



THE LONDON SCHOOL
OF ECONOMICS AND
POLITICAL SCIENCE ■



Research
Centre



Leading education
and social research
Institute of Education
University of London



Trajectories and Transitions of Disabled Children and Young People

Overview of Findings

November 28th 2014

Project Aims

1. To measure child disability, considering different definitions and measures
2. To explore the relationship of childhood disability with socio-economic disadvantage
3. To analyse the trajectories of cognitive ability of disabled children and educational transitions of disabled adolescents

Context

ESRC Secondary Analysis Initiative Phase I Project, funded by ESRC, started January 2013. This event concludes. We are grateful to ESRC for funding the project.

Policy context

Concern about how children with disabilities fare in the school system and in transition from it

Children and Families Act 2014 has recently reformed provision for young people with Special Educational Needs or Disabilities (SEND)

Equality Act 2010 laid down the framework and responsibilities for the equal treatment of those with 'protected characteristics'.

Team and process

Collaboration between

- IOE / LSE / Warwick researchers (Stella Chatzitheochari, Samantha Parsons, Lucinda Platt)
- National Children's Bureau [NCB] (Becky Fauth, Helena Jelacic, Cathy Street)
- Council for Disabled Children [CDC] (Philippa Stobbs, Lucia Winters, Caroline Bennett)

Process

- Identification of measures of disability
- Refining key questions
- Iterative process of producing findings and discussing implications and next steps between research team and CDC / NCB and with input from groups of disabled young people

Analysis and outputs

1. Preliminary work evaluating potential measures and their appropriateness to act as complementary but overarching measures of child disability (see summary and Parsons and Platt 2013 working paper)
 2. Background analysis ascertaining the association of relative socio-economic disadvantage with disability, according to all three measures used (see Parsons and Platt 2013 working paper and summary)
 3. Exploratory analysis of 'growing up' among disabled young people (see summary)
 4. **Analysis of trajectories of behavioural problems among young disabled compared to non-disabled children (aged 3-7). (see Fauth, Parsons and Platt working paper; article under review)**
 5. **Analysis of bullying among younger (aged 7) and older (aged 14/15) disabled compared to non-disabled children (see Chatzitheochari, Parsons and Platt working paper; article under review)**
 6. **Analysis of disabled children's cognitive / educational progress in the early years (age 3-7) (see Parsons and Platt 2014 working paper; article in progress)**
 7. **Analysis of disabled young people's educational aspirations and attainment in secondary and post-compulsory education (Chatzitheochari and Platt paper in progress)**
- See: www.cls.ioe.ac.uk/childhooddisability for working papers, summaries (including those not covered here) and further information about the project

Data and key measures

- Used two large-scale, nationally representative data sets to look at child disability in England at different ages
 - Millennium Cohort Study (MCS): ages 9 months to 7 years
 - Longitudinal Study of Young People in England (LSYPE): ages 13/14 to 19/20
- Note that very little research to date on the areas we have looked at have used nationally representative community samples
- Also we have advantage of being able to exploit a rich array of potential confounders, often not available in e.g. administrative sources
- Used multiple measures of disability
 - Developmental Delay (mild and severe); Longstanding Limiting Illness; SEN (with and without Statement)
 - All overarching measures (pros and cons to this)
 - Some different stories but also consistency across measures for most outcomes especially LSLI and SEN.

The MCS

A study of c. 19,000 babies born in UK between Sept 2000 and Jan 2002.

Children and parents surveyed at ages 9 months, 3, 5, 7 and 11 years.

Home-based data collection includes:

- interviews and self-completion with the main carer and their partner;
- self-completion questionnaire for the child (from age 7);
- teacher surveys (from age 5);
- direct physical measurements and cognitive assessments with the child (from age 3).
- Permissions to link to admin records, including child's school records at ages 5 and 7

Our sample: England only, children observed over all four sweeps up to age 7 (N=c7.300), but samples vary for specific analyses depending on response on dependent variables and e.g. linkage rates to National Pupil Database (NPD)

We use: parental interviews and self-completion questionnaires, postal questionnaire of teachers at age 7, cognitive assessments from ages 3, 5 and 7, the child's age 7 self-completion, and record linkage to the NPD.

