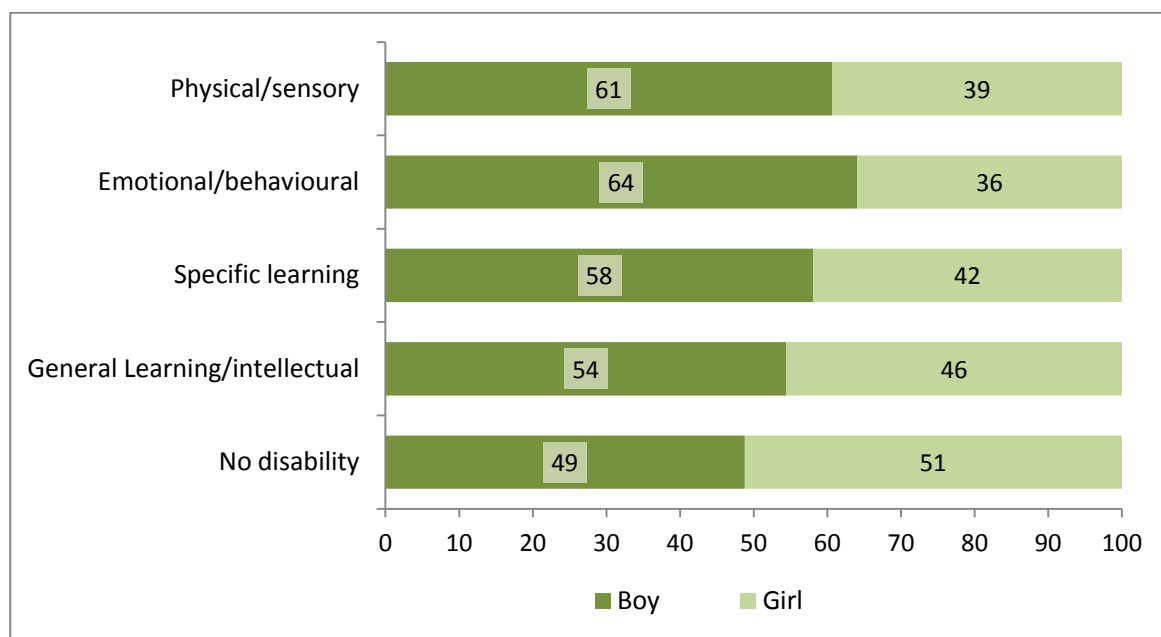
As shown in Figure 2.1, we find 23.5 per cent of 9-year-olds exhibit at least one of the five disability categories. This includes 8.0 per cent with general learning/intellectual disabilities, 6.6 per cent with emotional or behavioural difficulties, 4.4 per cent with specific learning difficulties, 2.4 per cent with physical disabilities and 2.1 per cent in the other category. Because of the very small size of the ‘other’ group, and also because the children in this group seemed to differ very little from those with no disability in most respects, we focused on the 21.4 per cent of children in the first four categories.

**FIGURE 2.1** Type of Disability at Age 9 (Percentage of Children)

Source: *Growing Up in Ireland* survey at age 9.

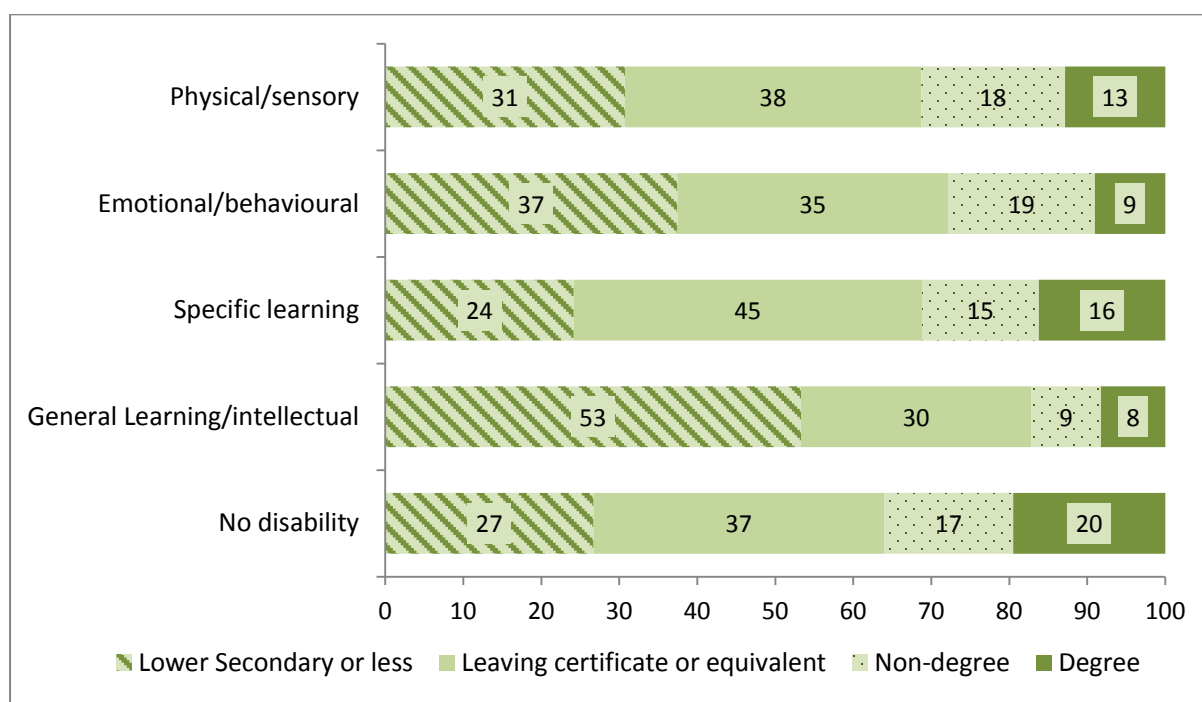
Figures 2.2 and 2.3 display the composition of the different disability groups according to gender and mother's educational attainment. Boys are over-represented across each of the disability types, but the differential is greatest among the emotional/behavioural disability group where nearly two-thirds are boys. While one-fifth of those without disabilities have mothers who achieved higher education, this is much lower among children with emotional/behavioural and general learning disabilities, less than 10 per cent of whom have highly educated mothers. Conversely, for over half of those with general learning disabilities, their mothers had not completed second-level education. This contrasts with less than a quarter of those with specific learning disabilities whose mothers had not completed second level, actually lower than the level for the cohort without a disability. Hence the findings show wide variation in the socio-economic composition of the disability groups, with higher levels of disadvantage among the emotional/behavioural and general learning disability groups.

**FIGURE 2.2** Type of Disability at Age 9 by Gender



Source: Growing Up in Ireland survey at age 9.

**FIGURE 2.3** Type of Disability at Age 9 by Mother’s Educational Level



Source: Growing Up in Ireland survey at age 9.

### 2.2.2 Parental Educational Expectations

Parents were asked ‘taking everything into account, how far do you expect (*child’s name*) will go in his/her education or training?’, at Wave 1. They were

given a number of responses including: 'Junior Certificate or equivalent'; 'Leaving Certificate or equivalent'; 'an apprenticeship or trade'; 'Diploma/Certificate'; 'Degree'; 'Postgraduate/higher degree'; and 'Don't know'.

### 2.2.3 The Academic Performance/Ability of 9- and 13-Year-Olds

Reading and mathematics test scores are strongly predictive of later exam performance and therefore later life chances. This research examines the extent to which parental expectations at primary level influence academic development at age 13. This analysis provides a valuable insight into whether parents underestimate the academic ability of children with disabilities at age 9, and the extent to which this impacts on academic skills at age 13. In doing this we examine the mechanisms through which school and family processes may affect students' educational outcomes over time. It is worth noting that in examining the impact of expectations on the academic outcomes of children with disabilities, there is much debate around the use of standardised testing for this group of children. Much of this is focussed in the United States where there is still limited consensus among educators regarding appropriate achievement expectations for students with disabilities, particularly those with cognitive disabilities. Under the *No Child Left Behind (NCLB) Act of 2001* the expected educational outcomes for students with disabilities, or for any other subgroup, are the same high expectations for all students (McGrew and Evans, 2004). In contrast, other programmes for international student assessment such as TIMSS, PIRLS, and PISA are often criticised for excluding students with disabilities with some arguing that this means that students with disabilities are being entirely excluded from participation in the discourse on achievement (Schuelka, 2012). Schuelka has argued that students with a disability, therefore, do not belong to a culture of achievement and educational evaluation. This reinforces low expectations and has an impact on policies concerning educational inequality (Schuelka, 2012). In the US, NCLB requires that 95 per cent of all students take achievement tests, Schuelka (2012) concludes that international achievement tests should follow the same standard.

The Drumcondra Mathematics and Reading standardised tests are developed for Irish school children, are linked to the national curriculum and are grade-specific. The tests have been demonstrated to have strong reliability and validity and are widely used in the Irish context (for recent examples see Shiel et al., 2014, McCoy et al., 2014, McCrory and Layte, 2012). The child's performance in these tests was gathered at age 9. At age 13, the analyses will also consider the scores achieved on the Drumcondra Reasoning Test (DRT). This is a test of scholastic aptitude based on 20 verbal reasoning and 20 numerical ability items. It reflects the ability of students to reason with words and numbers but is not intended to measure reading or mathematics achievement. Although not an achievement measure, in the Irish

context, performance in the verbal and numerical reasoning components of the Differential Aptitude Test was found to be highly predictive of Junior Certificate (lower secondary) exam grades (Hannan et al., 1996; Smyth, 2015).

#### **2.2.4 School Engagement and Self-Concept at Age 9 and 13**

Another major focus of this study examines the extent to which parental behaviours and aspirations/expectations of children in primary school impact on social outcomes at age 13. Here we focus on two social outcome measures at aged 13, namely, student engagement with school and the young person's self-concept. As noted in Chapter 1, research has highlighted the connection between school engagement, achievement and behaviour. In addition to focussing on performance on academic tests we examine a more subtle but equally important 'outcome', that is school engagement. School engagement is thought to play a central role in children's longer-term educational trajectories and research has shown that it differs for children with disabilities compared to their peers (McCoy and Banks, 2012).

Another important social outcome for young people is the self-concept they have. Using the well-established Piers-Harris scale, we can examine changes in the child's self-concept over time (Piers et al., 2002). The scale is a multidimensional construct containing six subscales: behavioural; intellectual and school status; physical appearance and attributes; freedom from anxiety; popularity; and happiness. It is argued to be 'one of the best if not the best questionnaire of its type' (Kelley, 2004) and has been used in a wide range of settings, including in the measurement of self-concept in children with complex needs (Buckroyd and Flitton, 2004). It is often administered for routine classroom screening, to identify children who might benefit from further evaluation. It is also commonly used in clinical settings to determine specific areas of conflict, typical coping and defence mechanisms, and appropriate intervention techniques. As well as being a strong indicator of child wellbeing, it has also been found to be correlated with disability status. Research by Rogers and Saklofske (1985) compared the self-concept of children with learning disabilities compared to children with no disabilities and found that they had lower self-concept and lower performance expectations (Rogers and Salofske, 1985). Using the 'happiness and satisfaction' subscale of the Piers-Harris measure, Cosgrove et al. (2014) found that the scores of children with disability were lower on average for most children with disabilities compared to children without (p.73). Smyth (2015) also found that children with special educational needs (not differentiated by type of SEN) are less happy, less confident about themselves as learners, report poorer behaviour and feel more anxious at 9 years of age and continue to have more negative self-images at 13 years of age.

The *Growing Up in Ireland* study administered the Piers-Harris scale to children at the two waves and therefore allows us to explore change over time. The Piers-Harris scale is based on a set of 60 items to which the child responds whether the statement applies to them or not. Items include 'I often get into trouble', 'I am unhappy' and 'I am often sad'. The majority of the children completed Piers-Harris in a group setting in the school at age 9 and in the home at age 13.

### 2.2.5 The Child-Parent Relationship at 9 Years Old

The quality of the relationship between parents and children influence children's socio-emotional development (Asher and Gottman, 1981; Black and Logan, 1995; Hastings and Rubin, 1999; Laible and Thompson, 2000), as well as school performance (Barth and Parke, 1993; de Ruiter and van Uzendoorn, 1993; Greenberg and Speltz, 1988; Pianta, 1997, 1999). Since our indicator of disability includes children with emotional/behavioural difficulties and since the quality of the parent-child relationship may also be important for children's academic and social wellbeing, we control for this in the models.

The nature and strength of the parent-child relationship can be explored by using the Pianta Child-Parent Relationship Scale (CPRS). The CPRS (Driscoll and Pianta, 2011) measures several dimensions of the parent (or child carer) relationship, focusing on conflict, closeness and dependency. In this report we draw only on the measures of conflict and closeness. The CPRS is constructed from a list of questions asked to the parent (or carer) of the child.

The conflict measure is based on twelve statements such as 'My child and I always seem to be struggling with each other', or 'My child easily becomes angry at me' and the parent (carer) has several possible answers ranging from 'Definitely does not apply' (given a score of 1) to 'Definitely applies' (given a score of 5). The total score is then the sum of each answer producing a continuous measure where a large score indicates a high level of conflict while a low score indicates no conflict between the parent (carer) and the child. For ease of statistical analysis we create a dichotomous conflict indicator based on the methodology used for the Student Teacher Relationship Scale (STRS) where a score above the 75 percentile indicates a high level of conflict while the bottom 75 per cent have an average to low level of conflict.

The closeness measure is also based on twelve statements to which the parent (carer) say 'Definitely does not apply' (given a score of 1) to 'Definitely applies'



(given a score of 5). Examples of these twelve statements are ‘I share an affectionate, warm relationship with my child’, ‘If upset, my child will seek comfort from me’. The total score gives a continuous variable where in this context a high score means a high level of closeness, and a low score a low level of closeness between the parent (or carer) and the child. Here, as for the conflict measure, we use a dichotomous indicator that differentiates the bottom 25 percentile as the group with a very low level of closeness from those above the 25 percentile with average to high level of closeness.

### 2.2.6 Other Child and Family Characteristics

As noted above, there are a number of characteristics of the child and the family that are included in the analysis. These include:

**Individual child characteristics** such as gender; presence of a disability age 9; levels of school engagement (liking school); academic achievement results at age 9 and aptitude tests at age 13; and self-concept.

**Family characteristics** that have been found to be significant for child outcomes in other research (see, for example, Watson et al., 2014). These include family structure (whether a lone parent or two-parent family); mother’s education; mother’s age; dimensions of the parent-child relationship; parental attendance at school meetings and assistance with homework; whether the mother has a disability; and family economic vulnerability. Economic vulnerability is an indicator of the risk of poverty and deprivation based on low income, household joblessness and financial strain (see Whelan et al., 2015 for a discussion of this indicator).

**School Context.** Earlier research has highlighted the role of school composition in the processes of identifying children with special educational needs (McCoy et al., 2014). The analysis of academic outcomes in Chapter 5 also examines the role of school context in young people’s academic wellbeing, based on the disadvantage status (DEIS) of the school attended at 9 years of age.

## 2.3 ANALYTICAL APPROACH METHODOLOGY

The analysis incorporates both descriptive and multivariate statistical approaches. We begin each section with the descriptive tables before moving to the multivariate statistical analysis which is designed to investigate the impact of one set of factors, controlling for all others. For instance, when we focus on parental expectations, we examine the influence of the child’s disability on these

expectations, over and above the impact of the child's performance in standardised tests of reading and numerical ability. This allows us to ask whether the presence of a disability may have additional effects on parental expectations other than those that affect the child's academic performance at age 9.

The statistical analysis is conducted in STATA on the weighted data and the standard errors are adjusted to take account of weights and of clustering at the school level at age 9.

Apart from child and family characteristics, when we focus on child educational outcomes at age 13, we include indicators of parental engagement with the school and with the child's homework because these may mediate between parental expectations and child educational outcomes. Some key characteristics of the school are also considered.

The statistical analysis involves the logistic regression modelling of binary dependent variables. In Chapter 3, for example, the analysis models those who expect their child to achieve no more than diploma/certificate-level education versus those who expect at least a degree-level qualification. Linear regression is used where the dependent variable is measured as a scale, such as the child's self-concept.

Using these statistical techniques, we are able to look at the inter-relationship of child disability, child academic performance, and parental expectations at age 9 and their influence on child's academic and social outcomes at age 13.

# Chapter 3

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## Parental Expectations

### 3.1 INTRODUCTION

The literature review in Chapter 1 highlighted a range of factors influencing parental expectations of children, including characteristics of the child such as academic performance, gender, or the nature of their child's disability. Other studies also showed the influence of parental characteristics such as their levels of income and other, more subtle, aspects of the home environment or parenting processes. Research is increasingly focussing on the extent to which parents' own experiences of school, their relationship with their child's school and with other parents can influence the expectations they hold for their child (Russell 2003). Furthermore, their own level of education has been linked to their educational expectations for their children (Davis-Kean, 2005). The richness of GUI data means that a wide range of characteristics of both parents and their children can be examined in relation to how parental educational expectations are formed.

In this chapter, we focus on parental expectations of the child's academic achievement at age 9 and look at how these expectations are linked to the child's disability, parent's own education, child's academic performance at age 9 and other child and family characteristics. We conclude the chapter by modelling the factors influencing parents having lower educational expectations for their children.

