ESRI

Working Paper No. 692

December 2020

Academic and Socio-Emotional Outcomes of Young People with Special Educational Needs and the Role of Parental Educational Expectations

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Abstract: This paper examines socio-emotional and academic outcomes among 17-year-olds with different types of special educational needs and the role of parental educational expectations in shaping these outcomes, using data from Ireland's national longitudinal study of children. The analysis takes account of a diversity of student and family characteristics as well as the effect of reading ability and socio-emotional wellbeing at age 9. The results show that lower parental academic expectations are linked to lower secondary performance of young people with special educational needs, even after controlling for academic achievements at age 9. Alongside other family characteristics, parental educational expectations at age 9 have long-term associations with both the socio-emotional and academic development of young people, providing important evidence that a more inclusive approach for supporting students with additional needs and their parents is needed.

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Keywords: special educational needs, academic achievement, socio-emotional outcomes, Parental educational expectations, Growing Up in Ireland

Acknowledgements: The paper has been prepared as part of the ESRI Programme of Research on The Experiences of Persons with Disabilities Across Key Policy Areas, funded by the National Disability Authority.

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Introduction

The expectations that parents have about the future educational achievement of their children have been found to impact children's academic achievement (Patrikakou, 1997) as well as their wellbeing (Oishi & Sullivan, 2005). The existent literature has primarily focused on explaining variations in parental expectations across racial and ethnic groups (Li, 2004; Sue & Okazaki, 1990; Schneider & Lee, 1990) and has provided evidence that cultural and environmental factors shape parental expectations, as does social class (Leung, Hou, Gati, & Li, 2011; Sheng, 2012). These studies indicated that interventions may be designed to change parental educational expectations, but also illustrated that socio-cultural factors may impact how different groups answer questions about parental expectation (Gannotti, Handwerker, Groce, & Cruz, 2001).

Separately, studies have shown that children and young people with special educational needs (SEN) have poorer academic, socio-emotional, and post-school outcomes compared to their peers without SEN (Blackorby & Wagner, 1996; Swift et al., 2020; Watson, Banks, & Lyons, 2015). A growing body of studies has started examining the impact that parental educational expectations have on the outcomes of students with SEN. Primarily drawing on longitudinal studies conducted in the United States, these studies suggest that lower parental educational expectations account, in part, for the widely documented poorer academic and post-school achievements among students with various types of SEN (Carter, Austin, & Trainor, 2012; Chiang et al., 2012; Doren, Gau, & Lindstrom, 2012; Shandra & Hogan, 2009). Studies have also shown that parental expectations may be impacted by the severity of SEN (Cawthon et al, 2014; Thomas et al., 2018).

Academic literature has also investigated the effect that having a child with SEN has on parents, often concluding that additional supports are needed (Thomas et al., 2018) and that additional supports may increase parental expectations by increasing a parent's sense of efficacy (Arellano, Denne, Hastings, & Hughes, 2019). Dikow et al. (2019) found that caring for children with intellectual disabilities took a toll on a parents' mental health and that the severity of the intellectual disability had a negative relationship with parental mental and physical health, as well as their quality of life. Data from the Longitudinal Study of Australian Children has shown that mothers of children with chronic illness (Quach & Barnett, 2005) and special needs (Quach, Jansen, Mensah, & Wake, 2015) have poorer mental health outcomes. This body of research suggests a relationship between SEN status, severity, parental expectations, and parental and student outcomes.

Like many countries, policy in Ireland has been seeking to shift provision for students with SEN from segregated to mainstream settings. Ireland is considered to have a 'multi-track' approach to the provision for students with SEN, including a multiplicity of approaches and a variety of services between the mainstream and special systems (Kenny, McCoy, & Mihut, 2020). The United Nations Convention on the Rights of Persons with Disabilities (UNCRPD) was signed by Ireland in 2007 and ratified in 2018. It remains unclear whether current systems for resourcing and supporting inclusion in Irish schools adequately meet the principles of the Convention (Kenny et al., 2020; Mac Domhnaill, Lyons, & McCoy, 2020). Evidence suggests that inclusive policies and programmes have not yet led to full inclusion for these students. In mainstream settings, students with SEN have been found to like school less than their peers and to have lower academic self-concept. These gaps widen between primary and second level education. Parents of students with

additional needs are typically highly engaged in their children's education, in terms of attending school meetings or events and supporting homework completion. However, they were also found to hold lower academic expectations of their children; and these expectations are important in shaping academic skills at age 13 and changes in academic skills between 9 and 13 years. The role of parental expectations in inhibiting students from maximising their potential is likely to stem from how parents view the opportunities their children have for further and higher education (Mihut & McCoy, 2020; McCoy, Shevlin, & Rose, 2019), but may capture other unobserved characteristics.

The current study extends previous research (McCoy et al., 2016b), by exploring the factors shaping the academic and socio-emotional outcomes of young people as they move into young adulthood. The paper is particularly focused on whether parental educational expectations at age 9 influence young people's outcomes, using data from Ireland's nationally representative longitudinal study of children—Growing Up in Ireland (GUI). The current study addresses the following questions:

1. How do children with different types of SEN fare in their educational and socio-emotional development?
2. To what extent are parental educational expectations associated with the socio-emotional and educational outcomes of young people in Ireland?
3. What risk and protective factors relating to the family environment and relationships affect the socio-emotional and education outcomes of young people with SEN?