No evidence that disabled children more likely to attrit or show non-response on key variables

The LSYPE

- 7 wave longitudinal survey of young people in England with annual data collection. Follows around 16,000 children from age 13/14 (2004) to age 19/20
 - Sampled through schools. Young person and parental (up to sweep 4) personal interviews.
 - Our sample; longitudinal sample of those observed continuously and with information on disability status: 7,277 children
 - We use: children's self-report, parental reports and linked administrative data on school attainment
- NB – no evidence of excess attrition among disabled young people

The Disability Measures: SEN

Special Educational Needs (SEN) , with and without Statement of Need (Statement).

SEN: defined within the school system for those children who need additional support with their learning. SEN may relate to learning difficulties or impairments such as hearing loss, ADHD or dyslexia.

Statement: Those whose additional learning needs cannot be met within the normal school provision and resources may be assessed for a Statement of Needs, which specifies the additional resources required to support their learning

- measured at age 7 (MCS), reported by parent or teacher, those who have a SEN
- measured at ages 13/14 or 14/15 in LSYPE, reported by parent, those who are *currently* identified as SEN in Wave 1 or 2.

**In MCS around 13% were SEN (no Statement) and a further 4 % had a statement,
In LSYPE around 11% SEN and a further 5% with a Statement**

Note that having a Statement is associated with greater socio-economic disadvantage, and acts as a measure of severity of disability.

It has been argued that SEN / Statement renders teenagers 'different' and 'less able' in the school context (Keslair and McNally 2009;)

The Disability Measures: Long Standing Limiting Illness (LSLI)

LSLI approximates to the definition of disability as defined in relevant UK legislation.

In MCS

- Parent report a) that the child had a longstanding illness; and b) if so, that illness limited their daily activities.
- In our analysis: child defined as LSLI if so on 1+ occasions between ages 3 and 7.

In LSYPE

- Parent report that a) child had a longstanding illness at age 13/14; and b) limited their school activities. Or
- Parent report that children had a longstanding illness at age 13/14 and young person reported longstanding illness at age 16/17
- LSLI may include long-term health conditions, such as type 1 diabetes or asthma; mental health problems; and impairments, such as partial sight

In MCS around 11% were measured as LSLI; and in LSYPE 6-7% were measured as LSLI

The Disability Measures: Developmental Delay (MCS only)

Measured as mild (MDD) or more severe (SDD) developmental delay at 9 months old

Derived from a set of 8 questions in the first MCS survey from the Denver Developmental Screening Test. used to assess fine and gross motor coordination typical for a 9-month-old child, based on parental report.

Plus five items from an UK adaptation of the MacArthur Communicative Development Inventories (CDI) used to identify early communicative gestures.

Score created from the 13 variables: MDD : total score was 1 standard deviation above the mean; SDD: total score was 2 standard deviations above the mean.

Since not all the children were aged exactly nine months at the time of the survey, adjustment for age at time of measurement included in all analysis.

Around 10% of MCS children were measured as MDD with a further 2% measured as SDD

Research topics and programme for today

- 4.10-4.25: Behavioural problems: Lucinda Platt
- 4.25-4.35: Bullying: Stella Chatzitheochari (Warwick)
- 4.35-4.50: Cognitive change: Samantha Parsons (IOE)
- 4.50-5.05: Educational expectations & transitions: Stella Chatzitheochari
- 5.05-5.15: Discussant feedback: Tania Burchardt
- 5.15-5.30: Open questions and discussion
- 5.30-5.35: Wrap up: Philippa Stobbs, Council for Disabled Children
- 5.35-6.30: Drinks and Snacks reception in Bean Counter (lower ground floor)



Research
Centre



Leading education
and social research
Institute of Education
University of London



Young Disabled children's behavioural trajectories

Rebecca Fauth, NCB / Tufts

Samantha Parsons, IOE

Lucinda Platt, LSE

Key questions

- Do disabled children start off with different levels of behavioural problems prior to school entry (at age 3)? and
- Does behaviour converge with that of the non-disabled peers or does it diverge from them over the very early years?

Rationale – behaviour problems can have long term consequences for educational attainment, wellbeing, mental health and risks of anti-social behaviour.