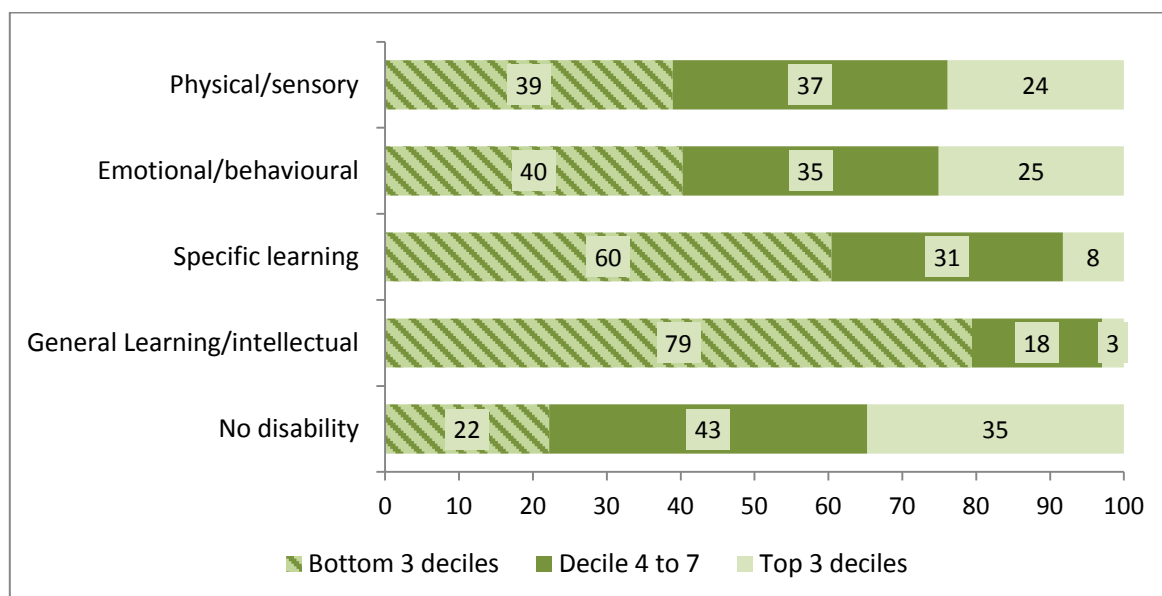
### 3.2 ACADEMIC OUTCOMES BY DISABILITY AT AGE 9

Reading and mathematics test scores are strongly predictive of later exam performance (Smyth and McCoy, 2009). Children with disabilities generally achieve poorer academic outcomes than their peers without a disability (Humphrey et al., 2012; Bouck 2012). This section firstly examines the extent to which academic achievement differs among children with different types of disabilities and those with no disabilities. Figure 3.1 highlights variation within the four disability categories outlined in Chapter 2: physical/visual/speech; emotional/behavioural; specific learning disabilities and general learning/intellectual disabilities.

In terms of reading ability there is a marked difference between the performance of children with disabilities and those without at age 9. Just 22 per cent of

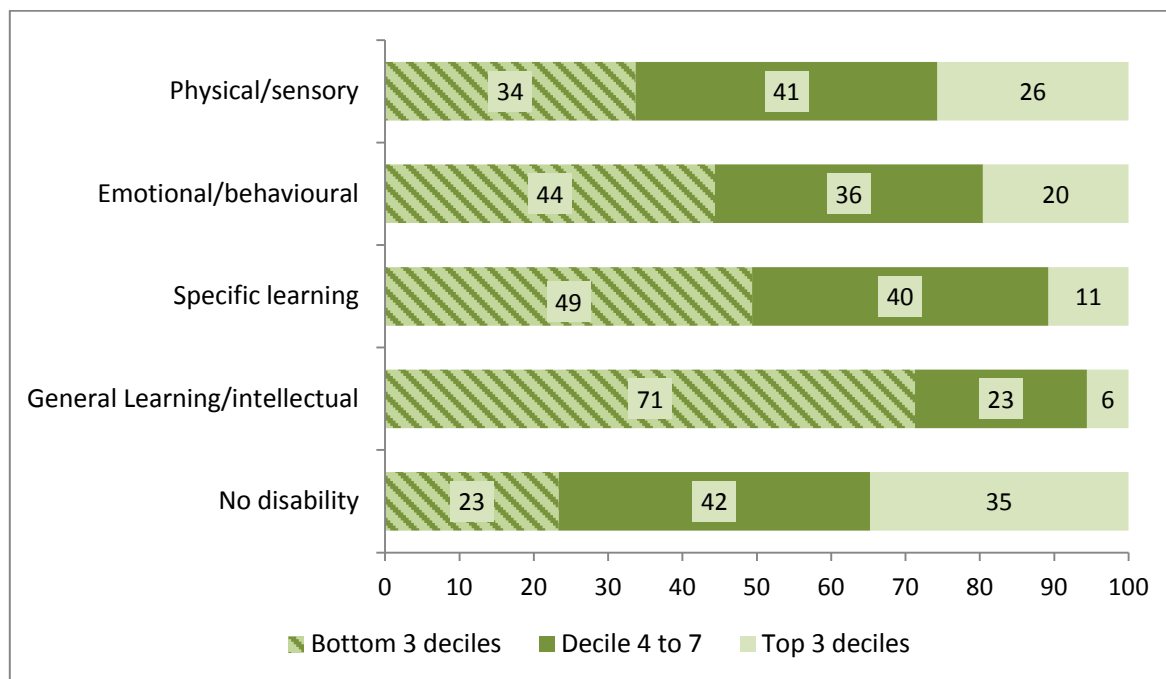
children with no disability achieve Drumcondra Reading Test results in the bottom 30 per cent of scores (bottom three deciles) compared to 79 per cent of children with general learning/intellectual disabilities and 60 per cent of the specific learning difficulties group. The results for children with physical/visual/speech and those with emotional/behavioural difficulties (39 per cent and 40 per cent in the bottom three deciles respectively) are lower than for children with no disabilities but notably higher than their peers with general learning/intellectual disabilities and specific learning difficulties. At the other end of the scale, 35 per cent of children with no disability have scores in the top 30 per cent of scores (top three deciles), compared to 24 per cent of those with physical disability, 25 per cent of those with emotional/behavioural disability, 8 per cent of those with specific learning disability and only 3 per cent of those with general learning/intellectual disability. The fact that 21 per cent of children with general learning/intellectual disability achieve above the bottom three deciles, and that 3 per cent of these students are in the top 30 per cent of scores, indicates that the composition of this group may be somewhat broader than the title suggests, and includes some children with average and above average levels of achievement.

**FIGURE 3.1** Drumcondra Reading Scores at Age 9 (%)



Source: GUI 9-year-old data.

A similar pattern emerges for children's Drumcondra Mathematics Test results with just 23 per cent of children with no disabilities in the bottom three deciles compared to 71 per cent of those with a general learning/intellectual disability and 49 per cent of those with specific learning difficulties. Children with physical, visual or speech disabilities fared better with similar results to children with no disabilities.

**FIGURE 3.2** Drumcondra Mathematics Scores at Age 9 (%)

Source: GUI 9-year-old data.

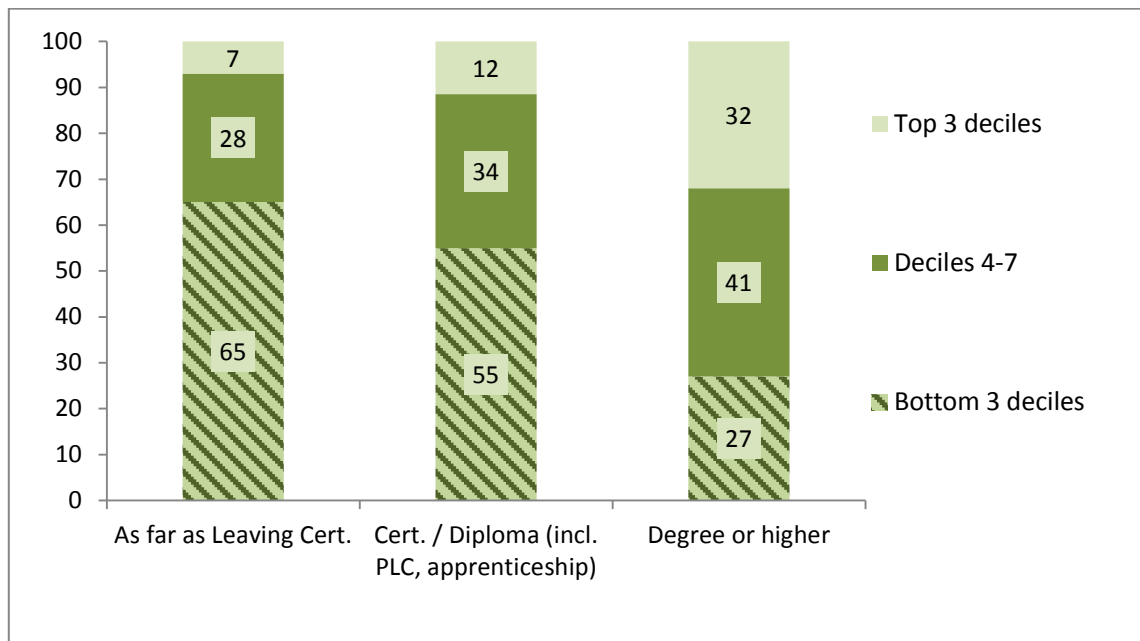
### 3.3 PARENTAL EXPECTATIONS AND ACADEMIC OUTCOMES AT AGE 9

The literature has shown how parental educational expectations influence children's educational outcomes above and beyond other contributing factors such as their socio-economic environment (Vartanian et al., 2007; Davis-Kean, 2005) but studies also recognise how educational outcomes interact with parental expectations (Goldenberg et al., 2001). Here we are particularly interested in exploring the latter relationship by focussing on children's reading and mathematics scores and parental educational expectations at age 9. Focussing on long-term educational expectations, parents were asked 'taking everything into account, how far do you expect (name of the child) will go in his/her education or training?' They were given a number of responses including: Junior Certificate or equivalent; Leaving Certificate or equivalent; an apprenticeship or trade; Diploma/Certificate; Degree; Postgraduate/higher degree; and Don't know. As the number of answers in some categories can be quite small, for statistical reasons we summarised the answer into three categories that are 'as far as Leaving Certificate or equivalent', 'Apprenticeship or trade and Diploma/Certificate' and 'a Degree or above'.

Figure 3.3 shows the extent to which educational expectations at age 9 are related to children's academic outcomes at the same age. We see that 65 per cent of children whose parents have low expectations (as far as Leaving

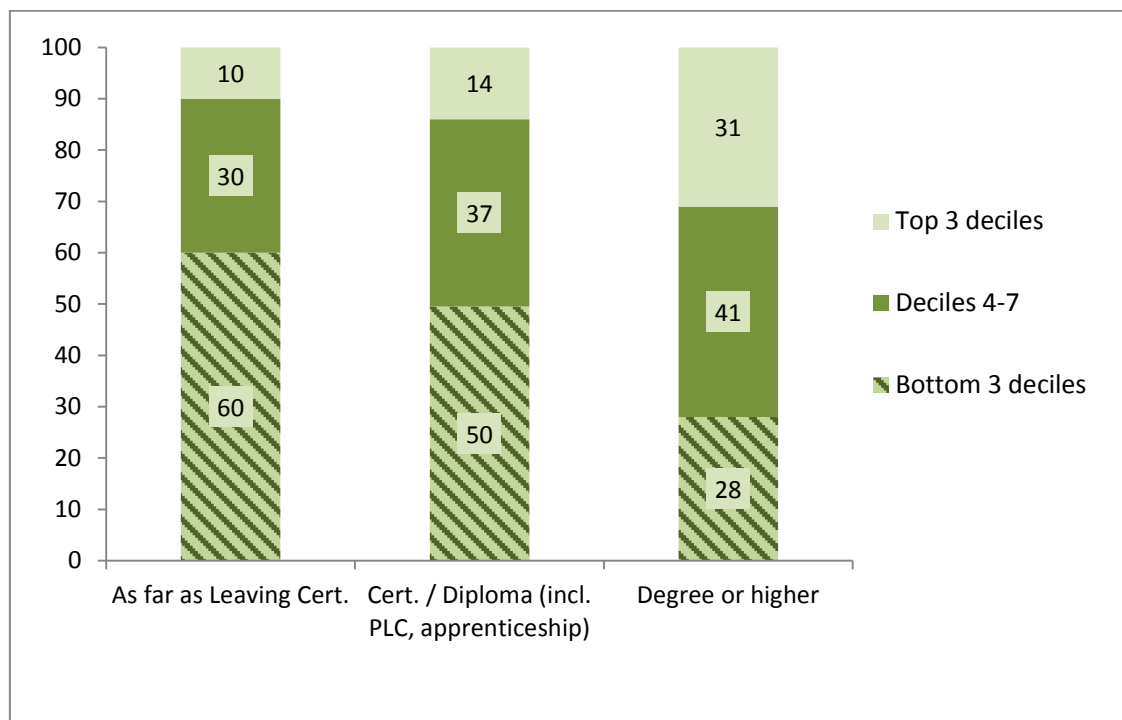
Certificate or equivalent) are in the bottom three reading score deciles compared to just 27 per cent of parents with high expectations (a degree or above). At the opposite of the spectrum only 7 per cent of children in the top three deciles have parents with low expectations compared to 32 per cent for parents with high expectations.

**FIGURE 3.3** Parental Educational Expectations by Drumcondra Reading Scores at Age 9 (%)



Source: GUI 9-year-old data.

For children’s mathematics scores at age 9, Figure 3.4 shows a similar pattern. Sixty per cent of children whose parents have lower expectations are in the bottom three mathematics score deciles compared to just 28 per cent of children whose parents hold degree or higher level educational expectations.

**FIGURE 3.4** Parental Educational Expectations (%) by Drumcondra Mathematics Scores at Age 9

Source: GUI 9-year-old data.

At this stage and without taking into account any other contributing factors, both results for reading and mathematics seem to support the idea that parents' expectations might be partially shaped by the child's performance.<sup>1</sup> Further analysis in this chapter with a formal statistical model will explore the relative contribution of a wide range of factors influencing parental educational expectations.

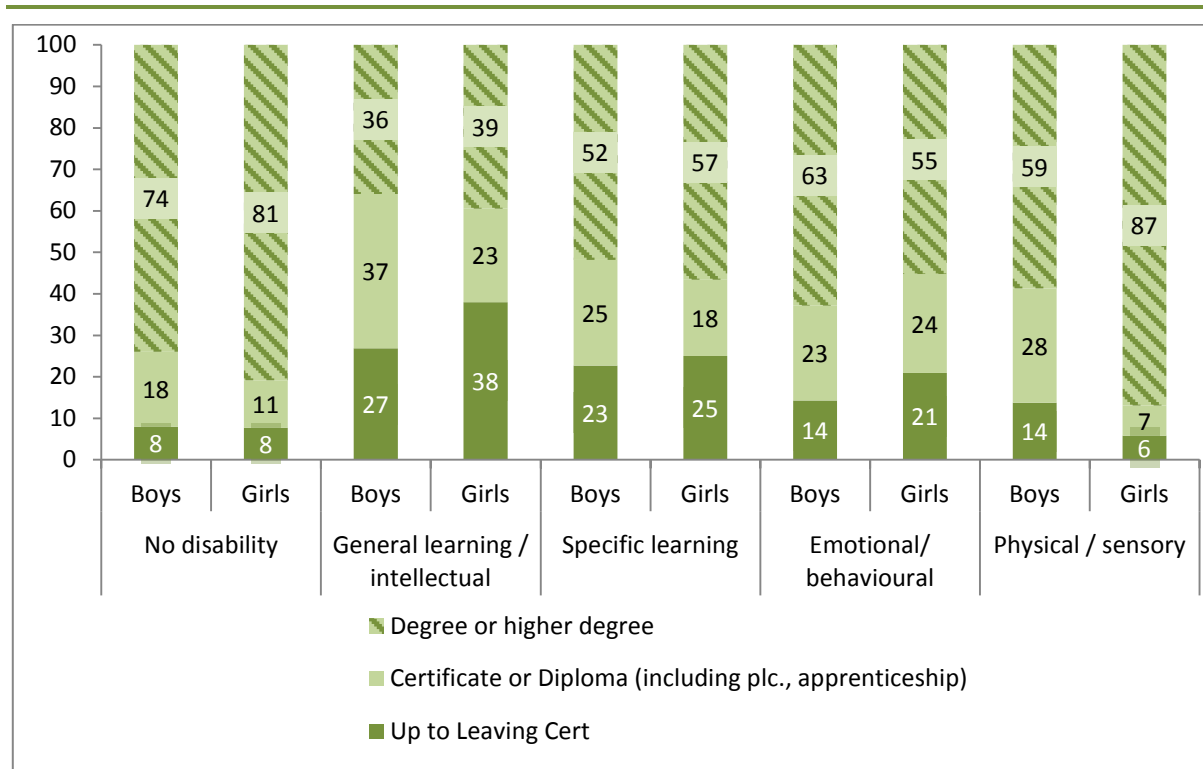
### 3.4 PARENTAL EXPECTATIONS AND DISABILITY AT AGE 9

This section examines the extent to which parents' educational expectations differ between parents of children with and without disabilities, and between children with different types of disability. Figure 3.5 shows how the large majority of parents of children with no disabilities expect their children to attain a degree or postgraduate qualification when they leave school (74 per cent for boys and 81 per cent for girls). Degree-level expectations are lower across all disability categories. Nevertheless, apart from general learning/intellectual disability, over half of parents of children with the other types of disability expect their children to achieve a degree-level education. Parental expectations are lowest for children with general learning/intellectual disabilities (just 36 per cent expect a degree for

<sup>1</sup> Further, achievement and expectations are likely to have been influenced by each other over a longer period (prior to the age of 9).

boys and 39 per cent for girls). The fact that over one-third expect their children to achieve a degree is partly due to the range of ability levels in this group, as we saw in Figures 3.1 and 3.2. Overall, degree expectations are slightly higher for girls than for boys across disability categories except for children with emotional/behavioural difficulties where slightly more parents hold degree-level expectations for boys than for girls.

**FIGURE 3.5** Parental Educational Expectations at Age 9 by Gender and Disability Type (%)

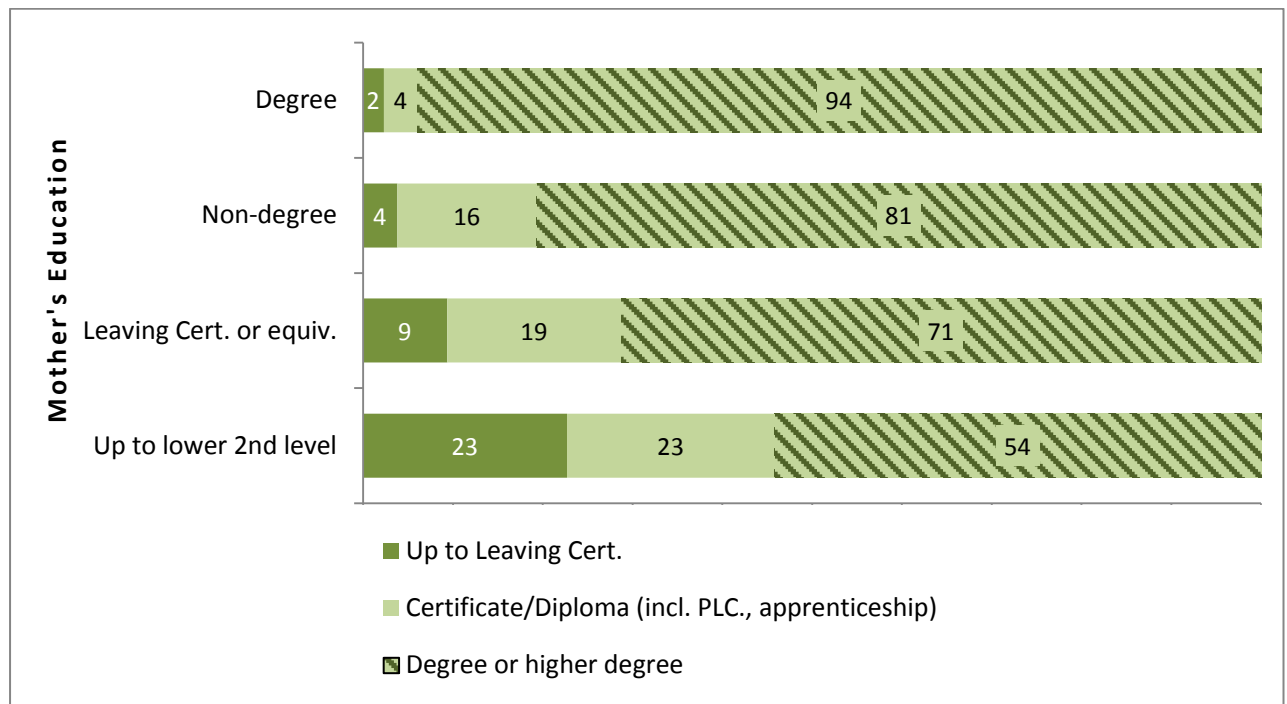


Source: GUI 9-year-old data.