We focus on three main aspects of young people's socio-emotional and educational development. Our first outcome variable relates to young people's academic development, as measured by performance on the Junior Certificate, a state examination in Ireland. Second, we focus on young people's life satisfaction. While life satisfaction is important as an indicator of wellbeing, it is also linked to other outcomes. Among young adults, previous cross-cultural studies have found a relationship between life satisfaction and several positive health behaviours, including exercising and healthy eating, for example (Grant, Wardle, & Steptoe, 2009). The academic literature on how life satisfaction varies by SEN status among young adults is sparse (Proctor, Linley, & Maltby, 2009).

Our third main outcome is young people's coping strategies. Typically, life satisfaction and coping strategies measure different aspects of socio-emotional wellbeing. Whereas life satisfaction aims to capture an overall judgement of the lives of respondents (Diener, Emmons, Larsen, & Griffin, 1985), coping strategies measure how individuals resolve problems (Amirkhan, 1990). Mahmoud et al. (2012) tested both the effect of life satisfaction and coping skills on depression, anxiety and stress among young adults. Maladaptive coping skills—and not life satisfaction—were positively related to depression, anxiety, and stress. Previous studies have also investigated the relationship between the use of different coping strategies and life satisfaction (Salas, Rodríguez, Urbieta, & Cuadrado, 2017; Utsey, Ponterotto, Reynolds, & Cancelli, 2000) showing a mixed relationship between the two constructs. Our coping strategy indicator includes three subscales: problem solving coping, avoidance coping and seeking support coping. Problem-solving and seeking support are considered positive methods of coping, while avoidance is regarded as a negative method of coping. The use of negative coping strategies has been linked to depression, anxiety and

stress (Mahmoud, Staten, Hall, & Lennie, 2012), whereas problem-solving coping strategies have been associated with resilience (Dumont & Provost, 1999).

Our analytical approach examines how young people with different types of special educational needs compare across these academic and socio-emotional domains, and whether any impact of SEN type is at least partly accounted for by parental expectations. In taking account of academic performance and socio-emotional wellbeing at 9 years, our approach assesses changes in young people's development as they move into young adulthood. The inclusion of a range of family, parent and child characteristics, such as economic vulnerability, parent-child relationships and parental depression, allows us to undertake a like-for-like comparison of how young people with and without SEN fare in their development.

Data and methodology

Data source

This study draws on data collected as part of the first and third waves of GUI's child cohort study[1]. The first wave of the study gathered data on 8,570 9-year-olds in Ireland in 2007/2008, including approximately one in seven children in the country in this age group (Williams et al, 2009). Data collected at this time point is used to identify (1) students with different types of SEN, by cross-referencing multiple data sources as discussed later in this section, (2) parental educational expectations, (3) academic achievement at age 9, alongside (4) additional socio-economic controls. Outcome variables used in this paper are drawn from the third wave of data collected from the same cohort in 2015/2016, when these young people reached the ages of 17/18. This wave collected data from 6,216 young people, including 73 percent of the wave one participants (McNamara, Murphy, Murray, Smyth, & Watson, 2020). Respondents who participated in both wave 1 and wave 3 are included in this analysis. Data were weighted using the weighting factor for the full sample at 17/18 for the three waves of the study (9 years, 13 years, and 17 years).

Conceptualisation and variable description

As part of GUI, both primary and secondary caregivers were asked 'taking everything into account, how far do you expect (child's name) will go in his/her education or training' and provided with the following response options: 'Junior Certificate or equivalent'; 'Leaving Certificate or equivalent'; 'An Apprenticeship or Trade'; 'Diploma/Certificate'; 'Degree'; 'Postgraduate/higher degree'; and 'Don't know'. Parental educational expectations were regrouped in three distinct categories: (1) 'Leaving Cert or Less' (including the options 'Junior Certificate or equivalent' and 'Leaving Certificate or equivalent'), (2) 'Post-Secondary Certificate' (including the options 'An Apprenticeship or Trade' and 'Diploma/Certificate'), and (3) 'Degree' (comprising the options 'Degree' and 'Postgraduate/higher degree'). For the purposes of this paper, the parental educational expectations of primary caregivers are considered. At age 9, 98 percent of primary caregivers were the biological mothers of the children. Previous research has highlighted the importance of mothers' expectations in shaping child development (McCoy et al., 2016b), and this approach also allows us to include one-parent households. On average, at this wave, mothers'

[1] GUI is funded by the Department of Children, Equality, Disability, Integration and Youth (DCEDIY). It is managed by the DCEDIY in association with the Central Statistics Office (CSO). Results in this report are based on analyses of data from Research Microdata Files provided by the Central Statistics Office (CSO). Neither the CSO nor DCYA take any responsibility for the views expressed or the outputs generated from these analyses.

educational expectations were high, with over 70 percent of mothers expecting their child to complete either a degree or a postgraduate/higher degree. These expectations were strongly related to the educational level of the mother (Williams et al, 2009).