Investigating whether there are differences in early years, can highlight critical periods for intervention.

Understanding what might make a difference can inform what form such intervention might take.

Approach and analysis

- Parents have been asked to give responses to the Strength and Difficulties Questionnaire (SDQ) at each MCS sweep since age 3.
- The SDQ has four 'problem' domains (conduct problems, peer problems, hyperactivity, emotional symptoms) and one 'pro-social' domain. We look at all four problem domains separately.
- We estimated growth curve models to track differences in starting levels of behaviour and how they develop over time. As well as disability we track how far behaviour problems start and develop differently or similarly for boys and girls.
- We also looked at the influence of home learning environment and parental closeness as potential moderators of any associations between behavioural problems and disability.
- We controlled for family socio-economic status and family structure. We also controlled for cognitive ability at age 3.

Summary of Key Findings

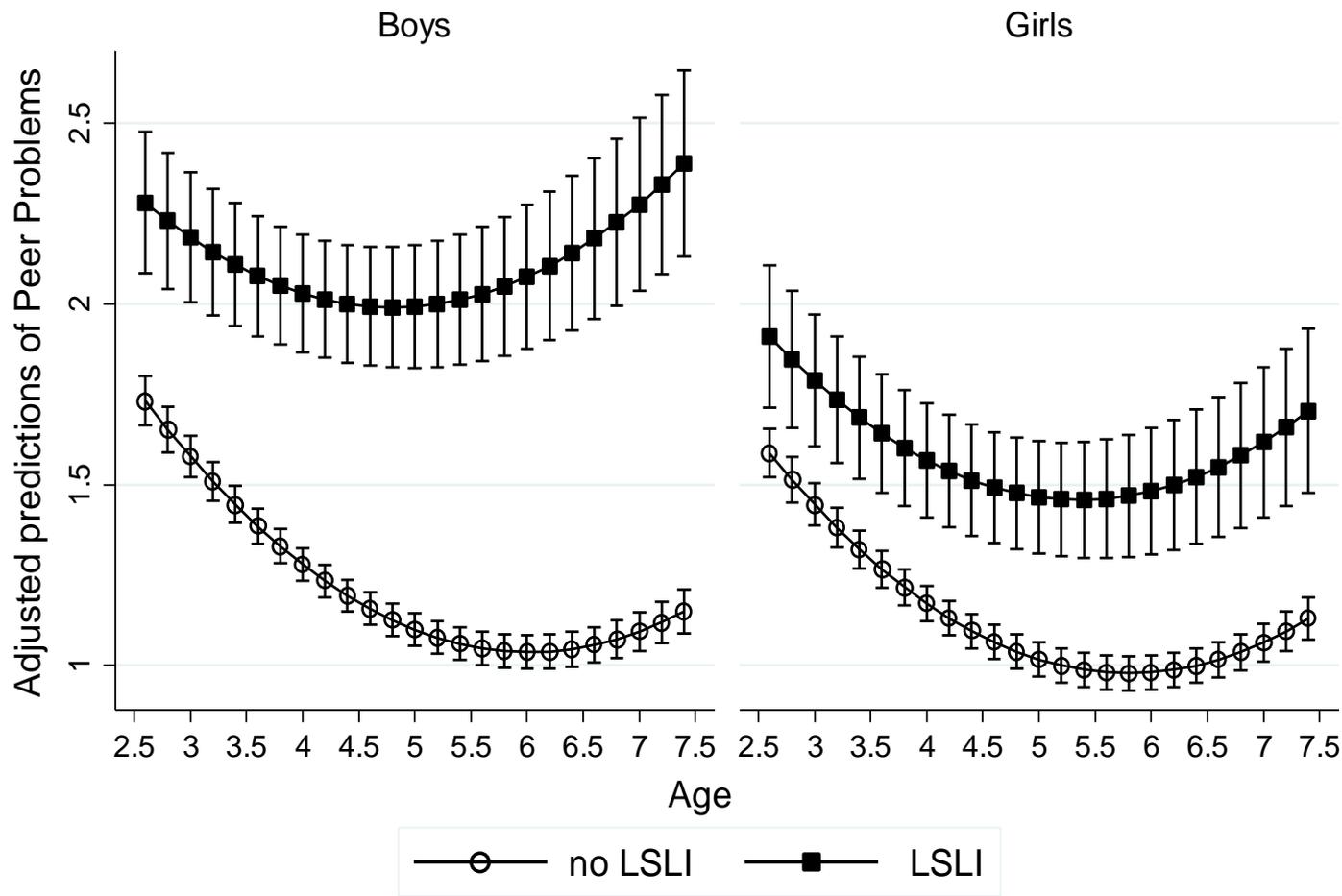
Question 1

- Disabled children start off with greater risks of problem behaviour prior to school entry across most types of behaviour.
- This is the case even when we control for relevant family socio-economic and parenting factors