Parental academic expectations literature highlights the impact of parents’ own education on the expectations they hold for their children (Davis-Kean 2005). Figure 3.6 shows the relationship between parents’ educational expectations for their children and their own level of education. It is clear that degree expectations have become the norm, no matter what level of education the parent has. Nevertheless, parents with lower levels of education are more likely to have lower educational expectations for their children. Twenty-three per cent of parents with lower secondary or less expect their children to achieve qualifications ‘up to Leaving Certificate’. This is compared to just two per cent of parents with degree-level qualifications. The majority (94 per cent) of parents who themselves have a degree expect their children to attain this level of education compared to 54 per cent of parents with lower second-level education.



**FIGURE 3.6** Parental Educational Expectations by Parents' Own Level of Education (%)



Source: GUI 9-year-old data.

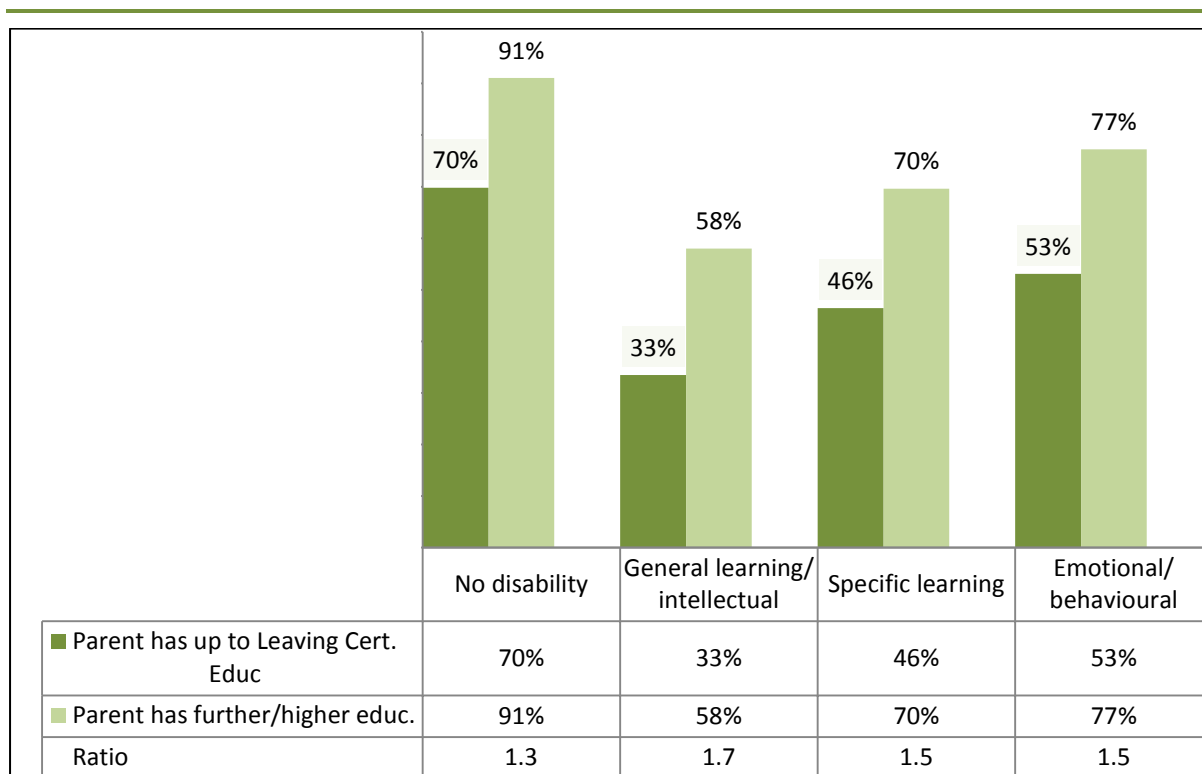
Figure 3.7 examines whether the socio-economic gap in educational expectations is larger or smaller when the child has a disability. The chart shows the percentage of parents who expect their child to achieve degree-level education, by their own level of education and child's disability status. The table below the chart also shows the ratio of the percentage holding degree-level education expectations for their children by parental education. Parents' education is grouped into two categories in order to have enough cases: up to Leaving Certificate (or equivalent) and further or higher education (including Certificate, Diploma Degree or higher). Because of the smaller number of cases where the child has a physical/sensory disability, we do not provide this detailed breakdown for this group.

Among parents of children with no disabilities, the percentage expecting their children to achieve a degree is 70 per cent for parents with education up to Leaving Certificate level and 91 per cent for parents with further or higher education. This gives a ratio of 1.3 which suggests parents with further or higher education are 1.3 times more likely to expect their children to achieve a degree. These ratios tend to be higher among parents of children with a disability, especially where the child has a general learning/intellectual disability. For this group, parents with further or higher education are 1.7 times more likely to expect the child to achieve a degree than parents who have up to Leaving

Certificate education. The ratio is 1.5 among parents of children with specific learning or emotional/behavioural disability.

This suggests that the socio-economic gap in parental educational expectations may be greater where the child has a disability. We return to this issue in Section 3.5 below, where we find that for most disability types, when we take account of educational achievement at age 9, child gender and other family characteristics, the socio-economic gap is not significant.

**FIGURE 3.7** Parental Degree Expectations by Parents’ Level of Education and Disability Status of Child



Source: GUI 9-year-old data.

### 3.5 STATISTICAL MODEL OF PARENTAL EXPECTATIONS

Using a multivariate logistic regression model, this section examines the factors influencing parental expectations for children with disabilities in more detail.<sup>2</sup> In order to understand the processes shaping low parental educational expectations, we need to control for a range of variables (such as child, parent and family characteristics) simultaneously in a regression model. In Table 3.1 we present odds ratio results where the outcome of the model is binary, that is, the

<sup>2</sup> As noted in Chapter 2, the method of analysis takes account of the fact that the initial sample was clustered at the school level.

expectation that the child will go up to, or as far as, post-second-level diploma or certificate level versus the achievement of a higher education degree-level qualification. This threshold is used since the expectation that the child will go on to higher education has now become the norm. An odds ratio greater than one indicates an increase in the probability of parents having low educational expectations, while an odds ratio lower than one indicates a reduced probability of having low educational expectations. Table 3.1 focuses on the influence of child's disability, gender, mother's education and child's academic achievement at age 9. The full set of results is shown in Appendix Table A3.1.

Model 1 shows the impact of the child's disability type on parents having low educational expectations. All else being equal, parents of children with general learning/intellectual disabilities are five times more likely to expect their child to progress no further than the Leaving Certificate compared to parents of children with no disabilities. Parental expectations are also significantly lower for children with specific learning difficulties and emotional/behavioural difficulties (with odds ratios of 2.8 and 2.2 respectively) compared to parents of children with no disability. It is interesting to note that there is no difference in regards to low expectation between parents of children with physical/sensory disability and parents of children with no disability.

Model 2 takes into account a range of individual and family characteristics including family type, the level of economic vulnerability in the household and the parent's level of education. There is a clear gender effect with parents of girls more likely than parents of boys to expect higher educational achievement. A strong relationship also emerges between parents with lower levels of education and low educational expectations. Mothers with Leaving Certificate or lower are 12 times more likely than mothers with a degree to hold lower expectations for their children. The gap is smaller when the mother has higher second-level to diploma-level education but is still very substantial compared to mothers with a degree. Even after taking into account family characteristics including parental education, it is clear that having a disability is still significantly associated with low parental expectations.

Based on the descriptive statistics shown above (Figure 3.3 and 3.4) we would also expect that parents' expectations are informed by children's school performance. In Model 3 we therefore take account of the child's academic performance at age 9. Using the Drumcondra Reading and Mathematics Scores, the findings show the extent to which parents' educational expectations are influenced by their child's level of achievement at age 9. Parents of children in the lowest 20 per cent of reading scores (lowest reading quintile) for example are

3.7 times more likely to have low educational expectations compared to parents of children in the top 20 per cent (top quintile). A similar effect is shown for children with low mathematics scores although it is not as strong as for reading. Importantly, the effect of having a disability on lower parental expectations remains even when taking account of the child's academic performance. Those with general learning/intellectual disabilities, specific learning difficulties and, to a lesser extent, children with emotional/behavioural difficulties continue to differ from children with no disability in terms of parental expectations even when their actual ability at age 9 is accounted for.

**TABLE 3.1** Impact of Disability, Mother's Own Education and Child's Academic Performance on Mother Having Low Educational Expectations

	Model 1 (no controls)	Model 2 (controls for individual and family characteristics)	Model 3 (add controls for reading & maths score at age 9)
<b>No disability (ref)</b>	<b>1.000</b>	<b>1.000</b>	<b>1.000</b>
General learning/intellectual	5.560	3.806	2.192
Specific learning	2.789	2.692	1.865
Emotional/behavioural	2.150	1.585	1.473
Physical/sensory	n.s.	n.s.	n.s.
<b>Male (ref)</b>		<b>1.000</b>	<b>1.000</b>
Female		0.647	0.612
<b>Mother has degree (ref)</b>		<b>1.000</b>	<b>1.000</b>
Mother has Lower 2nd level education or less		11.790	9.292
Mother has Higher 2nd level education to diploma		5.267	4.857
<b>Reading score top quintile (ref)</b>			<b>1.000</b>
Reading score lowest quintile			3.794
Reading score second quintile			2.740
Reading score middle quintile			2.061
Reading score fourth quintile			1.767
<b>Maths score top quintile (ref)</b>			<b>1.000</b>
Maths score lowest quintile			2.070
Maths score second quintile			1.616
Maths score middle quintile			1.619
Maths score fourth quintile			n.s.

Source: *Growing Up in Ireland* Survey at ages 9 and 13, analysis by authors. Children present in both waves of the survey. See Appendix Table A3.1 for the full set of models.

Notes: 'n.s.' = not statistically significant. All figures shown differ significantly from the reference group (Ref.).

### 3.6 SOME ADDITIONAL ANALYSES ON THE SOCIO-ECONOMIC GAP

Figure 3.7 above showed that there is a socio-economic gap (as measured by parent's education) in parental educational expectations and that this gap varied by disability type. We conducted some additional checks to test whether these

differences in the gap by disability type persisted after taking account of other characteristics, such as those shown in Appendix Table A3.1. This analysis showed that once we took account of factors such as gender and child academic performance at age 9, the socio-economic gap was not significantly different by type of disability. The one exception here was children with emotional/behavioural disability. For this group, the level of education of the mother made more of a difference than it did for children with no disability. Among children with emotional/behavioural disability there is a larger expectation gap between mothers with a degree and those with lower second-level education.<sup>3</sup>

### 3.7 SUMMARY

In this chapter, we examined the factors influencing parental academic expectations of children with disabilities at age 9. We were particularly interested in the extent to which different types of disabilities impact on parents holding lower academic expectations for their child. Based on research findings in the national and international literature we also wanted to explore whether parent and household characteristics influenced long-term educational expectations for children with disabilities.

The findings show that the type of disability matters in influencing parents' academic expectations with parents of children with general learning/intellectual disabilities holding the lowest expectations even after taking into account household characteristics and children's actual reading and mathematics scores. Lower parental expectations are also apparent for children with specific learning difficulties and emotional/behavioural difficulties, while children with physical, sensory or visual disabilities do not differ significantly in terms of mother's educational expectations. The fact that the expectations are lower than seem warranted by the child's academic performance might reflect some additional information that the mothers have about their children – such as the trajectory of the child's condition or the child's academic motivation – or it may reflect a link between low expectations and the fact that the child has been identified as having a disability.

Family characteristics also impact on the levels of expectations held for children, particularly the level of education of the mother. Mothers who achieved a Leaving Certificate qualification (or lower) were more likely than those with a degree-level qualification to have lower educational expectations for their

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<sup>3</sup> The results from the models with the interactions are available from the authors.

children. Finally, child's academic performance played also a significant contributing factor in shaping parent's expectations.

**APPENDIX TABLE A3.1** Models of Mothers' Low Educational Expectations (Logistic Regression Model, Odds Ratios)

		Model 1	Model 2	Model 3
<b>Child Characteristics</b>				
<b>Disability Status</b>	General learning/ intellectual	5.601***	3.806***	2.192***
<b>(Ref: none)</b>	Specific learning	2.856***	2.692***	1.865**
	Emot./behave.	2.251***	1.585*	1.473*
	Physical/sensory	1.521	1.211	0.942
<b>Sex (Ref: male)</b>	Female		0.647***	0.612***
<b>Family Characteristics</b>				
<b>Age mother<sup>a</sup> at birth</b>	Under 25		0.921	0.924
<b>(Ref: 30-34)</b>	25-29		0.939	0.942
	35-39		1.004	1.012
	40+		0.901	0.894
<b>Family Type (Ref: couple)</b>	Lone parent		0.916	0.923
<b>Cohabiting</b>	Cohabiting		1.411*	1.322
<b>Econ. Vulnerability W1</b>	Vulnerable		1.123	1.018
<b>Mother's Education*</b>				
<b>(Ref: degree)</b>	Lower 2nd level/less		11.79***	9.292***
	Higher 2nd level/diploma		5.267***	4.857***
<b>Mother has disability</b>	Disability		0.961	0.973
<b>Parent-child conflict**</b>	High		1.314**	1.281**
<b>Parent-child closeness**</b>	Poor		1.602***	1.590***
<b>Parent assistance homework (Ref: less)</b>	Regularly to always		1.332**	1.212*
<b>Parent attendance meetings (Ref: no)</b>	Yes		0.969	0.949
<b>Child School Performance</b>				
<b>Reading Score W1</b>	Lowest quintile			3.794***
<b>(Ref: Top quintile)</b>	Second quintile			2.740***
	Middle			2.061***
	Fourth quintile			1.767***
<b>Maths Score W1</b>	Lowest quintile			2.070***
<b>(Ref: Top quintile)</b>	Second quintile			1.616**
	Middle			1.619**
	Fourth quintile			1.315
<b>Constant</b>		0.297***	0.0538***	0.0211***
<b>Observations</b>		7,386	7,369	7,209

Source: *Growing Up in Ireland Survey* at ages 9 and 13, analysis by authors. Children present in both waves of the survey.

Notes: <sup>a</sup> The analysis looked at the primary caregiver (PCG), which could be male or female. In the vast majority of cases it is the mother, so hereafter PCG is referred to as mother. \*\*\* p<0.001, \*\* p<0.01, \* p<0.05.

# Chapter 4

## Social Outcomes

### 4.1 INTRODUCTION

This chapter examines social outcomes for children at age 13, including self-concept and school engagement. As discussed in Chapter 2, we use the Piers-Harris scale to measure self-concept. This indicator draws on 60 items to measure self-perception across a number of different domains: physical appearance and attributes, freedom from anxiety, intellectual and school status, behavioural adjustment, happiness and satisfaction and popularity. School engagement is a measure of the extent to which the adolescent likes school at age 13.

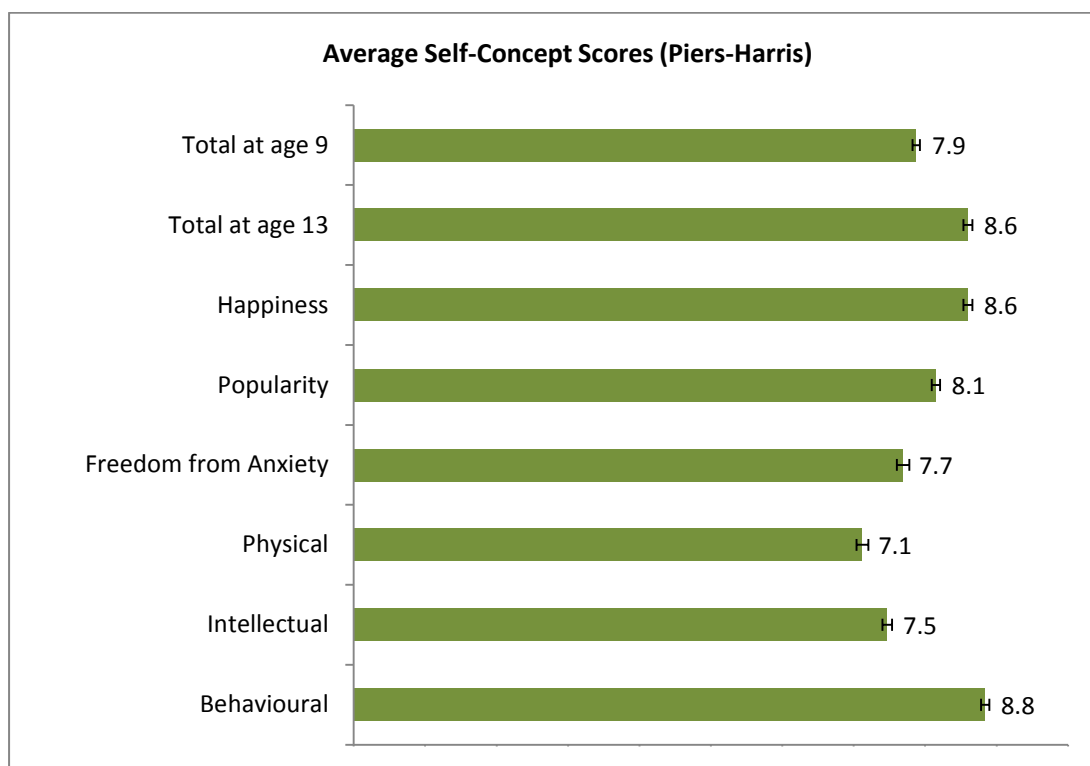
### 4.2 SELF-CONCEPT AT AGE 13

#### 4.2.1 Dimensions of Self-Concept

Figure 4.1 shows the dimensions of self-perception using the Piers-Harris scale. The behavioural scale measures the presence of problem behaviour (getting into fights, getting into trouble) in the school and home settings. Higher scores indicate better self-assessed behaviour. The intellectual and school status scale measures the adolescent's self-assessed academic abilities and academic performance, including general satisfaction with school and future expectations. The physical appearance and attributes scale measures self-assessment of physical appearance and attributes such as leadership and ability to express ideas. The subscale for freedom from anxiety assesses anxiety and low mood, including worry, nervousness, shyness, fear and sadness. The popularity subscale is designed to measure self-assessment of social functioning, including perceived popularity and the ability to make friends. Finally, the happiness subscale measures overall life satisfaction and general feelings of happiness.