This paper identifies students with a SEN at age 9 using data from teachers, parents, and the strengths and difficulties questionnaire (SDQ) completed by teachers, as originally developed by McCoy et al. (2016a) and McCoy et al. (2016b). SEN students were assigned to one of five SEN types. Students with multiple SEN were assigned according to the type of SEN most likely to impact on their learning experience (e.g. if students had a learning SEN and a physical SEN, they were assigned to the learning SEN type). Students with a *general learning or intellectual SEN* were identified by teachers as having a learning disability, excluding those students that were identified by the primary caregiver as having dyslexia or dyspraxia. These students represent 6.5 percent of 17/18 year olds (n = 392). Students who were identified by their teachers as having a learning disability and were identified by their primary caregiver as having either dyslexia or dyspraxia were categorised as having a *specific learning SEN.* Overall, 3.1 percent of 17/18 year olds have a specific learning SEN (n = 184). Students with an *emotional or behavioural SEN* do not include students with a general or specific learning SEN. These students were identified by teachers or their primary caregiver as having an emotional or behavioural problem (e.g. ADHD, autism or Asperger syndrome) or were in the top 10 percent on teacher reported SDQ. Altogether, 6.4 percent of 17/18 year olds (n = 387) have been identified as having an emotional or behavioural SEN at age 9. Students with a *physical SEN* were identified by teachers as having a 'physical disability or visual or hearing impairment' or 'speech impairment' or were identified by primary caregivers as having a speech impairment. These students account for 6.6 percent of 17/18 year olds (n = 398). Students who were identified by their primary caregiver as having 'other' difficulty or disorder and were not included in one of the previous types of SEN (2 percent, n = 123) were coded as *other SEN*. Overall, 25 percent of 17/18 year olds have been identified with some form of SEN at age 9.

Economic vulnerability is a composite measure based on latent class analysis that includes income poverty, household joblessness, and financial strain (Whelan, Watson, Maitre, & Williams, 2015). Prior research has shown that the quality of the relationship between parents and children has significant impacts on both socio-emotional (Branje, Hale, Frijns, & Meeus, 2010) and academic outcomes (McCoy et al., 2016b; Pianta, Nimetz, & Bennett, 1997). The effect of the relationship between primary caregivers and children on various outcomes is tested using the Pianta Child–Parent Relationship closeness and conflict subscales (Driscoll & Pianta, 2011; Pianta,1992). While studies are scarce, some previous studies have shown that students function well in families where the mother has a chronic illness (Chen & Fish, 2013). However, the severity of maternal chronic illness has a small effect on academic achievements. Among children whose mothers have a chronic illness, household income was found to be the largest predictor of academic performance (Chen & Fish, 2013). The analysis conducted as part of this paper includes a measure of chronic illness among primary caregivers at age 9. This measure is based on self-identification by primary caregivers as a response to the question 'do you have any chronic physical or mental health problem, illness or disability'.

Mother's depression status has been previously linked to persistent psychological difficulties in children (O'Connor, Reulbach, Gavin, & McNicholas, 2018). Persistent maternal depression has

also been found to predict academic achievements and school absences (Claessens, Engel, & Curran, 2015). Similar to the measure on chronic illness, the depression status of primary caregivers at age 9 included in this analysis is based on self-identification. The standardised Drumcondra primary reading test logit score is used as a measure of academic achievement at age 9. The child self-completed Piers-Harris Self-Concept Scale (Piers, Harris, & Herzberg, 2002) is used to measure how children feel about themselves. This measure recognises the importance of the child's voice.

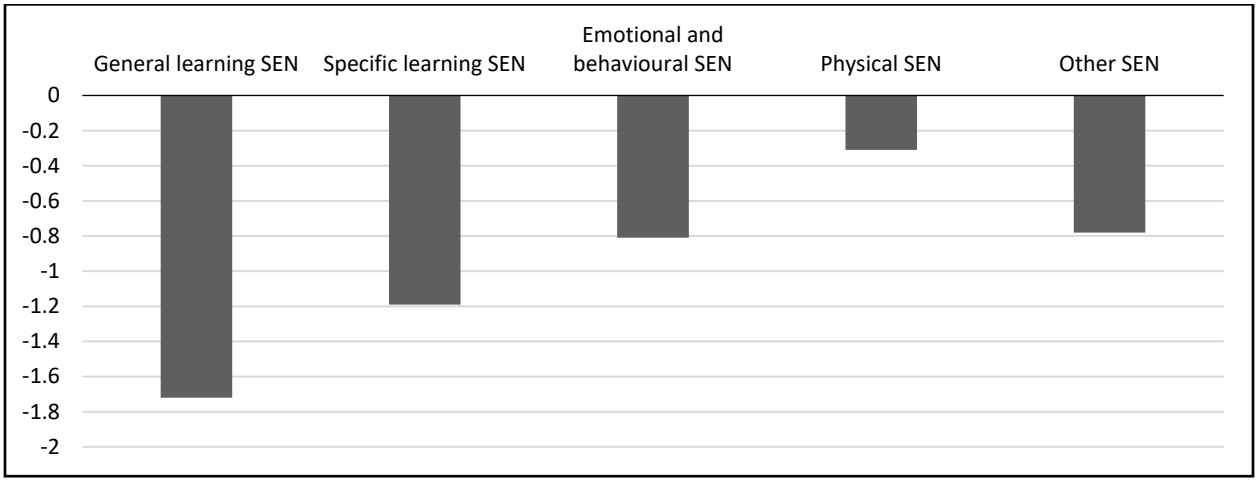
As noted, both academic achievement and socio-emotional outcomes at age 17/18 are considered as part of this paper. Academic achievement is defined as the average Junior Certificate score across all subjects. The variable was derived by allocating a numeric score to each Junior Certificate grade, with one unit increase in average score representing one grade higher. Students in Ireland take the Junior Certificate typically at age 14 or 15, when completing lower secondary education. As noted earlier, two broad socio-emotional outcomes at age 17/18 were considered: life satisfaction and coping strategy.