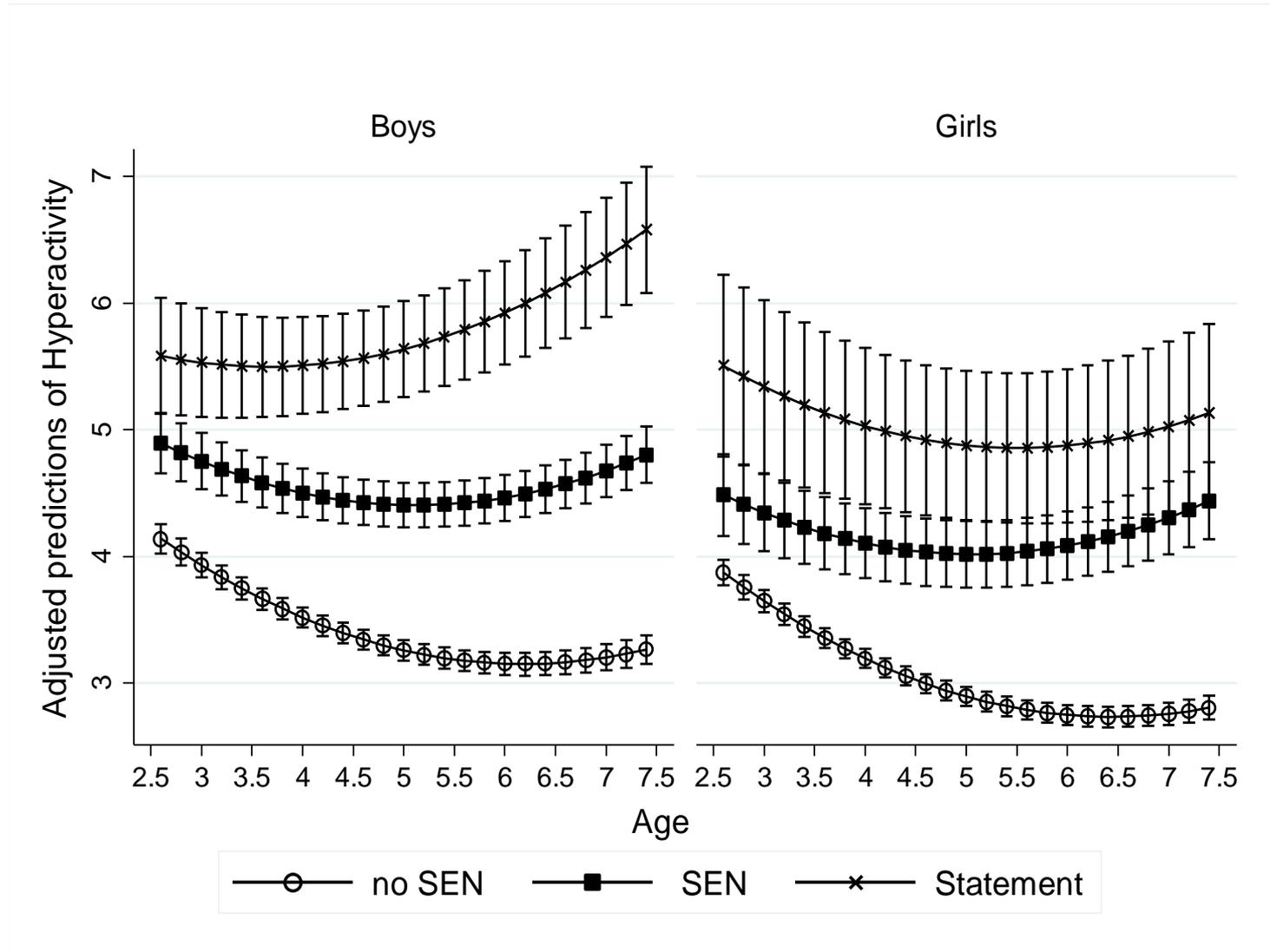
Question 2

- In general children gradually grow out of problem conduct, peer and hyperactive problem behaviours as they move into early school years, even if emotional problems tend to get a bit worse.
- But for disabled children, peer and hyperactivity problems tended to get worse over time increasing the gap with non-disabled children. This particularly for disabled boys
- No difference in trajectories for conduct problems (decline for both disabled and non-disabled children), therefore disabled children did not diverge from, but neither did they converge with non-disabled children