The chart also shows the overall self-concept score derived by combining these subscales. It was 8.6 out of ten at age 13 compared to 7.9 out of ten at age 9, indicating a more positive self-concept, on average, as children moved into their teen years.<sup>4</sup>

<sup>4</sup> Note, however, that there are important differences in the direction of the subscales (Smyth, 2015), with improvements in terms of behaviour and feelings of popularity but academic self-image worsens, particularly for girls.

**FIGURE 4.1** Dimensions of Self-Concept of 13-Year-Olds and Overall Self-Concept at Age 9

Source: *Growing Up in Ireland Survey at ages 9 and 13, analysis by authors. Children present in both waves of the survey.*

#### 4.2.2 Self-Concept by Presence of Disability

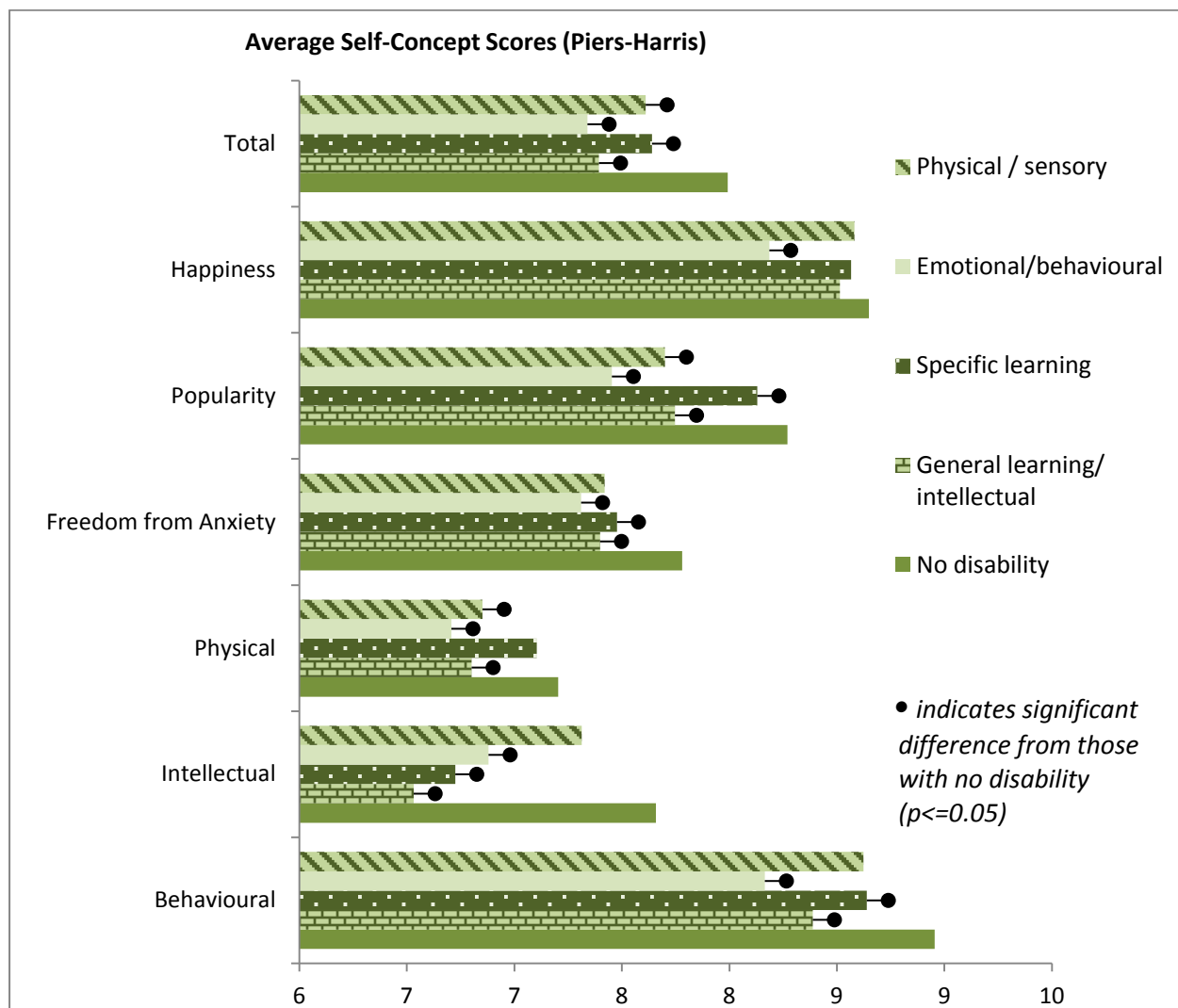
Figure 4.2 shows the self-concept scores of children at age 13 by presence of a disability. As before, the score is scaled to range from 0 (low self-concept) to 10 (high self-concept). The chart also shows whether the score is different from that of children with no disability.

Turning first to the overall self-concept scale, we can see that the score is significantly lower for adolescents with each type of disability than for those with no disability. The lowest average score is for children with socio-emotional or behavioural disability (7.3) and it is also low for those with general learning/intellectual disability (7.4 compared to 8.0 for those with no disability).

When we consider the subscales, we see that those with socio-emotional and behavioural disability have a lower self-concept than those with no disability on all the subscales. The self-concept is low on all but the happiness scale for adolescents with general learning/intellectual disability. On most of the subscales, this group has the second-lowest score (after those with socio-emotional or behavioural disability) and they have the lowest score on the intellectual and school status scale.



**FIGURE 4.2** Self-Concept of 13-Year-Olds by Presence of Disability



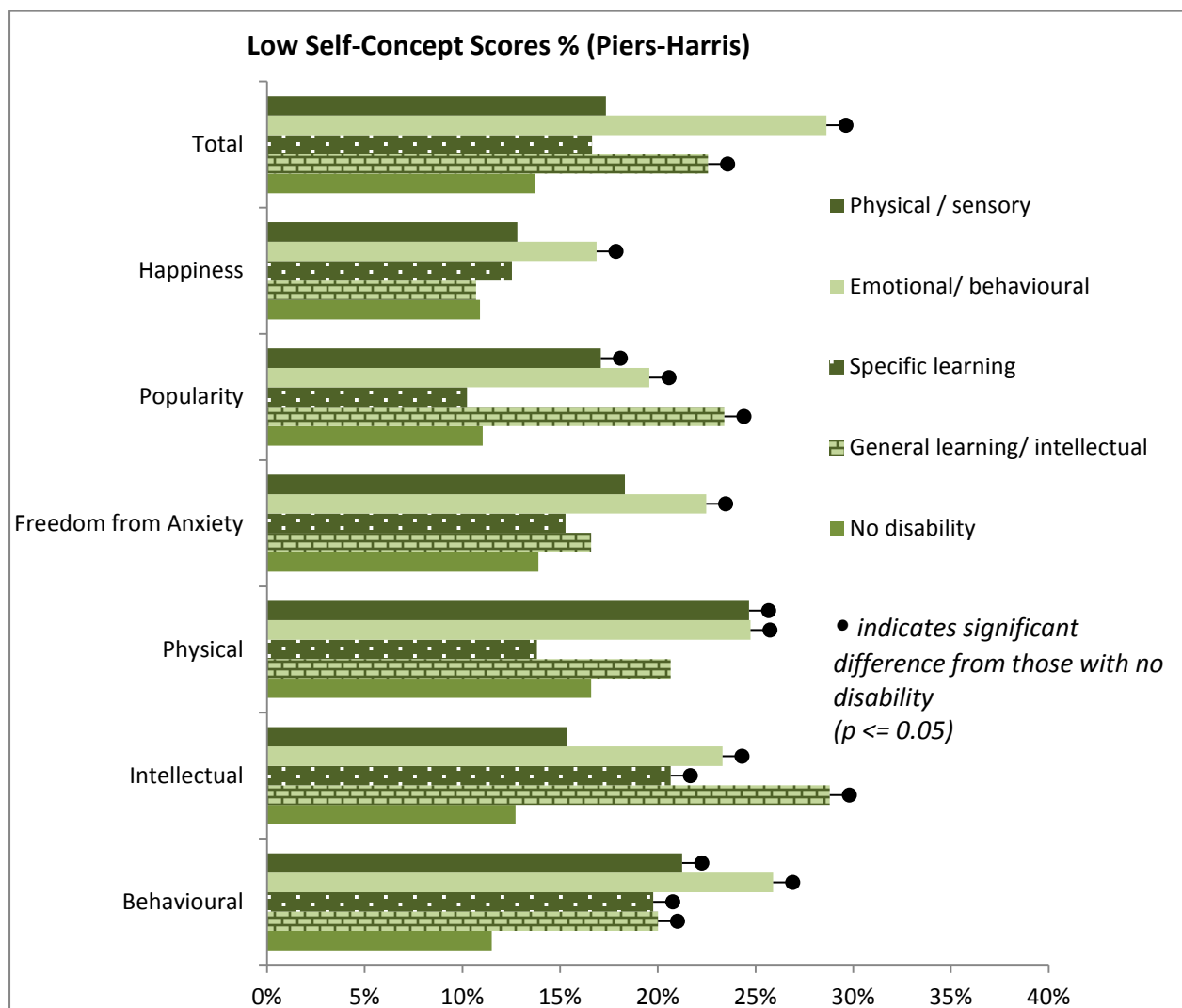
Source: *Growing Up in Ireland* Survey at ages 9 and 13, analysis by authors. Children present in both waves of the survey.

The scores are somewhat higher for those with specific learning and physical disability than for those with general learning/intellectual or socio-emotional and behavioural disability. Young people with specific learning disability fare worse than those with no disability on all but two subscales (i.e. happiness and physical/attributes). The self-concept of adolescents with a physical disability is closest to that of their non-disabled counterparts: they have a significantly lower self-concept score only on the physical/attributes subscale, the popularity subscale and the overall scale.

Figure 4.2 examined the average scores on the self-concept scales and we saw that young people with a disability had a lower average score than those without a disability. An alternative way of examining the data is to focus on the proportion of adolescents with 'low' or 'very low' scores on the total scale and

each subscale. Based on international scoring patterns, the scales can be divided into seven groups ranging from very low to very high.<sup>5</sup> A difference in the average scores might come about because adolescents with a disability have a slightly lower than average self-concept without many of them having the more serious low or very low scores. The percentage with low or very low scores is presented in Figure 4.3.

**FIGURE 4.3** Low Self-Concept of 13-Year-Olds by Presence of Disability



Source: Growing Up in Ireland Survey at ages 9 and 13, analysis by authors. Children present in both waves of the survey.

Figure 4.3 shows the percentage of young people who have low scores on each subscale and on the total scale. Unlike the previous figure, high values on this figure indicate a less desirable outcome. We can see that the same groups that emerged as having a lower average score are also most likely to have the very low

<sup>5</sup> The categories are very low, low, low average, average, high average, high and very high.

scores; young people with socio-emotional and behavioural disability and those with general learning/intellectual disability. The subscales where we find most difference between young people with a disability and those without a disability are intellectual and school status, problem behaviour and popularity.

### 4.3 UNDERSTANDING DIFFERENCES IN SELF-CONCEPT

At this point, we draw on the results of a series of regression models to examine the correlates of low self-concept among children at age 13. We are particularly interested in whether the difference between children with a disability and those without a disability persists when we control for other characteristics and in the impact of parental academic expectations on children's self-concept. In this section we focus on the overall self-concept scale.

Table 4.1 shows the results of this analysis. The full set of linear regression models for self-concept are shown in Appendix Table A4.1. Here we focus on the differences by type of disability and by parental expectations. The figures in the table show the difference in self-concept by type of disability (compared to those with no disability) and by parental expectation (compared to expecting a degree). Recall that the self-concept scale ranges from 0 (negative self-concept) to ten (positive self-concept). The models sequentially control for different sets of factors. In Model 1, for instance, young people with general learning/intellectual disability have a lower self-concept (by 0.598 on the ten point scale) than those with no disability (the reference group for disability status). This changes somewhat as we take account of other characteristics. For example, the difference between young people with general learning/intellectual disability and those with no disability is reduced to -0.326 in Model 5 when we take account of reading score in Wave 1 at age 9, the parent-child relationship, and the young person's self-concept at age 9.

Turning first to the results by disability type, we can see that young people with each of the types of disability (general learning/intellectual, specific learning, emotional/behavioural and physical disability) are less likely than those with no disability to have a positive self-concept. These differences persist when we control for the adolescent's gender, the mother's age at the birth of the child, family type and dynamics, mother's education, parental academic expectations, reading score at age 9, the parent-child relationship and parental depression at age 9 (Models 1 to 4). When we take account of self-concept at age 9 (Model 5) however, the difference between those with no disability, on the one hand, and those with either specific learning or physical disability, on the other, is no longer statistically significant. In other words, the gap in self-concept between young

people with these kinds of disability and those with no disability does not increase over time. However, the gap between those with general learning/intellectual or emotional/behavioural disability and those with no disability remains statistically significant even when their self-concept at age 9 is taken into account. This indicates that the gap between young people with these kinds of disability and those with no disability has widened by age 13.

**TABLE 4.1** How Does the Self-Concept of Children With a Disability Differ When We Take Account of Other Characteristics? (Based on Linear Regression Model)

	Model 1 (no controls)	Model 2 (controls for individual and family characteristics and parental expectations)	Model 3 (add controls for reading score at age 9)	Model 4 (add control for parent-child relationship and mother's depression at age 9)	Model 5 (add control for self-concept at age 9)
No disability	(Ref.)	(Ref.)	(Ref.)	(Ref.)	(Ref.)
General learning/ Intellectual	-0.598	-0.469	-0.507	-0.497	-0.326
Specific learning	-0.352	-0.343	-0.342	-0.303	n.s.
Emotional/behavioural	-0.651	-0.576	-0.569	-0.518	-0.307
Physical/sensory	-0.382	-0.362	-0.380	-0.333	n.s.
Parent expects Leaving Certificate or less		-0.350	-0.356	-0.326	-0.264
Parent expects Certificate/Diploma		-0.225	-0.224	-0.206	-0.185
Parent expects a degree or higher		(Ref.)	(Ref.)	(Ref.)	(Ref.)

*Source:* *Growing Up in Ireland* Survey at ages 9 and 13, analysis by authors. Children present in both waves of the survey. See Appendix Table A4.1 for the full set of models.

*Note:* 'n.s.' = not statistically significant. All figures shown differ significantly from the reference group (Ref.).

The academic expectations of the mother or primary care-giver are very important for young people, both those with and without disabilities. Where the mother expects the young person not to progress beyond Leaving Certificate, the young person's self-concept is expected to be lower by -0.326 compared to those where the mother expects a degree (Model 4). This drops slightly to -0.264 when we take account of the young person's self-concept at age 9. Hence, lower parental expectations appear to feed into poorer self-concept at an early age. The figure for mother expecting a certificate or diploma versus a degree is also statistically significant at -0.185 compared to expecting a degree. These figures come from Model 5, where self-concept at age 9 is controlled. This indicates, once again, that lower expectations at age 9 lead to a widening self-concept gap over time. Among young people with a disability, poorer self-concept at age 13 is partly explained by lower parental expectations, particularly for those with general learning/intellectual and emotional/behavioural disabilities. In other

words, these young people fare less well in their social development than those without disabilities partly as a result of the educational expectations their parents hold for them.

Other patterns evident in the Appendix Table A4.1 include the fact that females have a less positive self-concept than males and this pattern remains stable as controls are added to the model. Children of lone parents are likely to have a less positive self-concept than children of couple families. The relationship between parents and children is important, particularly whether there is conflict between the mother and child; in this case, the child is more likely to have a negative self-concept. There is no additional impact of parental closeness on self-concept, however. As we might expect, there is also an association between self-concept at age 9 and self-concept at age 13: for each unit increase in the scale at age 9, we see an increase of 0.244 in the scale at age 13.

With other characteristics of the young person and his or her family taken into account, there is no difference in self-concept by mother's education, mother's age at the birth of the child, family economic vulnerability, reading score at age 9 and mother's depression at age 9.

We conducted some additional analysis to check whether the patterns observed in Table 4.1 would be different if we focused on what was happening at the extremes of the self-concept scale, that is on the difference between those with high or very high scores or those with low and very low scores, and the group with average scores (see Appendix Table A4.3). In general, the results are broadly similar. We do see some differences, however. For those with general learning/intellectual disability, the lower average self-concept is mainly driven by the fact that they are less likely to have a positive self-concept. For those with emotional/behavioural disability, the lower average self-concept is mainly driven by the fact that they are more likely to have a very negative self-concept. In addition, parental expectations were more important in accounting for low self-concept than in accounting for high self-concept.