At age 17/18, young people were asked 'How satisfied are you with your own life in general?'. This Likert-scale variable ranges from 0 (extremely unsatisfied) to 10 (extremely satisfied). Overall, young women and respondents from one parent families were less satisfied with their lives at age 17/18 (McNamara et al., 2020). The adapted coping strategy indicator includes three subscales: problem solving coping, avoidance coping and seeking support coping, adapted from Amirkhan (1990). They aim to capture specific responses to stress. GUI employs the adapted subscales employed by My World Survey 1 and 2 of the National Study of Mental Health in Ireland (Dooley, O'Connor, Fitzgerald, & O'Reilly, 2019). Among 17/18 year-olds, the problem-solving subscale ranged between 5-30, support-seeking ranged from 4-24, and avoidance ranged from 6-36 (McNamara et al., 2020). The different ranges are explained by the fact that each subscale has a different number of items (Dooley et al., 2019). The higher the score, the more likely young people were to employ the respective coping strategy. Further descriptive information on both academic and socio-emotional outcome variables is included in Appendix 1. The mean values across key groups on all outcome variables are included in Appendix 2.

Results

Junior Cert average grades across all subjects ranged from 7.19 for students that were not identified as having any SEN type at age 9 to 5.47 for students with a general learning SEN at age 9. Overall, students with all types of SEN had lower Junior Cert average scores compared with students that did not have a SEN at age 9. Figure 1 illustrates the difference in the mean Junior Cert average score across all subjects by SEN type in reference to the mean score of students that had no SEN at age 9 (marked as 0 in Figure 1). One unit decrease in average score represents one grade lower. A one-way between subjects ANOVA was conducted to compare the association between SEN type and Junior Cert scores [$F(5, 5940) = 154.264$, $p < .001$]. Post-hoc comparisons using the Tukey HSD test indicated that the difference in mean scores between the students without SEN and students with all types of SEN were statistically significant at the $p < 0.001$ level. In addition, students with a general learning or intellectual SEN had statistically significantly lower mean Junior Cert score compared to students that had a specific learning, emotional, physical and other SEN types ($p < 0.001$).

Figure 1: Junior Cert average scores by SEN type (reference mean Junior Cert (7.19) for students with no SEN)

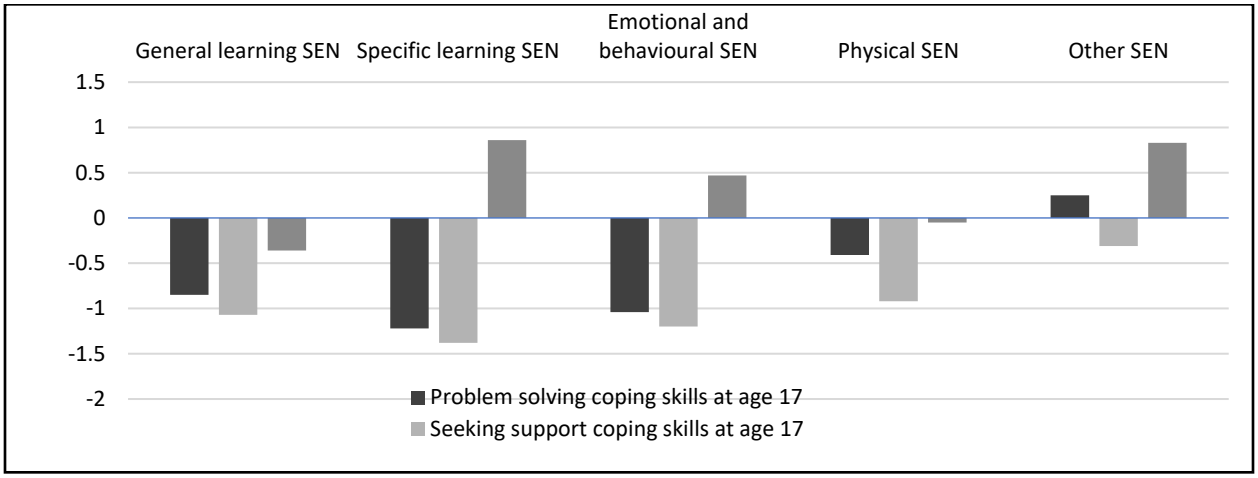


Data from Growing Up in Ireland, Child Cohort, Wave 1 and Wave 3 (at 9 and 17/18 years)

The relationship between SEN status and socio-emotional outcomes among 17/18 year olds was more complex. While young people without SEN had, on average, higher levels of satisfaction with their lives than young people with a SEN, the gap in life satisfaction was smaller than the gap in academic performance. A one-way between subjects ANOVA compares the association between SEN type and life satisfaction [$F(5, 5934) = 8.439$, $p < .001$]. Post-hoc comparisons using the Tukey HSD test indicated that the difference in mean scores between the no SEN group, on the one hand, and emotional and behavioural SEN ($p < 0.001$) and physical SEN ($p < 0.05$), on the other hand, were statistically significant. Differences in life satisfaction between young people with different SEN types were not statistically significant. These findings offer positive insights into the life satisfaction of young people with emotional and behavioural SEN, physical SEN, and other SEN.