- For emotional problems, these got worse at a faster rate for disabled children, particularly girls, again increasing the gap.
- Some differences between the two disability measures in these findings but largely a consistent story.
- Parenting and home learning environment were associated with reduced behaviour problems in some domains, but they did not specifically moderate the association with disability (nor did they reduce the differences between disabled and non-disabled children)

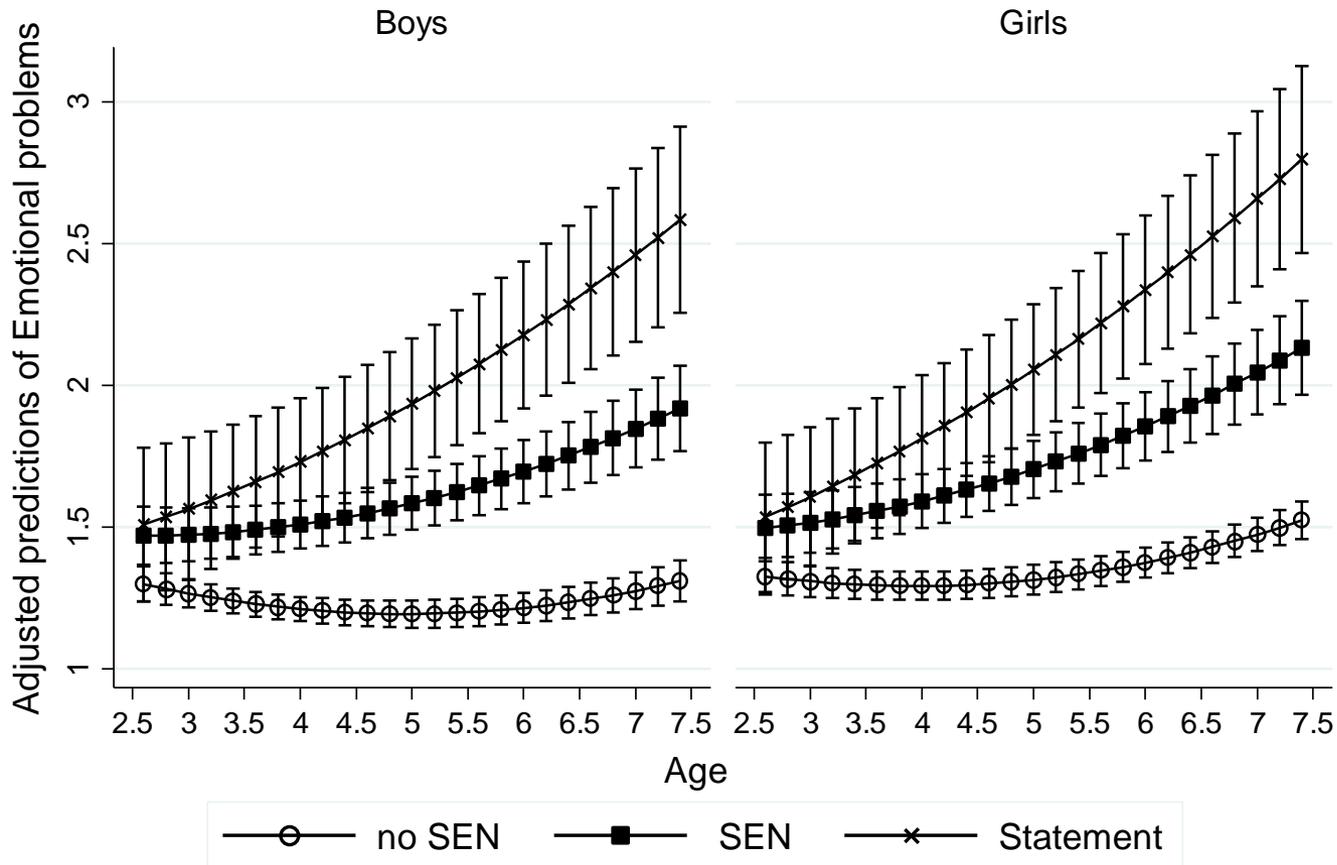
Peer problems (LSLI; pattern for SEN/Statement similar but enhanced)