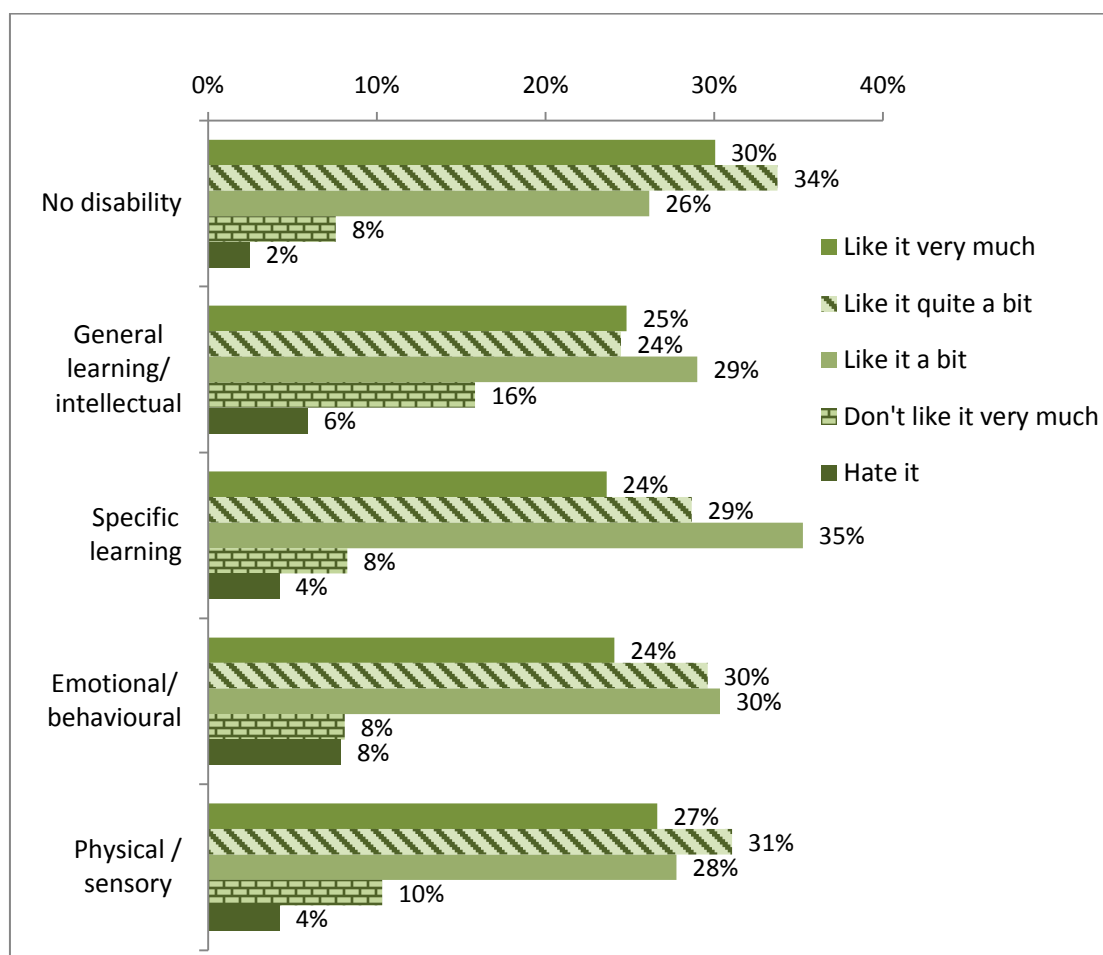
#### **4.4 SCHOOL ENGAGEMENT AT AGE 13**

At this point we turn to school engagement, specifically the extent to which the young person likes school. As noted in Chapter 1, school engagement has been shown to be associated with positive academic outcomes and earlier research in Ireland has shown that children with a disability are more likely to dislike school (McCoy and Banks, 2012). Figure 4.4 shows the extent to which children like or dislike school at age 13 by the presence and type of disability.

Among those with no disability, most like school either 'very much' or 'quite a bit' (64 per cent); 26 per cent like school a bit and 10 per cent either 'don't like it very much' or 'hate it'. Children with physical/sensory disability are most like those with no disability in terms of liking school: 58 per cent like school 'very much' or 'quite a bit', and 14 per cent dislike school.

Children with other types of disability are less positive. Forty-nine per cent of children with general learning/intellectual disability like school 'quite a bit' or 'very much'. The corresponding figures for other groups are 54 per cent for specific learning disability and the same figure for those with emotional/behavioural disabilities.

**FIGURE 4.4** School Engagement at Age 13 by Type of Disability at Age 9 (%)

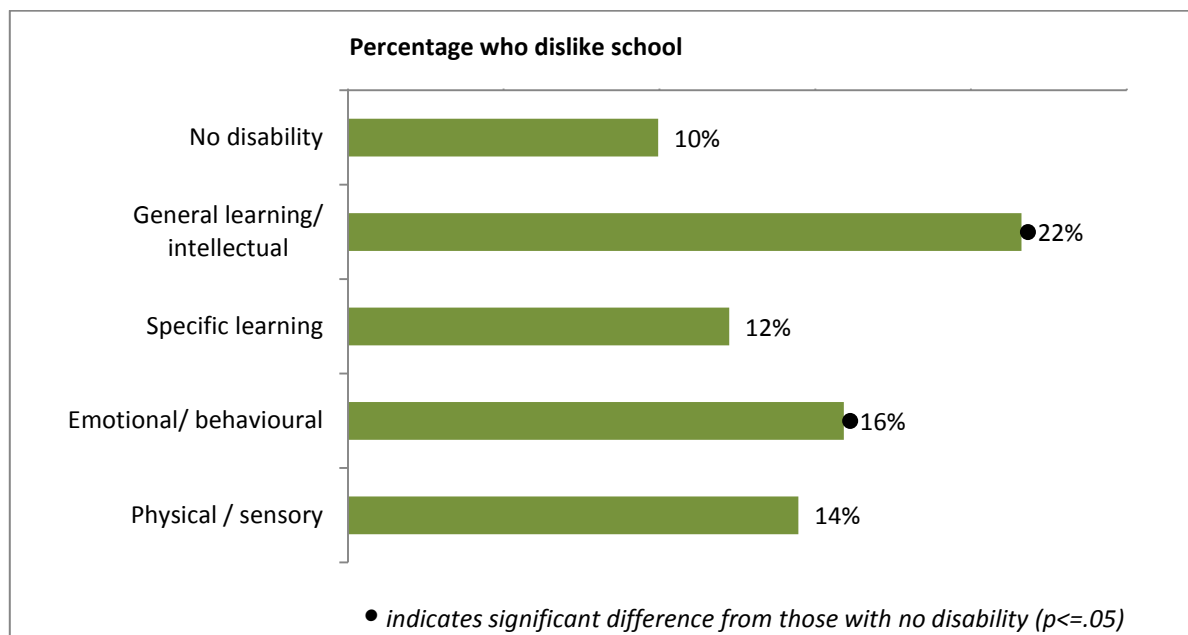


Source: *Growing Up in Ireland Survey at ages 9 and 13, analysis by authors. Children present in both waves of the survey. Because of the large amount of detail in this chart, statistical significance is not shown.*

We also see differences at the other end of the scale but only those with general learning/intellectual disability and emotional/behavioural differ significantly from

those with no disability. Figure 4.5 shows the percentage of young people who dislike school, that is 'don't like it very much' or 'hate it'. Among those with general learning/intellectual disability, 22 per cent dislike school and the figure is 16 per cent for those with emotional/behavioural disability.

**FIGURE 4.5** Low School Engagement at Age 13 by Type of Disability at Age 9



Source: Growing Up in Ireland Survey at ages 9 and 13, analysis by authors. Children present in both waves of the survey.

#### 4.5 UNDERSTANDING DIFFERENCES IN SCHOOL ENGAGEMENT

At this point we ask whether the relationship with type of disability persists when we take account of other characteristics of the young people and their families. The results are presented in summary form in Table 4.2 and the full logistic regression model for disliking school is shown in Appendix Table A4.2. The model is a logistic regression model for disliking school. The odds ratios from this model for the different types of disability are shown in Table 4.2. An odds ratio greater than one indicates an increase in the probability of disliking school while an odds ratio less than one indicated a reduction in the probability of disliking school. For example, in Model 1 we see that the odds of disliking school are 2.48 times higher for young people with general learning/intellectual disability than for the reference group of young people with no disability.

We see from the table that young people with general learning/intellectual disability are significantly more likely than those with no disability to dislike school. This pattern persists as we take account of different factors in the models. Young people with other types of disability do not differ significantly from those

with no disability when we take account of characteristics such as family type, parental education and parental expectations. Although young people with emotional/behavioural disability are more likely to dislike school, this is accounted for by characteristics of this group in terms of family background and parental expectations.

Parental expectations are also important to school engagement, for those with and without disabilities. Where the mother expects the young person to go no further than Leaving Certificate level, the odds of disliking school are higher by about 1.5 to 1.6 than where the mother expects the young person to complete a degree. The difference in the odds of disliking school is not significant between cases where the mother expects a diploma/certificate and cases where the mother expects a degree, however. Among young people with disabilities, it appears that young people with general learning/intellectual and emotional/behavioural disabilities fare less well in their school engagement partly as a result of lower parental expectations.

**TABLE 4.2** How Much More Likely are Children with a Disability to Dislike School? (Odds Ratios)

	Model 1 (no controls)	Model 2 (controls for individual and family characteristics and parental expectations)	Model 3 (add controls for reading score at age 9)	Model 4 (add control for parent-child relationship and mother's depression at age 9)
No disability	1.000	1.000	1.000	1.000
General learning/ intellectual	2.484**	1.820**	1.724**	1.639*
Specific learning	n.s.	n.s.	n.s.	n.s.
Emotional/behavioural	1.700**	n.s.	n.s.	n.s.
Physical/sensory	n.s.	n.s.	n.s.	n.s.
Parents expect Leaving Certificate or less		1.631	1.511	1.492
Parent expects certificate/diploma		n.s.	n.s.	n.s.
Parent expects degree		1.000	1.000	1.000

Source: *Growing Up in Ireland* Survey at ages 9 and 13, analysis by authors. Children present in both waves of the survey.

Note: 'n.s.' = not statistically significant. See Appendix Table A4.1 for the full model. All figures shown differ significantly from the reference group (Ref.).

Other patterns that can be seen in Appendix Table A4.2 are that females are less likely than males to dislike school and young people with a close relationship with the mother are less likely to dislike school. A number of other characteristics are associated with an increased likelihood of disliking school: being in a lone parent family, and having lower reading scores at age 9. In Model 2, we see that where the mother has a lower level of education, the young person is significantly more



likely to dislike school. However, when we control for the young person's own academic performance at age 9 (the Drumcondra Reading Score quintile), this pattern is no longer statistically significant. This suggests that those with lower educated parents do worse academically and this accounts for their attitudes to school.

There is no additional impact on disliking school associated with the age of the mother at the child's birth; whether the mother has a disability; family economic vulnerability in Wave 1; a distressed relationship between the partners in a couple family; whether the couple is married or cohabiting; and conflict in the relationship between the young person and the mother (see Appendix Table A4.2). Additional models examined whether the effects of parental expectations varied by disability type and whether the effects of parental education varied by disability type. We find no systematic variation in the effects.

#### 4.6 SUMMARY

In this chapter, we focused on two aspects of young people's socio-emotional wellbeing at age 13: their self-concept and whether they disliked school. Our main focus was on the impact of different types of disability and parental expectations on these outcomes.

In terms of type of disability, it was young people with general learning/intellectual disability and those with emotional/behavioural disability who were most disadvantaged. Students with any kind of disability tended to have a poorer self-concept, even after taking account of parental expectations. Much of their self-concept at age 13 can be traced to low self-concept at age 9. However, for students with general learning/intellectual disability and with emotional/behavioural disability there appears to be a further drop in self-concept by age 13. This pattern persisted when we took account of other characteristics such as gender, age and education of the mother, family type, family relationships, economic vulnerability, parental expectations and reading ability at age 9.

Young people with general learning/intellectual disability also had a greater probability of disliking school than those with no disability and this relationship persisted when other characteristics were controlled in the statistical model. Young people with emotional/behavioural disability had a poorer self-concept but did not differ significantly from those with no disability in terms of disliking school when other characteristics were taken into account.

Parental academic expectations at age 9 were important for both self-concept and disliking school four years later. Where parental academic expectations were lower, the student had a lower probability of liking school and a poorer self-concept. This relationship was robust and remained statistically significant when other characteristics were taken into account. However, when it came to disliking school the difference in the probability of disliking school was not statistically significant between parents who expected the young person to get a degree and those who expected the young person to attain a certificate or diploma.

**APPENDIX TABLE A4.1** Regression Model for Self-Concept (scale = 0 to 10; Linear Regression Coefficients)

		Model 1	Model 2	Model 3	Model 4
<b>Disability status</b>	General learning/Intellectual	-0.469***	-0.507***	-0.497***	-0.326*
<b>(Ref: none)</b>	Specific learning	-0.343**	-0.342**	-0.303**	-0.180
	Emotional/behavioural	-0.576***	-0.569***	-0.518***	-0.307*
	Physical/sensory	-0.362*	-0.380**	-0.333*	-0.277
<b>Sex (Ref: male)</b>	Female	-0.434***	-0.445***	-0.442***	-0.438***
<b>Age mother at birth</b>	Under 25	-0.099	-0.098	-0.088	-0.114
<b>(Ref: 30-34)</b>	25-29	-0.146*	-0.143*	-0.143*	-0.113
	35-39	-0.056	-0.05	-0.071	-0.071
	40+	-0.05	-0.037	-0.033	-0.028
<b>Family Type</b>	Lone parent	-0.318***	-0.313***	-0.285**	-0.203*
<b>(Ref: Couple, good rel.)</b>	Couple, distressed	-0.077	-0.085	-0.038	-0.020
<b>Cohabiting</b>	Cohabiting	-0.171	-0.151	-0.153	-0.119
<b>Mother's education</b>	Higher 2nd to Diploma	0.091	0.07	0.079	0.078
<b>(Ref: degree)</b>	Lower 2nd level or less	0.031	0.018	0.022	0.05
<b>Econ. Vulnerability</b>	Vulnerable w1	-0.081	-0.082	-0.083	-0.085
<b>Mother has disability</b>		-0.125	-0.122	-0.113	-0.097
<b>Mother's expectations</b>	Leaving Certificate or less	-0.350***	-0.356***	-0.326***	-0.264*
<b>(Ref: degree)</b>	Certificate/Diploma	-0.225***	-0.224***	-0.206**	-0.185**
<b>Reading score W1</b>	Lowest quintile		0.07	0.085	0.236**
<b>(Ref=Top quintile)</b>	Second lowest		0.105	0.104	0.163*
	Middle quintile		0.1	0.093	0.13
	Fourth quintile		0.017	0.011	0.035
<b>Parent-child relationship</b>	Conflict			-0.306***	-0.243***
	Closeness			0.083	0.060
<b>Mother's depression W1</b>	Depressed, Wave 1			-0.141	-0.115
<b>Self-concept Wave 1</b>	(range 0 to 10)				0.244***
<b>Constant</b>		8.386***	8.340***	8.379***	6.390***
<b>Observations</b>		7,254	7,114	7,103	6,671
<b>R-Squared</b>		0.069	0.069	0.08	0.143

Source: Growing Up in Ireland Survey at ages 9 and 13, analysis by authors. Children present in both waves of the survey.

**APPENDIX TABLE A4.2** Models for Disliking School (Logistic Regression Model, Odds Ratios)

		Model 1	Model 2	Model 3	Model 4
Disability status	Gen. learning/intellectual	2.484**	1.820**	1.724**	1.639*
(Ref: none)	Specific learning	1.274	1.101	0.969	0.935
	Emotional/behavioural	1.700**	1.322	1.324	1.298
	Physical/sensory	1.525	1.284	1.249	1.182
Sex (Ref: male)	Female		0.736**	0.743*	0.759*
Age mother at birth	Under 25		1.183	1.076	1.075
(Ref: 30-34)	25-29		1.128	1.083	1.058
	35-39		0.932	0.946	0.949
	40+		0.952	0.929	0.906
Family Type	Lone parent		1.617**	1.602**	1.553*
(Ref: Couple, good relationship)	Couple, distressed		0.953	0.948	0.905
Cohabiting	Cohabiting		1.364	1.253	1.284
Mother's education	Higher 2nd to Diploma		1.500*	1.358	1.321
(Ref: degree)	Lower 2nd level or less		1.142	1.081	1.071
Econ. Vulnerability	Vulnerable W1		0.967	0.968	0.945
Mother has disability	(in Wave 1)		1.167	1.174	1.200
Mother's expectations W1	Leaving Certificate or less		1.631**	1.511*	1.492*
(Ref: degree)	Certificate/Diploma		1.275	1.155	1.104
Reading score W1	Lowest quintile			1.571*	1.596*
(Ref=Top quintile)	Second lowest			1.309	1.303
	Middle quintile			1.421	1.432*
	Fourth quintile			1.089	1.095
Parent-child relationship	Conflict				1.154
	Closeness				0.741*
Mother's depression W1					1.236
Constant			0.082***	0.071***	0.074***
Observations			7,308	7,165	7,154

Source: *Growing Up in Ireland* Survey at ages 9 and 13, analysis by authors. Children present in both waves of the survey.

Note: p<0.001, \*\* p<0.01, \* p<0.05. School characteristics in Wave 1 (whether a special school or a DEIS school) are not statistically significant.

**APPENDIX TABLE A4.3** Regression Model for Self-Concept (Negative or Positive versus Average, Odds Ratios)

		Negative	Positive	Negative	Positive
Disability status	General learning/ intellectual	1.325	0.429***	1.193	0.523**
(Ref: none)	Specific learning	0.966	0.288***	0.775	0.342**
	Emotional/behavioural	2.173***	0.597*	1.740**	0.698
	Physical/sensory	1.136	0.668	1.113	0.656
Sex (Ref: male)	Female	1.613***	0.565***	1.735***	0.580***
Age mother at birth	Under 25	1.138	0.778	1.301	0.839
(Ref: 30-34)	25-29	1.236	0.907	1.253	0.961
	35-39	1.087	1.017	1.183	1.051
	40+	1.149	0.694	1.079	0.617*
Family Type	Lone parent	1.518**	0.966	1.362	1.035
(Ref: Couple, good relationship)	Couple, distressed	1.325*	0.976	1.271	1.024
	Cohabiting	1.221	1.149	1.163	1.151
Mother's education	Higher 2nd to Diploma	0.868	1.037	0.864	1.001
(Ref: degree)	Lower 2nd level or less	0.938	1.012	0.92	1.003
Econ. Vulnerability	Vulnerable w1	1.092	0.977	1.091	1.011
Mother has disability		1.208	0.902	1.216	0.857
Mother's expectations	Leaving Certificate or less	1.627**	0.696*	1.504*	0.694
(Ref: degree)	Certificate/Diploma	1.419**	0.778	1.321*	0.810
Reading score W1	Lowest quintile			0.892	1.150
(Ref=Top quintile)	Second lowest			1.003	1.171
	Middle quintile			0.914	0.940
	Fourth quintile			0.968	0.925
Relationship	Parent-child conflict			1.378**	0.723**
	Parent-child closeness			0.836	0.959
Mother's depression	Depressed, Wave 1			0.841	0.889
Self-concept W1	Negative vs. average			2.245***	0.597**
	Positive vs. average			0.604**	2.202***
Constant		0.117***	0.398***	0.107***	0.345***
Observations		7,254	7,254	6,671	6,671

Source: *Growing Up in Ireland* Survey at ages 9 and 13, analysis by authors. Children present in both waves of the survey.