Several differences can be noted in the coping styles employed by young people with and without SEN. Young people with all SEN types, except other SEN, were less likely to employ positive coping skills than young people without SEN. Figure 2 illustrates the difference in the mean coping style score by SEN type in reference to the mean score of students that had no SEN at age 9 (marked as 0 in Figure 2). One-way between subjects ANOVA shows the association between SEN type and problem solving coping skills [$F(5, 5872) = 5.972$, $p < .001$], seeking support coping skills [$F(5, 5894) = 11.016$, $p < .001$], and avoidance coping skills [$F(5, 5884) = 2.071$, $p = .066$]. Post-hoc comparisons using the Tukey HSD test indicated that young people with a general learning SEN ($p < 0.05$), specific learning SEN ($p < 0.05$), and emotional SEN ($p < 0.01$) had statistically significantly lower problem solving coping skills scores. Differences in mean scores on the seeking support coping style between young people with all SEN types (except other SEN) and young people with no SEN were statistically significant ($p < 0.01$). No statistically significant differences emerge between groups in relation to the use of avoidance coping skills.

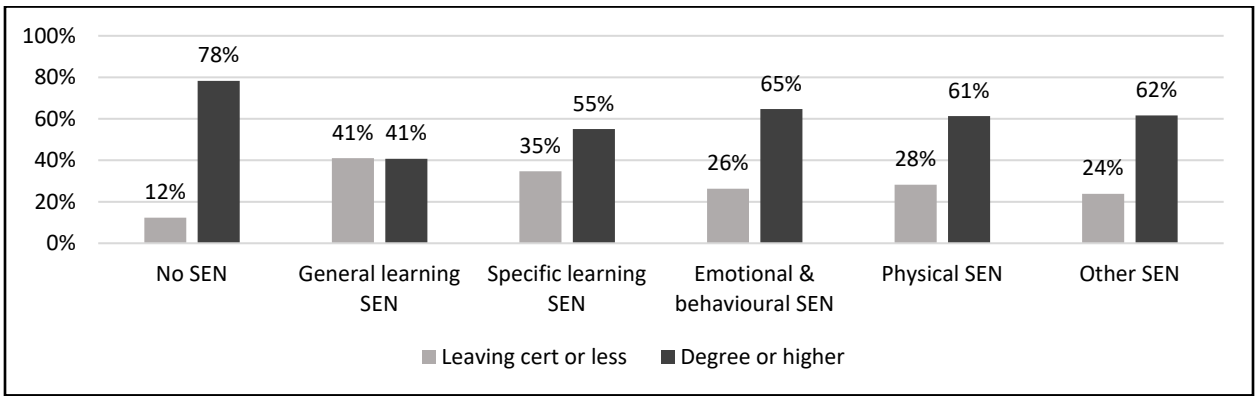
Figure 2: Coping styles at 17/18 by SEN type (reference no SEN)



Data from Growing Up in Ireland, Child Cohort, Wave 1 and Wave 3 (at 9 and 17/18 years)

At age 9, 17 percent of parents expected their child to complete their education at Leaving Cert or less only, 10 percent expected them to complete a post-secondary Certificate only, and 73 percent expected them to complete a degree. However, primary caregivers of students with all SEN types had lower average educational expectations than those of students without SEN, as illustrated by Figure 3. If 12 percent of primary caregivers expected their child with no SEN to complete Leaving Cert or less only, parents of children with a general learning SEN (41 percent), specific learning SEN (35 percent), emotional SEN (26 percent), physical SEN (28 percent) and other SEN (24 percent) were at least twice as likely to expect their child to complete Leaving Cert or less.

Figure 3: Parental educational expectations at age 9 by SEN type



Data from Growing Up in Ireland, Child Cohort, Wave 1 and Wave 3 (at 9 and 17/18 years).

GUI data also suggests parental educational expectations change over time. Only 2 percent of all primary caregivers consistently expected their child to complete the Leaving Cert across the three waves of the child cohort of GUI, in contrast with 64 percent who consistently expected their child to complete a degree. Parental expectations were most likely to be consistent over time for young people without SEN (71 percent) and least likely to be consistent over time for young people with a general learning SEN (32 percent). At the same time, parental educational expectations were

more likely to increase over time for young people across all SEN types than for young people without SEN. Sixteen percent of primary caregivers of young people with no SEN increased their educational expectations over time, but almost twice as many primary caregivers of young people with a general learning SEN (34 percent) and specific learning SEN (30 percent) increased their educational expectations. Primary caregivers of young people with any type of SEN were also more likely to indicate mixed educational expectations over time.