Hyperactivity Problems (SEN / Statement)



Emotional Symptoms (SEN/ Statement; pattern similar for LSLI)



Implications

- The fact that disabled children whether defined as LSLI or SEN face greater behavioural difficulties and that these either do not converge with those of disabled children or become worse in the early school years, suggests that school entry and interactions within school may be particularly challenging for disabled children, and they would benefit from greater support in managing these
- Given that we controlled for cognitive ability, this suggests that it is not purely their learning needs that are driving the divergence in behaviour. Nor are there obvious differences in home context that these differences can be attributed to, or which would make a particular difference for disabled children if supported.
- There may be school cultures which are more or less supportive for disabled children and young people and more or less conducive to stabilising or reducing these problem behaviours. It would be helpful to investigate further what might make a difference, to avert the early development of behaviours which may have long-term consequences.



THE LONDON SCHOOL
OF ECONOMICS AND
POLITICAL SCIENCE ■



Research
Centre



Leading education
and social research
Institute of Education
University of London



Bullying experiences among disabled children and young people

Stella Chatzitheochari, University of Warwick

Samantha Parsons, IOE

Lucinda Platt, LSE

Background

- Bullying victimization a important policy concern: In England, 50 % of students aged 8 – 16 are worried about school bullying and 18 % regularly bullied at school (Tellus 4 National Report)
- Consequences of bullying detrimental: immediate psychological and health impact & long-term scarring; links with low educational attainment, depression, and stress in adulthood (Takizawa et al. 2014; Wolke et al. 2013)
- Bullying a potential mechanism in the reproduction of social inequalities across a range of domains

Childhood disability and bullying (I)

- School bullying involves asymmetric power relationships; weak and vulnerable populations bear the brunt of abuse (Faris and Felmlee 2014)
- Disabled children often perceived as different by non-disabled peers, comprising “easy targets” in the school context
- “othering” of disabled children through labeling of learning needs as Special Educational Needs (Holt 2004; Powel 2003)
- Social relational model of disability: bullying as a “barrier to being”, part of the process of “psycho-emotional disablism”, undermining disabled children’s expectations and life trajectories

Childhood disability and bullying (II)

- Qualitative studies suggest bullying is a daily experience for disabled children (Connors and Stalker 2002; Watson et al 1999)
- But quantitative evidence partial and cross-sectional, covering certain areas, ages, and not examining important risk factors that vary with disability and bullying.

•Aims:

- 1.Document the prevalence of bullying victimisation among disabled children (age 7) and young people (age 15) in England
- 2.Investigate whether the relationship between childhood disability and risk of being bullied exists when taking into account the greater socio-economic disadvantage faced by disabled children and victims of bullying

Disability measures

- Distinction between learning needs/special educational needs and chronic limiting illness (different constructions of disability, visibility in the school context)
- **Special Educational Needs**
- MCS - age 7 (13% no statement, 4 % statement)
LSYPE - wave 1 or 2 (11% no Statement, 5% statement)
- **Long-standing limiting illness**
- MCS - ages 3, 5 and/or 7 (11% LSLI)
LSYPE - wave 1 (6 % LSLI)