# Chapter 5

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## Academic Outcomes

### 5.1 INTRODUCTION

Much of the literature examining the educational experiences and outcomes of children and young people with disabilities has been cross-sectional in nature, unable to assess how the performance and engagement of these students changes over time. This chapter, drawing on two waves of the GUI study, examines academic skills among young people at the ages of 9 and 13 years. In particular, the analysis considers the relationship between performance at 9 years of age for young people with different types of disabilities and the extent to which they progress by the age of 13 years (when students are in first or second year of second-level education), taking account of a host of social background, family relationship and school engagement measures. Crucially the educational expectations parents hold for their children at 9 years of age is also examined, particularly in terms of its role in students' academic development between 9 and 13 years.

### 5.2 ACADEMIC PERFORMANCE AT AGE 9 BY PRESENCE OF A DISABILITY

This first section examines children's performance on the Drumcondra Reading and Mathematics achievement tests at 9 years of age, and the extent of variation across children with different types of disabilities. While international research highlights lower average academic performance among all students with disabilities (Humphrey et al., 2012; Bouck, 2012), this study examines academic skills development among students with different types of disabilities. The results show significant variation in baseline achievement levels across the groups, with children with specific learning and, particularly, general learning/intellectual disabilities faring less well.

As shown in Chapter 3, just 22 per cent of children with no disability achieve Drumcondra Reading Test results in the bottom 30 per cent of scores (bottom three deciles) compared to 79 per cent of children with general learning/intellectual disabilities and 60 per cent of those with specific learning difficulties. The results for children with physical/visual/speech and those with emotional/behavioural difficulties are lower than children with no disabilities but notably higher than their peers with general learning/intellectual disabilities and specific learning difficulties (39 per cent and 40 per cent in the bottom three deciles respectively).

A similar pattern emerges for children’s Drumcondra Mathematics Test results with just 23 per cent of children with no disabilities in the bottom three deciles compared to 71 per cent of those with a general learning/intellectual disability and 49 per cent of those with specific learning difficulties. Of the children with disabilities, children with physical, visual or speech disabilities fared better, with similar results to children with no disabilities.

### 5.3 ACADEMIC SKILLS AGE 13 BY PRESENCE OF A DISABILITY

Turning attention to academic skills at 13 years of age,<sup>6</sup> results show important differences in student aptitude scores. Figure 5.1 shows the proportions of 13-year-olds falling into the lowest and highest performing quintile groups, by type of disability. Almost 60 per cent of young people with a general learning/intellectual disability fall into the lowest performing group on verbal reasoning, while nearly 55 per cent achieve at this lowest level in numeric ability. Those with an emotional/behavioural disability are also significantly over-represented in these low performing groups, with one-third in the lowest 20 per cent of scores (lowest quintile) for verbal reasoning and 31 per cent for numeric ability. Similarly, just under one-third of those with a specific learning disability are located in the lowest performing quintile on both assessments. Just 15 per cent of those without a disability achieved verbal reasoning and numeric ability results in the lowest quintile. Those with a physical/visual/speech disability do not differ significantly from those without a disability vis-à-vis the proportion located in the lowest or highest performance quintiles.

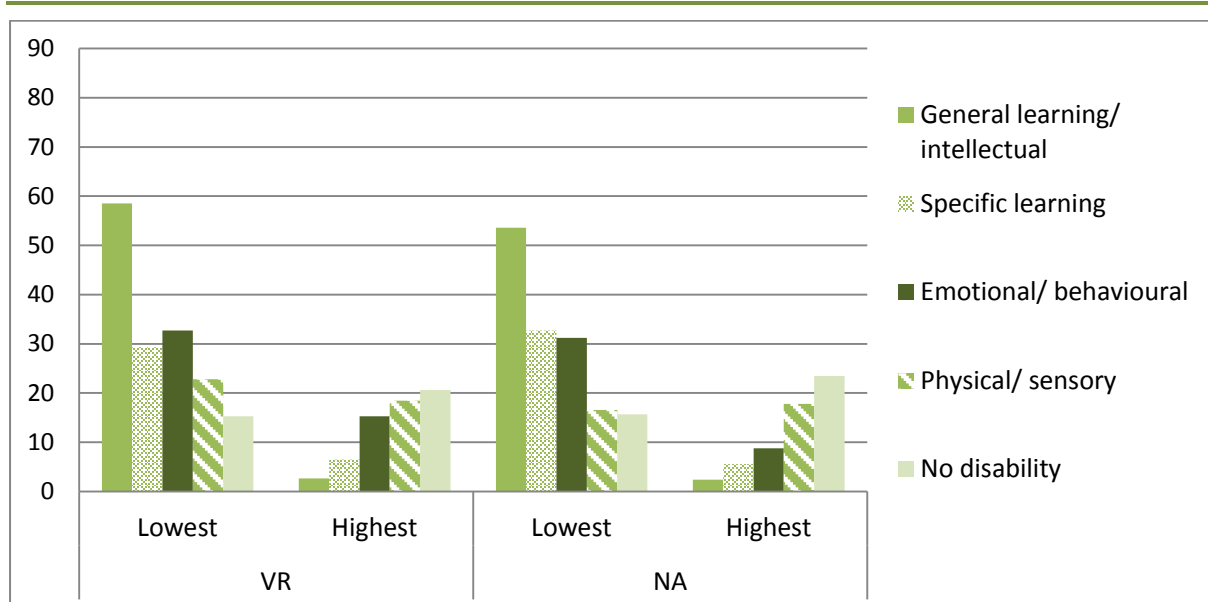
Figures 5.2 and 5.3 show notable differences in levels of performance on these aptitude tests for boys and girls. While overall girls are more likely to be in the lowest performing quintiles in both verbal reasoning and numeric ability, the gap between boys and girls is particularly wide for young people with general learning/intellectual, specific learning and emotional/behavioural disabilities. To illustrate, 77 per cent of girls with a general learning/intellectual disability fall into the lowest performing verbal reasoning quintile, compared to 44 per cent of boys with this disability. Likewise, females with an emotional/behavioural disability are twice as likely to fall into the lowest quintile on verbal reasoning as compared to boys with this disability. Across young people with each disability type, girls appear to perform at a lower level, suggesting that girls identified with each of

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<sup>6</sup> As discussed in Chapter 2, the Drumcondra tests administered with the 13-year-olds (Wave 2 of the GUI study) are *aptitude* tests – verbal reasoning and numeric ability tests. In contrast, reading and mathematics *achievement* tests were used for the survey of 9-year-olds (Wave 1 of GUI). Aptitude tests are typically used to predict how well a person might perform in a school situation, while achievement tests are generally used to assess what a person has learned prior to being tested.

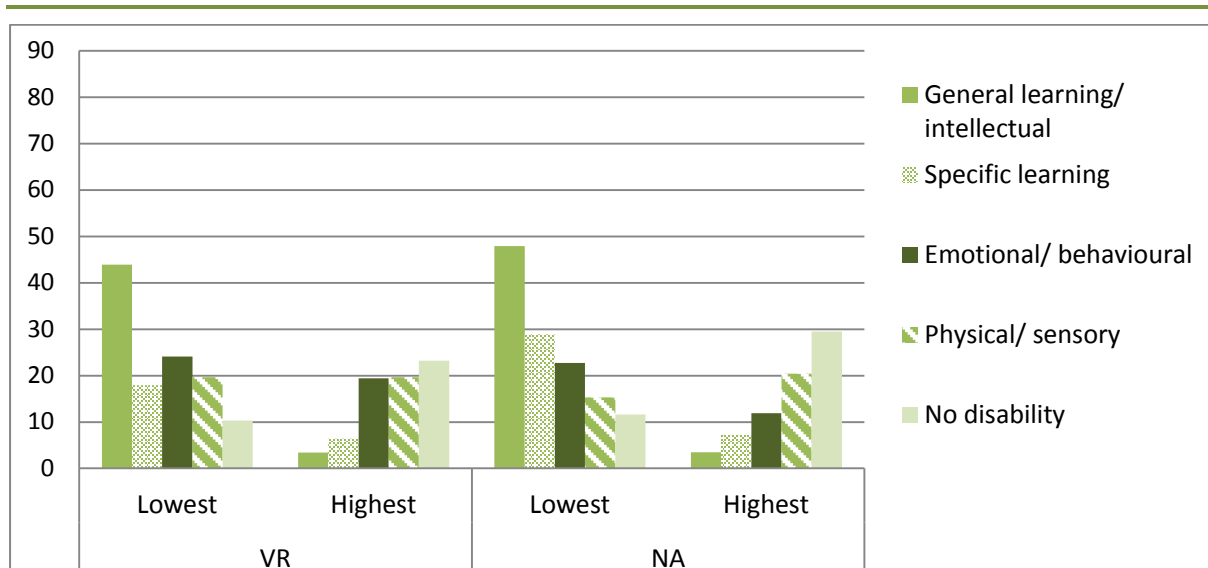
these disabilities are more severely hampered by the disability than their male counterparts.

**FIGURE 5.1** Performance on Aptitude Tests at Age 13 (Percentage in Lowest and Highest Quintiles in Verbal Reasoning and Numeric Ability), by Presence of a Disability



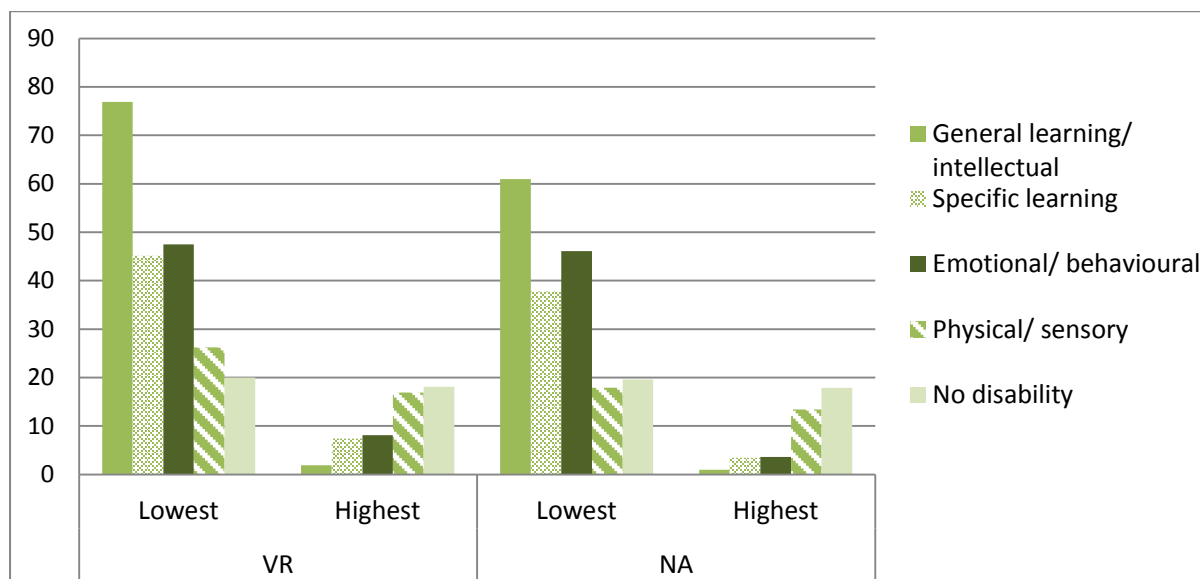
Source: Growing Up in Ireland Survey at ages 9 and 13, analysis by authors. Children present in both waves of the survey.

**FIGURE 5.2** Performance of Males on Aptitude Tests at Age 13 (Percentage in Lowest and Highest Quintiles in Verbal Reasoning and Numeric Ability), by Presence of a Disability



Source: Growing Up in Ireland Survey at ages 9 and 13, analysis by authors. Children present in both waves of the survey.

**FIGURE 5.3** Performance of Females on Aptitude Tests at Age 13 (Percentage in Lowest and Highest Quintiles in Verbal Reasoning and Numeric Ability), by Presence of a Disability



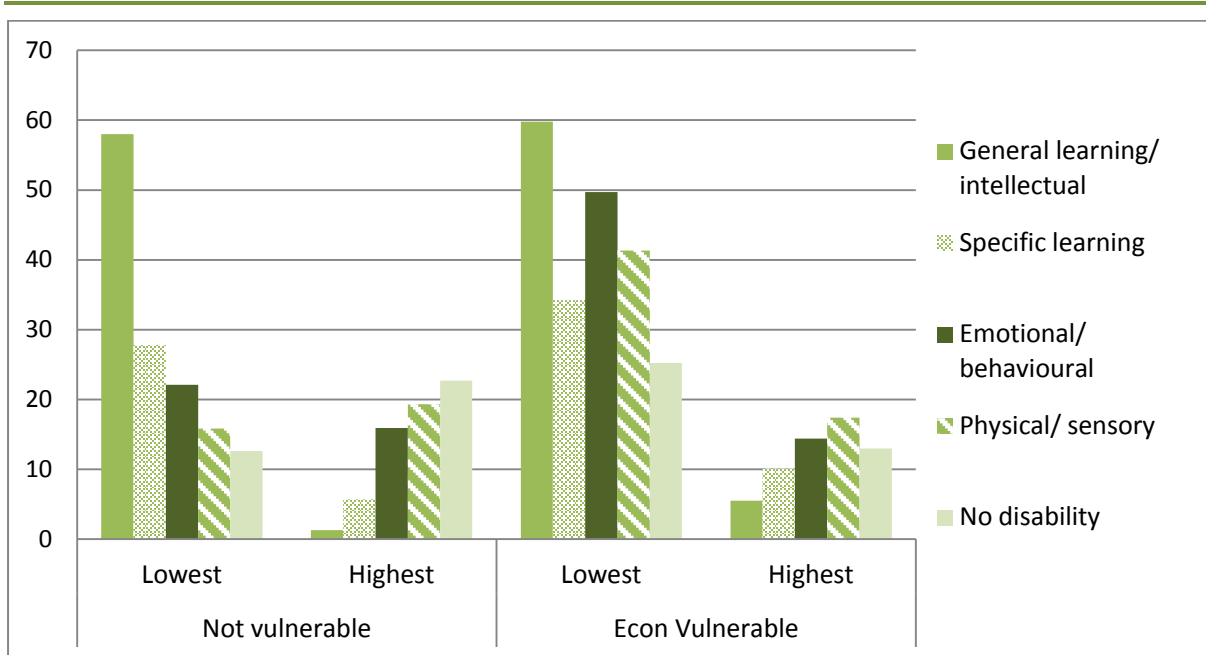
Source: *Growing Up in Ireland* Survey at ages 9 and 13, analysis by authors. Children present in both waves of the survey.

#### 5.4 ACADEMIC SKILLS AT AGE 13 BY PRESENCE OF A DISABILITY AND SOCIO-ECONOMIC CHARACTERISTICS

Further differences in academic skill development are apparent when the economic status of the family is also considered. Taking the measure of economic vulnerability (as described in Chapter 2), much higher proportions of young people in economically vulnerable homes are located in the lowest performing quintiles than their counterparts in non-vulnerable homes, regardless of disability status or disability type. Academic performance differences are particularly large for young people with emotional/behavioural or physical/visual/speech disabilities: while 22 per cent of those with emotional/behavioural disabilities from non-vulnerable families perform at the lowest level in verbal reasoning, this is the case for half of those in economically vulnerable families (Figure 5.4). Among those with physical/sensory disabilities, 11 per cent of those from non-vulnerable families achieve in the lowest quintile in numeric ability (Figure 5.5), compared to 29 per cent of their counterparts in economically vulnerable households. While it is difficult to unpack cause and effect, it appears the severity of disability is typically greater among those from socio-economically disadvantaged families. Further, the extent of socio-economic disadvantage may compound the difficulties faced by children and young people with disabilities. It may also be the case that middle class families are better placed to access and resource additional learning and other supports for their children, so the impact of the disability in terms of academic development may be lessened.

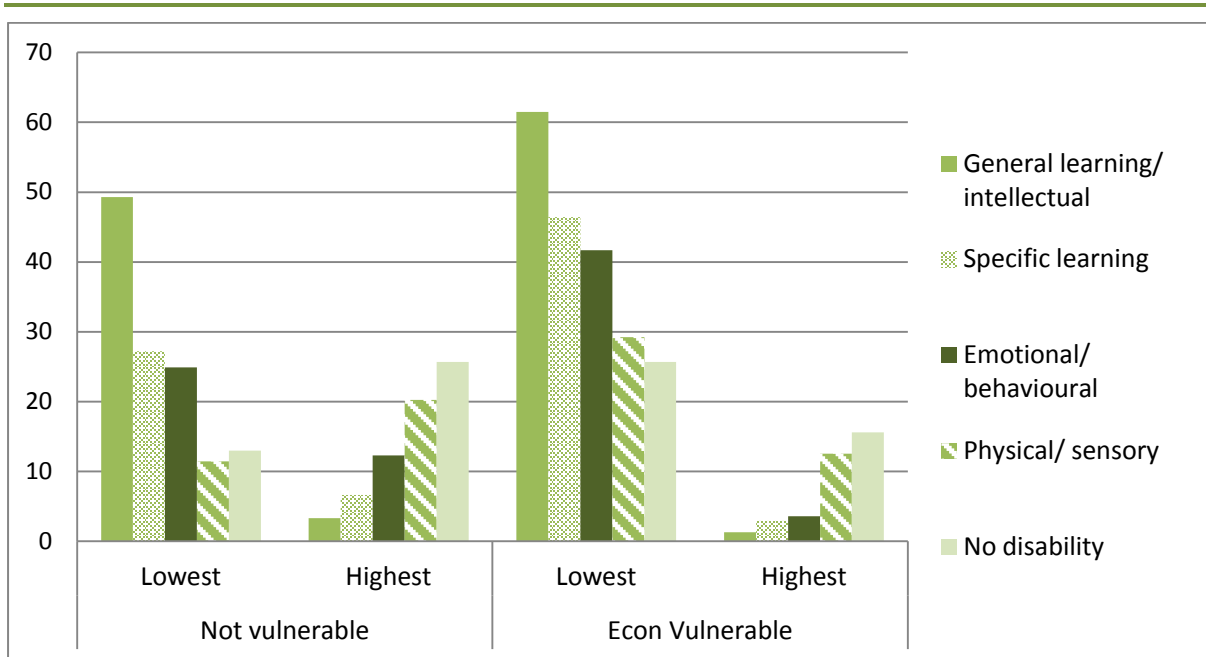


**FIGURE 5.4** Performance on Verbal Reasoning Aptitude Tests at Age 13 (Percentage in Lowest and Highest Quintiles), by Presence of a Disability and Economic Vulnerability of the Household



Source: Growing Up in Ireland survey at ages 9 and 13, children present in both waves of the survey.