Descriptive results show that all SEN groups have lower Junior Cert scores, that some SEN groups have lower life satisfaction and fare less well on problem solving coping skills and seeking support coping skills. However, we see no significant differences between the avoidance coping skills of young people with and without SEN. Overall, primary caregivers of young people with SEN have lower parental educational expectations on their children at age 9. In the next section, we consider how these patterns are influenced by the addition of controls for family circumstances and quality of parental relationships, in order to test if these differences for young people with different SEN types persist.

Inferential results

The average Junior Certificate score across all subjects served as the outcome variable for three OLS models that tested the association between parental educational expectations and the academic achievements of students with different SEN types at age 17/18. These models are detailed in Table 1. In Model 1, we tested the association between parental educational expectations and the average Junior Certificate score for different SEN types, after controlling for key socio-economic characteristics (one parent household, education level of primary caregiver, economic vulnerability, and chronic illness status of primary caregiver) and the sex of the young person. This model revealed that young people with general and specific learning SEN, emotional SEN, and other SEN have significantly lower Junior Cert average scores compared with young people who have not been identified with SEN at age 9. The relationship persists after controlling for the sex of the young person—which did not predict Junior Cert average scores in Model 1—as well as other socio-economic characteristics. Young people whose parents had lower educational parental expectations at age 9 had statistically significantly lower Junior Cert average scores. However, in Model 1, parental educational expectations may be a proxy for unobserved academic abilities or other unobserved environmental conditions.

As such, in Model 2 we test the effect of parental educational expectations after introducing additional controls for the academic achievement of young people at age 9 as well as other variables that capture the relationship between primary caregivers and young people and the depression status of the primary caregiver. Model 2 reveals that students with general and specific learning SEN, emotional SEN, and other SEN make less academic progress between age 9 and their Junior Cert examination, after taking account of socio-economic characteristics and the relationship between primary caregivers and young people. Similarly, Model 2 shows that the association between parental educational expectations and Junior Cert average score decreases after accounting for academic achievement at age 9, but it remains statistically significant. Model 3 accounts for the effect of the students' socio-emotional wellbeing at 9 on academic outcomes at 17/18. The effect of parental educational expectations remains statistically significant in Model 3. Models 2 and 3 also reveal that the educational progress of young women between age 9 and their Junior Cert score is higher than for young men. This relationship is likely affected by the fact that

boys were slightly more likely to be in the lowest reading quintile at age 9 (Williams et al., 2009). Having a primary caregiver with a chronic illness or disability did not predict Junior Cert average scores. Instead depression status of primary caregiver and conflict between child and primary caregiver did, further supporting the bidirectional relationship between these variables (Quach, Jansen, Mensah, & Wake, 2015). As found by McCoy et al. (2016b), the level of education of the primary caregiver was the strongest predictor of Junior Cert average scores. Parental educational expectations predicted, in part, Junior Certificate average scores after accounting for academic achievement at age 9, providing evidence for the long-term effect of early parental educational expectations on academic development. Less than 40 percent of the variability in Junior Cert results is explained by the predictor variables included in Model 1, 2, and 3, indicating that additional factors than those considered affect academic outcomes.

Table 1: Regression models for Junior Cert average scores (OLS)

	Model 1	**Model 2**	**Model 3**
Constant	8.449	8.741	8.203
General learning SEN at 9 (reference no SEN)	-1.142***	-0.734***	-0.631***
Specific learning SEN at 9 (reference no SEN)	-0.896***	-0.542***	-0.482***
Emotional SEN at 9 (reference no SEN)	-0.508***	-0.314***	-0.305***
Physical SEN at 9 (reference no SEN)	-0.092	0.018	-0.010
Other SEN at 9 (reference no SEN)	-0.591***	-0.353**	-0.301**
Primary caregiver expects child to complete leaving cert only (reference degree)	-0.803***	-0.629***	-0.615***
Primary caregiver expects child to complete post-secondary certificate only (reference degree)	-0.439***	-0.311***	-0.306***
Female (reference male)	0.055	0.118***	0.134***
Primary caregiver was 25 or less when study child was born (reference 30-34)	-0.530***	-0.391***	-0.385***
Primary caregiver was between 25 and 29 when study child was born (reference 30-34)	-0.185***	-0.145***	-0.118**
Primary caregiver was between 35 and 39 when study child was born (reference 30-34)	0.096*	0.057	0.068
Primary caregiver was 40 or over when study child was born (reference 30-34)	-0.235**	-0.185*	-0.163*
One parent family (reference couple)	-0.204***	-0.258***	-0.257***
Education primary caregiver lower secondary (reference degree)	-0.920***	-0.708***	-0.719***
Education primary caregiver higher secondary (reference degree)	-0.365***	-0.255***	-0.265***
Economic vulnerability	-0.517***	-0.334***	-0.278***
Primary caregiver has chronic illness/disability (reference does not have chronic illness/disability)	-0.010	-0.058	-0.039
First quintile reading score at 9 (reference 5th quintile)		-1.046***	-1.034***
Second quintile reading score at 9 (reference 5th quintile)		-0.620***	-0.648***
Third quintile reading score at 9 (reference 5th quintile)		-0.408***	-0.425***
Fourth quintile reading score at 9 (reference 5th quintile)		-0.145**	-0.135**
Pianta level of conflict with primary caregiver at 9		-0.009***	-0.008***
Pianta level of closeness with primary caregiver at 9		-0.001	-0.002
Depression status of primary caregiver (reference not depressed)		-0.183**	-0.172**
Self-concept at 9			0.010***

	Model 1	Model 2	Model 3
Observations	5923	5359	4989
R-squared	0.314	0.369	0.364[2]
Adjusted R-squared	0.312	0.366	0.361

*Note: ***p<.001; **p<.01; *p<.05*
Data from Growing Up in Ireland, Child Cohort, Wave 1 and Wave 3 (at 9 and 17/18 years)

The association between parental educational expectations and life satisfaction as well as problem solving, support-seeking and avoidance coping skills was tested using OLS regressions (see Table 2). After controlling for socio-economic characteristics, academic achievement, the relationship with primary caregiver, and self-concept at age 9, young people with emotional SEN represented the only SEN type to self-report statistically significantly lower life satisfaction levels. Girls, young people from one parent households, young people whose primary caregiver was 25 years old or less at the time of their birth, and young people whose primary caregiver completed lower secondary education had lower self-reported levels of life satisfaction. Similarly, level of conflict between parent and child and self-concept at age 9 also predicted life satisfaction levels. Notably, students with general and specific learning SEN, physical SEN and other SEN did not report statistically significantly lower levels of life satisfaction compared with young people with no SEN. Similarly, parental educational expectations at age 9 had no statistically significant effect on life satisfaction.

Regression models that investigate the correlates of coping style at age 17/18 suggest that only students with a specific learning SEN were systematically more likely to make use of negative coping skills (avoidance) and less use of positive coping skills (problem solving). While students with a general learning SEN and an emotional learning SEN were also less likely to employ problem solving skills at age 17/18, they did not more likely use avoidance as a coping style than students without SEN. There are no statistically significant differences between the groups in the use of seeking support as a coping strategy. This perhaps indicates that support received from home and schools have equipped students with and without SEN to employ this important positive coping strategy. Young people from one parent households were less likely to employ positive coping styles (problem solving and seeking support) than young people from two-parent households. As a positive finding, while previous research has shown a suite of negative effects associated with younger birth age, young people whose mothers were 25 or less at birth were statistically significantly more likely to employ positive coping styles. Lower parental educational expectations were indicative of lower use of negative coping styles. In addition, young people whose parents expected them to complete a certificate only registered lower uses of positive coping styles. Young people whose mothers experienced depression were more likely to employ negative coping styles. Self-concept at age 9 was systematically related to the four socio-emotional outcomes at age 17/18 included in Table 2. Self-concept had a positive relationship with both life satisfaction and the use of problem solving and coping styles and a negative relationship with employing avoidance. Only a small variability of the socio-emotional outcome variables included in this paper is explained by the predictor variables included in the respective models, indicating that additional factors shape the life satisfaction and coping styles of 17/18 year-olds.

[2] The drop in R-squared and Adjusted R-squared between Model 2 and Model 3 are due to changes in samples between the two models.

Table 2: Regression models for life satisfaction and coping style outcomes at age 17/18 (OLS)

	Life satisfaction at 17/18	Problem solving coping skills at 17	Seeking support coping skills at 17	Avoidance coping skills at 17
Constant	6.473	13.201	7.996	17.766
General learning SEN at 9 (reference no SEN)	-0.026	-0.774*	-0.497	0.631
Specific learning SEN at 9 (reference no SEN)	-0.208	-0.907*	-0.540	1.352**
Emotional SEN at 9 (reference no SEN)	-0.375**	-0.705*	-0.417	0.549
Physical SEN at 9 (reference no SEN)	-0.132	-0.011	-0.262	-0.093
Other SEN at 9 (reference no SEN)	-0.174	0.070	-0.324	0.692
Primary caregiver expects child to complete leaving cert only (reference degree)	-0.012	-0.433	0.082	-0.708**
Primary caregiver expects child to complete post-secondary certificate only (reference degree)	-0.058	-0.547*	-0.505*	-1.032***
Female (reference male)	-0.246***	0.011	2.537***	1.790***
Primary caregiver was 25 or less when study child was born (reference 30-34)	-0.252**	0.558*	0.802***	-0.123
Primary caregiver was between 25 and 29 when study child was born (reference 30-34)	-0.121	-0.283	0.032	-0.174
Primary caregiver was between 35 and 39 when study child was born (reference 30-34)	-0.142	-0.018	0.161	-0.414
Primary caregiver was 40 or over when study child was born (reference 30-34)	-0.277	-0.565	0.180	0.280
One parent family (reference couple)	-0.282**	-0.469*	-0.398*	-0.078
Education primary caregiver lower secondary (reference degree)	-0.193*	-0.331	0.012	0.371
Education primary caregiver higher secondary (reference degree)	0.096	-0.233	0.223	0.204
Economic vulnerability	-0.107	0.594*	0.065	-0.244
Primary caregiver has chronic illness or disability (reference does not have chronic illness/disability)	-0.053	0.092	0.145	-0.265
First quintile reading score at 9 (reference 5th quintile)	0.033	-0.317	-0.593**	-1.451***
Second quintile reading score at 9 (reference 5th quintile)	0.015	0.073	-0.229	-0.413
Third quintile reading score at 9 (reference 5th quintile)	-0.053	0.135	-0.335	-0.181
Fourth quintile reading score at 9 (reference 5th quintile)	0.045	0.133	0.069	-0.056
Level of conflict with primary caregiver at 9	-0.012**	-0.028**	-0.016	0.037***
Level of closeness with primary caregiver at 9	0.006	0.020	0.067***	-0.057**
Depression status of primary caregiver (reference not depressed)	-0.212	0.471	0.088	1.143***
Self-concept at 9	0.0256***	0.061***	0.044***	-0.053***
Observations	4992	4935	4956	4947
R-squared	0.044	0.032	0.100	0.057
Adjusted R-squared	0.039[3]	0.027	0.095	0.052