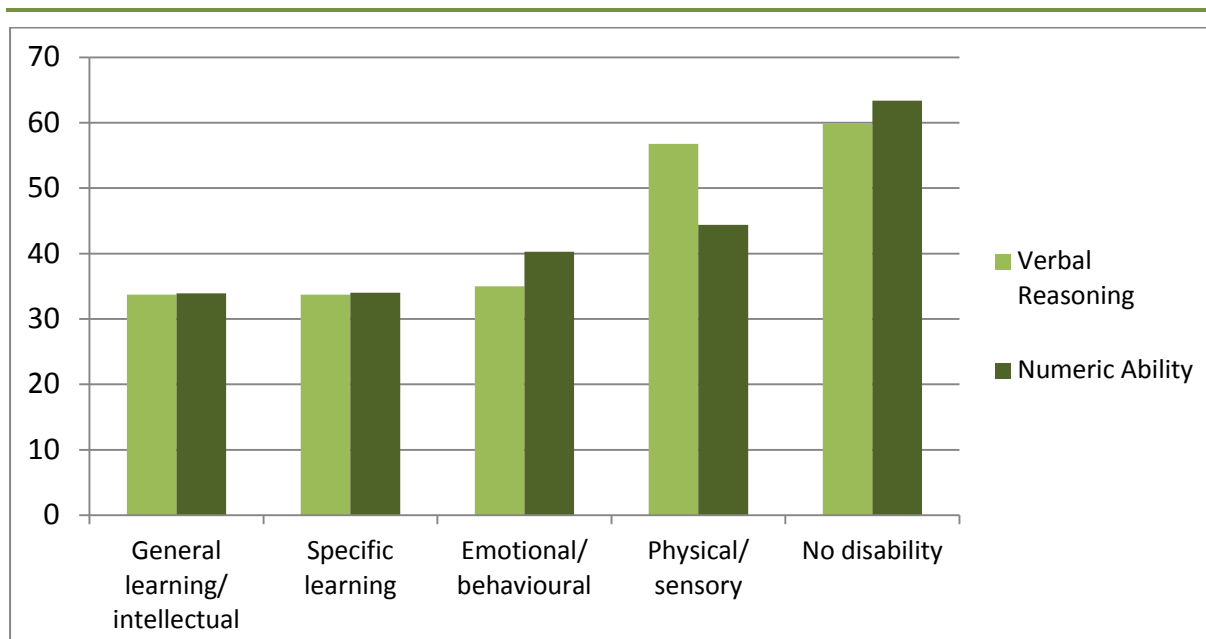
**FIGURE 5.5** Performance on Numeric Ability Aptitude Tests at Age 13 (Percentage in Lowest and Highest Quintiles), by Presence of a Disability and Economic Vulnerability of the Household



Source: Growing Up in Ireland survey at ages 9 and 13, children present in both waves of the survey.

Central to the theme of this report, educational expectations parents hold for their children are of key interest. At a descriptive level, it appears that parental expectations when children are 9 years of age are strongly associated with how young people perform at 13 years. Taking account of just those who perform at the lowest levels in verbal reasoning and numeric ability at 13 years, parental expectations at age 9 differ considerably across the disability types (Figure 5.6). While 60 per cent of this performance group without a disability are expected by their parents to achieve a degree, this is the case for just one-third of those with general or specific learning disabilities. Slightly higher proportions of those with an emotional/behavioural disability are expected to achieve a degree (35-40 per cent), while expectations for those with a physical/visual/speech disability are slightly higher. The multivariate models will examine the relationship between expectations and academic development, taking account of a host of child and family characteristics.

**FIGURE 5.6** Of Those in the Lowest Performing Quintiles Age 13, Percentage Expected by Parents to Achieve a Degree by Presence of a Disability



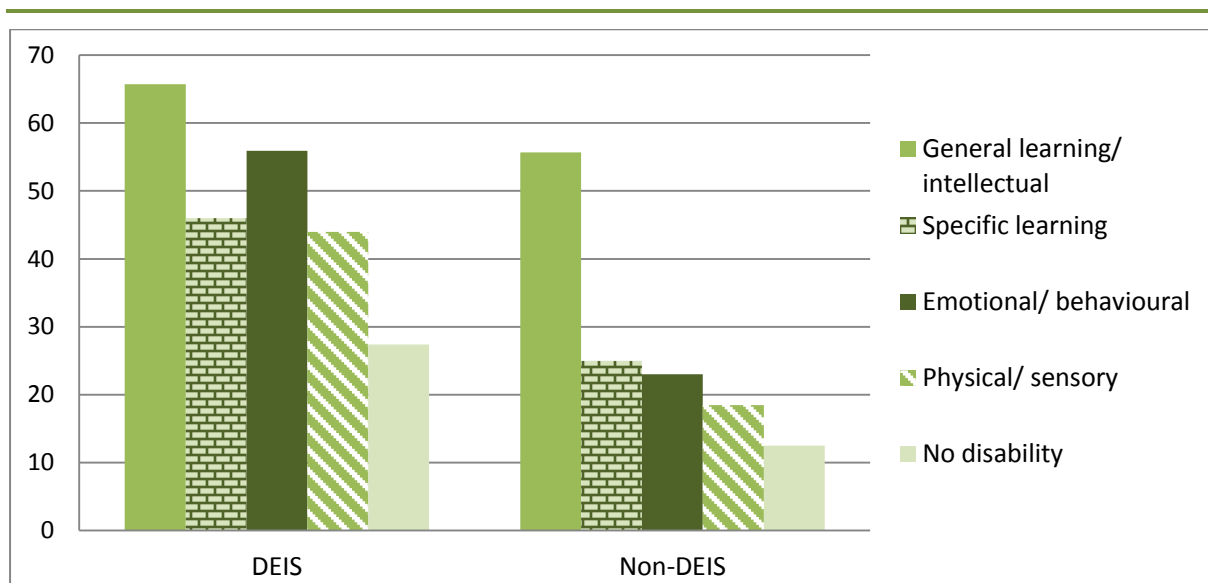
Source: *Growing Up in Ireland* survey at ages 9 and 13, children present in both waves of the survey.

## 5.5 ACADEMIC SKILLS AT AGE 13 BY PRESENCE OF A DISABILITY AND SCHOOL CONTEXT

Earlier research has highlighted the role of school context, in particular the socio-economic composition of the school, in the identification of children as having special educational needs (McCoy et al., 2012). This section examines the levels of academic skills of students with different types of disability in schools with higher and lower levels of socio-economic disadvantage. In line with earlier

studies, DEIS status is used to identify more and less socio-economically disadvantaged schools.<sup>7</sup> Across students with each type of disability, and without a disability, those attending DEIS schools at second level are more likely to perform at a lower level than their counterparts in non-DEIS schools. The academic performance gap between DEIS and non-DEIS students is particularly large for young people with specific learning, emotional/behavioural and physical/visual/speech disabilities: while 46 per cent of those with specific learning disabilities in DEIS schools achieve verbal reasoning scores in the lowest quintile, this is the case for just one-quarter of their counterparts in non-DEIS schools (Figure 5.7). In total 56 per cent of those with emotional/behavioural disabilities in DEIS schools achieve in the bottom fifth of the verbal reasoning performance distribution nationally, compared to 23 per cent of those in non-DEIS schools. Among those with a physical/visual/speech disability, 35 per cent in DEIS schools perform in the lowest numeric ability quintile, compared to 13 per cent of those in non-DEIS schools (Figure 5.8). This reflects the nature of intake to such schools, with much higher levels of socio-economic disadvantage and typically more complex student needs than in other school settings (McCoy et al., 2014).

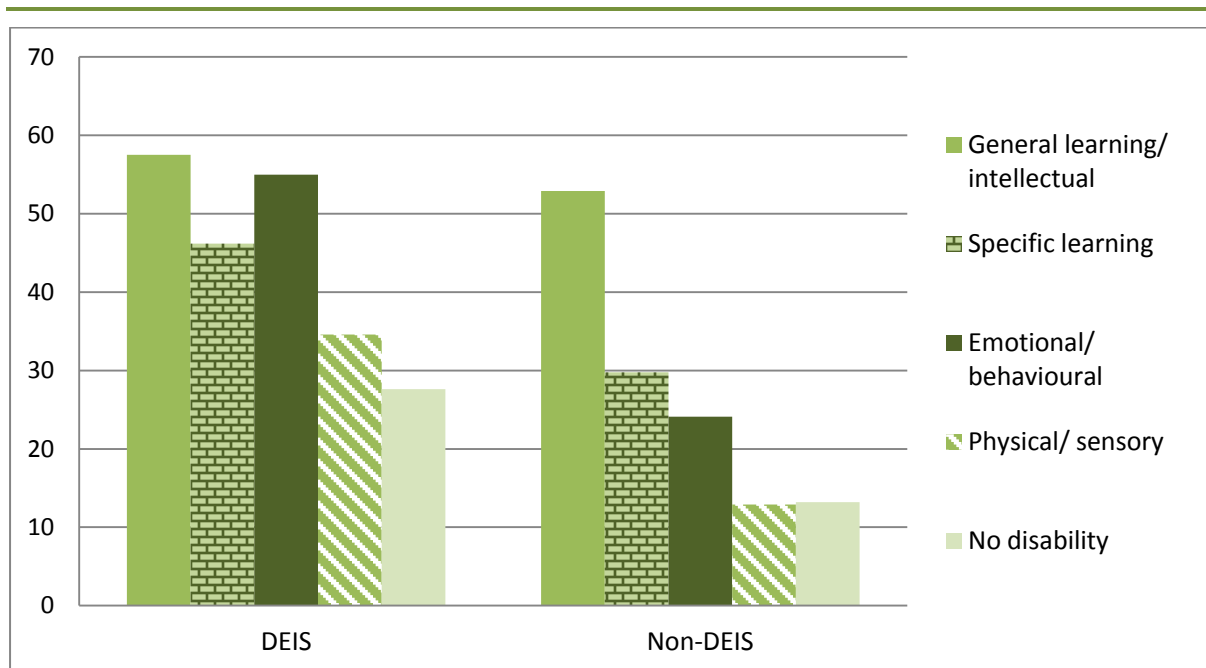
**FIGURE 5.7** Percentage in the Lowest Performing Verbal Reasoning Quintile by Presence of a Disability and School DEIS Status



Source: *Growing Up in Ireland* survey at ages 9 and 13, children present in both waves of the survey.

<sup>7</sup> The Delivering Equality of Opportunity in Schools (DEIS) programme was introduced in 2006 to provide additional funding, access to literacy and numeracy programmes and assistance with school planning to socio-economically disadvantaged primary and second-level schools. Second-level schools were identified for inclusion based on their ranking on an index combining the percentage of medical cards at junior cycle, the percentage of students that dropped out prior to completing junior cycle, the percentage retention rate to the end of junior cycle, overall performance score at Junior Certificate and the percentage retention rate to the end of senior cycle (Weir et al., 2014).

**FIGURE 5.8** Percentage in the Lowest Performing Numeric Ability Quintile by Presence of a Disability and School DEIS Status



Source: *Growing Up in Ireland* survey at ages 9 and 13, children present in both waves of the survey.

## 5.6 CHANGES IN ACADEMIC SKILLS BETWEEN 9 AND 13 YEARS

This final section considers the relationship between child disability status at 9 years of age and their probability of being located in the lowest performing verbal reasoning and numeric ability quintiles at age 13. As in Chapter 3 we use logistic regression models, taking account of the clustering at the school level at age 9. The models take account of a host of child (gender, academic performance at 9 years, in reading or mathematics depending on the model) and family characteristics (parental age, family relationship, parental education, economic vulnerability, Pianta score, assistance with homework and attendance at school meetings). The outcome measure is performance in the lowest (verbal reasoning or numeric ability) quintile at age 13 years. Hence, the models are measuring the probability of not progressing higher than the lowest quintile between 9 and 13 years for young people with different disabilities, and the role of parental expectations and school context in these outcomes.

**TABLE 5.1** How Much More Likely Are Children with a Disability to Perform in the Lowest Verbal Reasoning Quintile? (Odds Ratios)

	Model 1 (no controls)	Model 2 (controls for individual and family characteristics and parental expectations)	Model 3 (add controls for reading score at age 9)	Model 4 (add control for school DEIS status)
No disability	1.000	1.000	1.000	1.000
General learning/intellectual	7.889	5.768	2.679	2.834
Specific learning	2.405	2.263	n.s.	n.s.
Emotional/behavioural	2.678	2.293	2.374	2.150
Physical/sensory	1.687	1.765	n.s.	n.s.
Parents expect Leaving Certificate or less		2.737	1.989	1.964
Parent expects certificate/diploma		2.493	1.809	1.809
Parent expects degree		1.000	1.000	1.000

Source: *Growing Up in Ireland* Survey at ages 9 and 13, analysis by authors. Children present in both waves of the survey.

Notes: 'n.s.' = not statistically significant. See Appendix Table A5.1 for the full model. All figures shown differ significantly from the reference group (Ref.).

**TABLE 5.2** How Much More Likely Are Children with a Disability to Perform in the Lowest Numeric Ability Quintile? (Odds Ratios)

	Model 1 (no controls)	Model 2 (controls for individual and family characteristics and parental expectations)	Model 3 (add controls for maths score at age 9)	Model 4 (add control for school DEIS status)
No disability	1.000	1.000	1.000	1.000
General learning/intellectual	6.017	3.911	2.457	2.530
Specific learning	2.459	2.148	n.s.	n.s.
Emotional/behavioural	2.358	1.815	1.615	1.535
Physical/sensory	n.s.	n.s.	n.s.	n.s.
Parents expect Leaving Certificate or less		2.702	2.252	2.230
Parent expects certificate/diploma		1.783	1.411	1.398
Parent expects degree		1.000	1.000	1.000

Source: *Growing Up in Ireland* Survey at ages 9 and 13, analysis by authors. Children present in both waves of the survey.

Notes: 'n.s.' = not statistically significant. See Appendix Table A5.2 for the full model. All figures shown differ significantly from the reference group (Ref.).

Overall, Tables 5.1 and 5.2 show wide variation in the probability of being in lowest verbal reasoning and numeric ability quintiles at age 13 by disability type – differences which persist when we take account of gender, family characteristics

and academic performance at 9 years (full results shown in Appendix Tables A5.1 and A5.2). As shown in Model 1, young people with general learning/intellectual, emotional/behavioural and specific learning disabilities are significantly more likely to be located in the lowest verbal reasoning (7.9, 2.7 and 2.4 times respectively) and numeric ability (6.0, 2.4 and 2.5 times respectively) quintiles at 13 years of age. Young people with physical/visual or hearing disabilities do not differ from those without disabilities in their likelihood of performing at this lower level in the numeric ability tests.

Model 2 takes account of the range of family characteristics, examining whether young people with different disabilities are more likely to be in the lowest performing quintiles. Girls are more likely to be in the lowest verbal reasoning and numeric ability quintiles, even after taking account of their academic performance at 9 years of age. Primary care giver (predominantly mother) educational level is by far the strongest predictor of academic performance at 13 years – with those whose mothers have second-level and, particularly, less than second-level education, substantially more likely to perform at the lowest level academically. In the case of verbal reasoning results, for example, young people whose mothers attained less than upper second-level education are five times more likely to perform in the lowest quintile. Taking account of this range of family socio-economic and emotional characteristics, those with emotional/behavioural and, particularly, general learning/intellectual disabilities are significantly more likely to be in the lowest quintiles (in both verbal reasoning and numeric ability). In the case of numeric ability, young people with specific learning disabilities are also significantly more likely than those without disabilities to be in the lowest quintile at 13 years, although they do not differ to those without disabilities in terms of changes in their academic skills.

Model 2 also includes the level of education parents expect their child to achieve (as reported when the child was 9 years of age). Parental expectations play a significant role, above and beyond the impact of the wide range of child and family characteristics. Where parents expect their child to achieve a post-school diploma or second-level qualification, rather than a higher education degree, young people are more likely to perform at the lowest quintile level in both verbal reasoning and numeric ability. Where parents don't expect their son/daughter to progress beyond the Leaving Certificate level, these young people are three times more likely to perform at the lowest level at age 13. Young people with general learning/intellectual, emotional/behavioural and specific learning disabilities remain more likely to achieve the lowest performance level, but the effects lessen. Hence, young people with these disabilities perform less well partly as a result of lower parental expectations. In Chapter 3 we saw how

parental expectations could fall behind academic achievement. It is difficult to disentangle cause and effect – whether low expectations are a cause or a consequence of low achievement.

The third model includes performance on the reading and mathematics achievement tests at 9 years of age, so the focus shifts to changes in academic development as young people move from primary to second-level education. As we focus on the chances of a young person performing at lowest quintile level (in aptitude tests) at age 13, the model presents the role of child and family characteristics in shaping this, controlling for their level of performance at age 9. The results show performance at 9 years is a strong predictor of academic outcomes at age 13. In the case of numeric ability, young people who perform in the bottom fifth at age 9 are 16 times more likely than the top performers to remain in the bottom fifth at age 13. The effects of socio-economic disadvantage and parental education are somewhat reduced when we take account of prior performance, but they remain significant predictors of academic development. Similarly, mother’s educational expectations play a somewhat smaller role when we are looking at change in academic development, but they continue to be a significant influence on student academic outcomes. The effects of having a disability are also somewhat lower, suggesting that young people with general learning, specific learning and emotional and behavioural disabilities do less well academically at 13 years of age because they did less well at 9 years of age. However, those with general learning and emotional/behavioural disabilities remain more likely to perform at the lowest level – these students fare less well academically than their peers as they move from primary to second-level education. Additional models tested the extent to which the effects of parental education on academic development vary by disability type but no significant effects were found.