*Note: ***p<.001; **p<.01; *p<.05*
Data from Growing Up in Ireland, Child Cohort, Wave 1 and Wave 3 (at 9 and 17/18 years).

[3] In order to account for the skewness of the distribution of the Life Satisfaction outcome variable, an additional general Poisson model was run. This model replicated the findings of the OLS model presented in this paper.

Conclusion

This paper has shown that young people with a general, specific, emotional, and other SEN at age 9 have lower average Junior Cert scores than young people without SEN. The Junior Cert average scores of young people with physical SEN were no different than those of young people without SEN. Parental educational expectations at age 9 were found to have a persistent association with Junior Cert scores and socio-emotional outcomes at age 17/18. These findings are consistent with previous research that has shown that parental educational expectations at age 9 accounts for academic and socio-emotional outcomes at age 13 (McCoy et al., 2016b). The paper has also shown that the level of conflict between primary caregiver and young people and the depression status of primary caregiver at age 9 predicted academic and socio-emotional outcomes at age 17/18. This finding is in line with previous research which shows that being exposed to cumulative risk factors may lead to reduced psychological adjustment and academic achievement (Forehand, Biggar, & Kotchick, 1998). Consistent with prior research, this study found that having a primary caregiver with a chronic illness has no impact on the academic and socio-emotional outcomes of young people.

Parental educational expectations are linked to Junior Cert academic outcomes, even after controlling for past academic achievements. This indicates that the parental educational expectations of students with SEN may perhaps be a reflection of stereotype and lack of information about post-school opportunities and supports available. The possibility remains that parental educational expectations can also capture a different, unobserved characteristic that would be known to the parent and unknown to the researchers. However, as lower parental educational expectations are likely to both change and increase over time—particularly for students with SEN—interventions that would increase parental expectations earlier could have positive effects on the outcomes of students with SEN. Further analyses need to be conducted to better understand the role that different school and home supports can play in supporting the academic and socio-emotional development of young people with SEN. Future studies can also investigate the association between parental educational expectations and employment outcomes of young people with SEN.

Appendix 1: Descriptive information for outcome variables

	N	Minimum	Maximum	Mean	Std. Deviation
Junior Cert Average	5946	0.00	9.67	6.9652	1.42909
Life satisfaction	5940	0.00	10.00	7.2030	2.12045
Coping Strategy - problem solving	5879	5.00	30.00	16.5244	5.20241
Coping Strategy - seeking social support	5900	4.00	24.00	13.8732	4.77983
Coping Strategy - avoidance	5891	6.00	36.00	13.7432	5.64192
Valid N (listwise)	5821				

Data from Growing Up in Ireland, Child Cohort, Wave 3 (at 17/18 years).

Appendix 2: Mean values across key groups on all outcome variables

Characteristic	Group	Junior Cert Average	Life satisfaction at 17	Problem solving at 17	Seeking social support at 17	Avoidance at 17
Sex of young person	Male	6.92	7.34	16.47	12.59	12.80
	Female	7.02	7.06	16.58	15.18	14.71
Economic vulnerability	Not economically vulnerable	7.08	7.26	16.53	13.89	13.74
	Economically vulnerable	5.87	6.62	16.47	13.72	13.80
Education level of primary caregiver	Lower 2nd level or less	6.23	6.95	16.34	13.68	13.79
	Higher 2nd to Diploma	7.12	7.30	16.42	13.94	13.74
	Degree	7.71	7.31	17.15	13.97	13.67
Age of primary caregiver at birth	Under 25	6.27	6.99	16.85	14.21	13.68
	25-29	6.79	7.14	16.23	13.69	13.74
	30-34	7.23	7.38	16.64	13.86	13.80
	35-39	7.31	7.24	16.57	13.93	13.53
	40 or more	6.78	6.81	16.06	13.70	14.42
Primary caregiver has chronic illness/ disability	No chronic illness/disability	6.99	7.21	16.51	13.85	13.76
	Chronic illness/disability	6.80	7.12	16.62	14.03	13.65
Depression status of primary caregiver	Not depressed	7.05	7.26	16.49	13.86	13.63
	Depressed	6.36	6.81	16.51	13.85	14.87

Data from Growing Up in Ireland, Child Cohort, Wave 1 and Wave 3 (at 9 and 17/18 years)

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