The final model includes school DEIS status when the child was in primary school. For both verbal reasoning and numeric ability models, attendance at an urban DEIS school increases the chances of performing in the lowest quintile. These results are line with recent cross-sectional research showing that children attending the most disadvantaged primary school contexts (Urban Band 1 DEIS) achieve less well in reading and mathematics, a so-called contextual or multiplier effect (McCoy et al., 2014).<sup>8</sup> Hence for children of similar characteristics, with similar family environments and performance levels at age 9, and taking account of disability status, those attending socio-economically disadvantaged school

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<sup>8</sup> The McCoy et al. (2014) research showed that the achievement gap at primary school level is found to reflect differences in teacher experience and turnover, the concentration of additional learning needs, absenteeism levels and children’s engagement in school.

contexts perform less well at 13 years. Additionally, those with general learning/intellectual and emotional/behavioural disabilities remain more likely than those without a disability to perform in the lowest quintile.

## 5.7 SUMMARY

This chapter has examined young people's academic skills at 9 and 13 years of age, in particular assessing which groups are more likely to perform at a low level on transition to second-level school after taking account of their performance during the mid-primary school years. Those with a general learning/intellectual and emotional/behavioural disability, in particular, are more likely than those without a disability to be in this lowest performing group, differences which persist when account is taken of a range of child and family characteristics. Those with physical and sensory disabilities do not differ from those without disabilities in their academic skills (as measured in terms of their likelihood of remaining in the lowest performing group) between 9 and 13 years. It is also interesting to note that those with specific learning disabilities are also faring well and do not differ from those without disabilities in their academic trajectories. Mother's education is a strong predictor of academic performance at age 13, even taking account of disability status and performance at age 9. Mother's educational expectations for their child at age 9 are also significant predictors of academic performance at 13 years. Finally, school context also shapes academic development, those students who attended Urban Band 1 and Band 2 DEIS schools are more likely to perform in the lowest verbal reasoning and numeric ability quintiles at age 13.



**APPENDIX TABLE A5.1** Logistic Regression: Probability of Being in Lowest Verbal Reasoning Quintile Age 13 (Odds Ratios)

Heading		Model 1	Model 2	Model 3	Model 4
<b>Child Characteristics</b>					
Disability Status	General learning /intellectual	7.889***	5.768***	2.679***	2.834***
(Ref: none)	Specific learning	2.405***	2.263***	1.055	1.104
	Emotional/behav.	2.678***	2.293***	2.374***	2.150***
	Physical/sensory	1.687*	1.765*	1.319	1.298
Sex (Ref: male)	Female		2.691***	3.012***	3.036***
<b>Family Characteristics</b>					
Family Type	Lone parent		1.142	1.216*	1.244**
(Ref: couple good relationship)					
Cohabiting	Cohabiting		0.995	0.954	0.861
Econ. Vulnerability W1	Vulnerable		1.355*	1.228	1.153
Age mother at birth	Under 25		1.646***	1.235	1.134
(Ref: 30-34)	25-29		1.273*	1.106	1.066
	35-39		0.847	0.874	0.913
	40+		1.111	0.903	0.924
Mother's Education	Lower 2nd level/less		4.707***	2.998***	2.656***
(Ref: degree)	Higher 2nd level/diploma		2.222***	1.713***	1.680**
Mother has disability	Disability		0.910	1.003	1.017
Mother/child Conflict	Poor		1.342**	1.315*	1.277*
Mother/child Closeness	Poor		1.035	1.063	1.115
Parent assistance homework (Ref: less)	Regularly to always		1.101	0.879	0.932
Parent attendance meetings	Yes		0.889	0.796	0.717
Mother's Expectations	LC or below		2.737***	1.989***	1.964***
(Ref: degree)	Diploma		2.493***	1.809***	1.809***
Reading Score W1	Lowest quintile			77.87***	75.88***
(Ref: Top quintile)	Second quintile			27.93***	27.62***
	Middle			9.523***	9.517***
	Fourth quintile			3.935**	4.000**
<b>School Characteristics W1</b>					
DEIS	Urban Band 1 DEIS				2.478***
(Ref: Non-DEIS)	Urban Band 2				1.903**
	Rural				1.040
Constant		0.178***	0.0167***	0.0015***	0.0014***
Observations		7,126	7,100	6,974	6,974

Source: *Growing Up in Ireland* Survey at ages 9 and 13, analysis by authors. Children present in both waves of the survey.

\*\*\* p<0.001, \*\*p<0.01, \*p<0.05.

**APPENDIX TABLE A5.2** Logistic Regression: Probability of Being in Lowest Numeric Ability Quintile Age 13 (Odds Ratios)

Heading		Model 1	Model 2	Model 3	Model 4
<b>Child Characteristics</b>					
Disability Status	General learning / intellectual	6.017***	3.911***	2.457***	2.530***
(Ref: none)	Specific learning	2.459***	2.148***	1.532	1.579
	Emotional/behav.	2.358***	1.815**	1.615*	1.535*
	Physical/sensory	1.027	0.977	0.863	0.847
Sex (Ref: male)	Female		1.879***	1.762***	1.771***
<b>Family Characteristics</b>					
Family Type	Lone parent		0.975	0.979	0.999
(Ref: couple good relationship)					
Cohabiting	Cohabiting		1.130	1.033	0.975
Econ. Vulnerability W1	Vulnerable		1.727***	1.581**	1.546**
Age mother at birth	Under 25		1.726***	1.507**	1.439*
(Ref: 30-34)	25-29		1.292*	1.209	1.187
	35-39		0.865	0.849	0.866
	40+		1.170	1.100	1.109
Mother's Education	Lower 2nd level/less		3.159***	2.372***	2.232***
(Ref: degree)	Higher 2nd level/diploma		2.063***	1.879***	1.859***
Mother has disability	Disability		0.766	0.773	0.788
Mother/child Conflict	Poor		1.358**	1.314**	1.302*
Mother/child Closeness	Poor		0.987	1.040	1.079
Parent assistance homework (Ref: less)	Regularly to always		1.539***	1.358**	1.405**
Parent attendance meetings	Yes		0.835	0.728	0.688
Mother's Expectations	LC or below		2.702***	2.252***	2.230***
(Ref: degree)	Diploma		1.783***	1.411**	1.398**
Maths Score W1	Lowest quintile			16.19***	15.75***
(Ref: Top quintile)	Second quintile			9.428***	9.395***
	Middle			5.614***	5.667***
	Fourth quintile			2.729**	2.742***
<b>School Characteristics W1</b>					
DEIS	Urban Band 1 DEIS				1.550*
(Ref: Non-DEIS)	Urban Band 2				1.772***
	Rural				0.079
Constant		0.193***	0.0362***	0.0093***	0.0089***
Observations		7,096	7,070	7,017	7,017

Source: *Growing Up in Ireland Survey* at ages 9 and 13, analysis by authors. Children present in both waves of the survey.  
 \*\*\* p<0.001, \*\*p<0.01, \*p<0.05.

# Chapter 6

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## Conclusions and Implications

### 6.1 INTRODUCTION

In this chapter, we draw together the findings of the report to address the research questions and consider the implications of the findings for policy. To recap, the questions were as follows:

- What accounts for differences in the academic expectations parents hold for their children? How important are the child's own disability status at age 9 and the primary care giver's own level of education?
- To what extent do parental expectations of children at age 9 impact on socio-emotional outcomes for the young person at age 13, including self-concept and school engagement?
- To what extent do parental expectations for the academic achievement of their children at age 9 influence the young person's academic skills at age 13?

In the following, we will discuss the findings related to each of these in turn before considering the implications for policy.

### 6.2 UNDERSTANDING PARENTAL EXPECTATIONS

Before focussing on the extent to which parental expectations impact on students' social and academic development, we firstly examined in Chapter 3 the factors influencing parent having low expectations, controlling for other factors. The analyses showed that having a disability, and in particular having a general learning/intellectual disability, impacts on the long-term educational expectations parents hold for their child. Parents of children with general learning/intellectual disabilities are far more likely to expect their child to not go beyond certificate/diploma level compared to parents of children with no disabilities, even after taking into account family characteristics and the child's actual achievement on reading and mathematics tests. Parental expectations are also lower for children with specific learning difficulties and emotional/behavioural difficulties, compared to parents of children with no disability. In other words, for children with these specific disabilities, parents' expectations for their children's future education lag behind their child's actual performance. However, this expectations gap does not hold in the case of children with a physical or a sensory disability.

The child's gender also appears to play a role with parents of girls more likely than parents of boys to expect their child to attain higher education qualifications, all else being equal.

The findings also show that mother's own level of education is a major driver of the educational expectations they hold for their child. Mothers with Leaving Certificate (or lower) qualifications are 12 times more likely than mothers with a degree to hold lower expectations for their children. We also found a relationship between the nature of the parent-child relationship and educational expectations. Notably, mothers who reported high levels of conflict with their child, or those who reported not being 'close' to their child, had lower educational expectations for their child.

Finally, and in line with research findings internationally, the model shows that parental educational expectations are influenced by the child's actual academic performance. Using test scores from the Drumcondra Reading and Mathematics tests, we find that parents of children in the lowest quintiles for reading and mathematics tests are more likely to have lower expectations for their child compared to parents of children in the top quintiles.

Having established that parental academic expectations are strongly influenced by the presence of a childhood disability, without being completely determined by it, we then turned to an examination of both disability and parental expectations on outcomes for young people at age 13.

### **6.3 UNDERSTANDING SOCIO-EMOTIONAL OUTCOMES**

In Chapter 4 we considered the impact of childhood disability and parental academic expectations on two socio-emotional outcomes for young people at age 13: self-concept and school engagement.

Self-concept was measured by the 60-item Piers-Harris scale that covered six domains: behaviour, popularity, happiness, intellectual, physical and freedom from anxiety. We used a measure of disliking school ('don't like it very much' or 'hate it') as an indicator of school engagement.

There were differences by type of disability in self-concept, and it was young people with general learning/intellectual disability and those with emotional/

behavioural disability who were most disadvantaged compared to their counterparts with no disability. Adolescents with any kind of disability tended to have a poorer self-concept, even after taking account of parental expectations. Much of their self-concept at age 13 can be traced to low self-concept at age 9. However, for students with general learning/intellectual disability and with emotional/behavioural disability there appears to be a further drop in self-concept by age 13. This pattern persisted when we took account of other characteristics such as gender, age and education of the mother, family type, family relationships, economic vulnerability, parental expectations and reading ability at age 9. On the ten point scale, the self-concept of those with general learning/intellectual or emotional/behavioural disability at age 13 was 0.3 points lower even after taking account of these other influences.

Disliking school was also more common among young people with general learning/intellectual disability and this relationship persisted when other characteristics were controlled in the statistical model. For instance, the odds of disliking school were 1.6 times higher for those with general learning/intellectual disability than for those with no disability, even after taking account of other factors including gender, age and education of the mother, family type, family relationships, economic vulnerability, parental expectations and reading ability at age 9. Young people with emotional/behavioural disabilities did not differ significantly from those with no disability in terms of disliking school when these other characteristics were taken into account.

Parental academic expectations were important for both self-concept and disliking school. The persistence of the relationship to self-concept when other characteristics were controlled was particularly striking. We might have expected to find an association with disliking school but the association with general self-concept – which is broader than academic self-concept – is far from self-evident. Where parental academic expectations were lower, the student had a poorer self-concept. For instance, where the mother expected the young person to attain at most a Leaving Certificate qualification, the young person's self-concept at age 13 was -0.26 points lower than the case where the mother expected a degree, even after controlling for self-concept at age 9.

There was also a significant difference in the probability of disliking school by parental expectations. Where the mother expected the young person to attain a Leaving Certificate or lower qualification, the odds of the young person disliking school at age 13 were 1.5 times higher. However, the difference in the probability of disliking school was not statistically significant between children of parents

who expected the young person to get a degree and of those parents who expected the young person to attain a certificate or diploma.

Other important patterns were the differences by gender and by family type. Females were less likely to dislike school, but had a lower self-concept overall than males. Children from lone parent families had a lower self-concept than those from couple families and a higher probability of disliking school. These patterns remained even after taking account of mother's education, economic vulnerability and the young person's reading score at age 9.

The quality of the relationship between the parent and child was also important, but the aspect of the relationship that mattered was different depending on whether the outcome was self-concept or disliking school. In the case of self-concept, conflict between the mother and child at age 9 was associated with a lower self-concept at age 13 but there was no association with closeness of the relationship. In the case of disliking school, a close relationship between the mother and the young person tended to reduce the chance of disliking school but there was no association with conflict in the parent-child relationship.

#### **6.4 UNDERSTANDING ACADEMIC OUTCOMES**

Chapter 5 considered young people's academic skills at age 13, taking account of a host of individual, family and school characteristics, as well as parental educational expectations. Performance in Drumcondra verbal reasoning and numeric ability aptitude tests, typically when adolescents were in their first or second year of second-level education, formed the main focus of this chapter. Given the longitudinal nature of the study, having reading and mathematics achievement test scores at age 9 allowed us to examine changes in academic development as young people move from primary to second-level education, and the extent to which patterns differed for young people with different types of disabilities.

Focusing on the probability of a young person performing at the lowest quintile level (bottom fifth in the performance distribution) in verbal reasoning or numeric ability, young people with general learning/intellectual and emotional/behavioural disabilities are significantly more likely to be in this group relative to those without disabilities. Interestingly, those with physical/visual/speech and those with specific learning disabilities are not statistically more likely to be low performers. These results hold when we take account of academic performance at 9 years of age. Hence, in terms of change over the four years (9 to 13 years of age), students with general learning/intellectual and emotional/behavioural

disabilities are faring less well than other groups of young people. In contrast, young people with physical and sensory and specific learning disabilities are faring better and their patterns of academic development are on a par with those of young people without disabilities.

These results hold when we take account of a range of individual and family characteristics, including gender, engagement in school, mother's age at the birth, family type and socio-economic characteristics of the family. Of these social background characteristics, mother's education is by far the strongest predictor of low performance at age 13 – adolescents whose mothers achieved lower secondary education or less are between 3.2 and 2.2 times as likely to be low performers in numeric ability at age 13, even taking account of their performance at age 9. In other words, parental education is a strong predictor of academic development over the primary to second-level school transition period. Interestingly, parent-child relationship characteristics and family characteristics (like the family type) are generally not significant predictors of academic development over this period, with the exception of higher levels of parent-child conflict associated with lower levels of academic development. However, for both verbal reasoning and numeric ability, parental expectations are highly significant in shaping both academic performance at age 13 and skills development between 9 and 13 years. Where the primary caregiver expects their son/daughter to achieve not more than Leaving Certificate education, young people are significantly more likely to be low performers in both verbal reasoning and numeric ability at age 13. These findings persist once we take account of the child's academic performance at age 9, gender, parental education and family socio-economic characteristics. It is striking that, as found by other research (e.g. Jacobs, 1991) parents' beliefs about their children's abilities have a strong influence on achievement, even after taking account of previous performance.

Finally, in line with recent research (McCoy et al., 2014), the models examine the extent to which academic development is shaped by school context, in particular the socio-economic composition of the school, as measured by DEIS status. The results show a significant contextual effect – students who attended the most disadvantaged school contexts (Urban Band 1 schools) are twice as likely to be low performers in verbal reasoning, all else being equal. Taking account of school context, as well as performance at 9 years and the host of individual and family characteristics, young people with general learning/intellectual and emotional/behavioural disabilities remain more likely to be low academic performers at 13 years of age, while those with specific learning disabilities and physical/visual/speech disabilities do not differ to those without disabilities in their academic development.

## 6.5 IMPLICATIONS FOR POLICY

### Need to Promote Equality of Opportunity

The finding that parental expectations can inhibit young people from maximising their potential is striking. These expectations are likely to be conditioned by what parents know of their children's preferences and abilities, but they are also likely to be influenced by what parents see happening in the world. Even when we control for children's academic performance, parental expectations are lowered where the child has a disability and also where the main caregiver has a lower level of education. Fewer young people with a disability or from lower social class backgrounds go on to further and higher education. Until these barriers to further and higher education break down, the lowered expectations are simply a reflection of reality. This points to the need to continue to promote equality of educational opportunity across the board. It also highlights the centrality of information and guidance for all young people and their parents in relation to the range of potential post-school education and training options available. The findings also illustrate the importance of regular feedback on the child's development from the school to parents, so that difficulties, progress and expectations can be fully understood and supported.

### Lowered Expectations are Not Protective

One might argue that higher academic expectations of young people with a disability or from disadvantaged backgrounds would simply set the young people up for disappointment. From this perspective, the lowered expectations might be seen as protective. However, the expectations are lower than we might expect based on the children's academic performance at age 9. It is possible that such lowered expectations reflect other factors which are not measured – such as child interest in different subjects and school overall, difficulties with parts of the curriculum and effort. However, lowered parental expectations were associated with a poorer self-concept – a finding which belies the idea that lowered expectations might be somehow protective for the young people.

### Other Avenues for Achievement

The fact that parental academic expectations were linked to the young person's self-concept reflects, at least in part, the centrality of school achievement to the lives of children and young people. This highlights the need for other opportunities to excel and to feel good about themselves for young people with a reduced capacity to achieve in a competitive educational setting.



### School Supports for Children with Emotional/Behavioural and General Learning/Intellectual Disability

Children with general learning/intellectual disability and emotional/behavioural disability are particularly disadvantaged. Even when we control for academic performance at age 9, parents expect them to achieve less, they have a poorer self-concept and they progress less in terms of their academic skills. This raises questions over the nature and adequacy of supports – academic and social – for these young people within the school setting and beyond the school setting.

### Socio-Economic Disadvantage

The role of socio-economic disadvantage in shaping both parental expectations and student outcomes permeates much of this study. However, the additional impact of school composition and disadvantaged status is particularly noteworthy. Other recent research has highlighted the challenges schools in disadvantaged areas face, particularly in terms of the complexity of student need, levels of student engagement and teacher turnover (McCoy et al., 2014; McCoy et al., 2012). This study reaffirms the need for debate on the levels of funding, and the types of supports required to meet the needs of students in these schools.

Parental expectations clearly play an important role for children's educational and social development. The finding that parents have lower expectations for children and young people with general learning/intellectual, specific learning and emotional/behavioural disabilities is a significant one; their expectations for their children's future education lag behind their children's actual performance. These lowered expectations partly explain poorer social and educational development among these young people. It seems that the disability 'label' has a range of negative implications. However, there is no expectation gap in the case of children with physical or sensory difficulties. This study reaffirms the need for debate on the appropriate types and levels of supports that the students attending these schools, and their families, may need, particularly those students with disabilities.

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