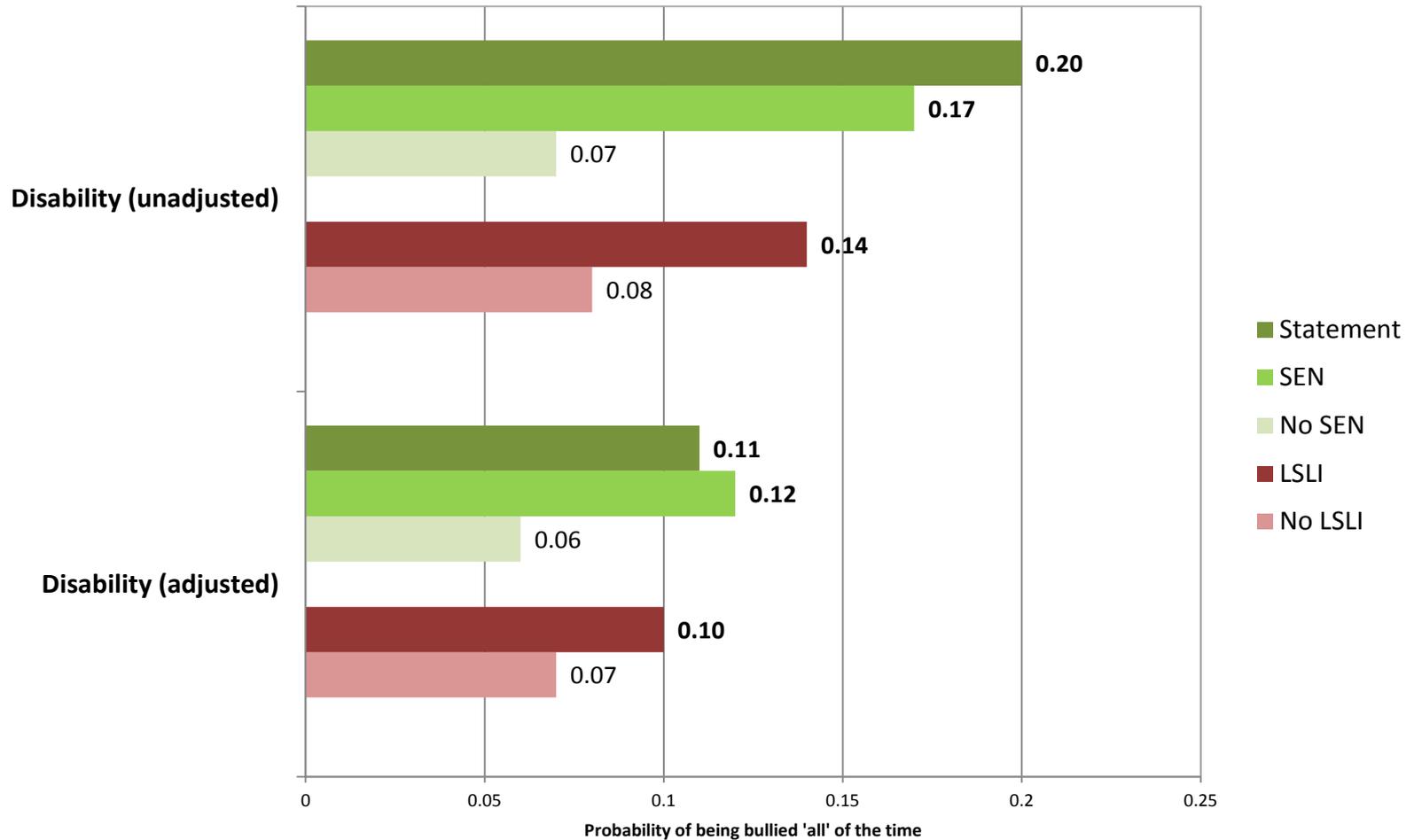
Bullying measures

- Age-appropriate measures; early childhood characterized by *physical* bullying while adolescence by “strategic” forms of *relational* bullying
- **Age 7** how often do other children bully you? **All of the time**
- **Age 15**
- Physical Bullying how often being made to hand over money/ violence threats/ actual violence
- Relational Bullying how often excluded from a group of friends, being called names (including texts and emails)
- Every day, A few times a week, Once or twice a week, Once every two weeks

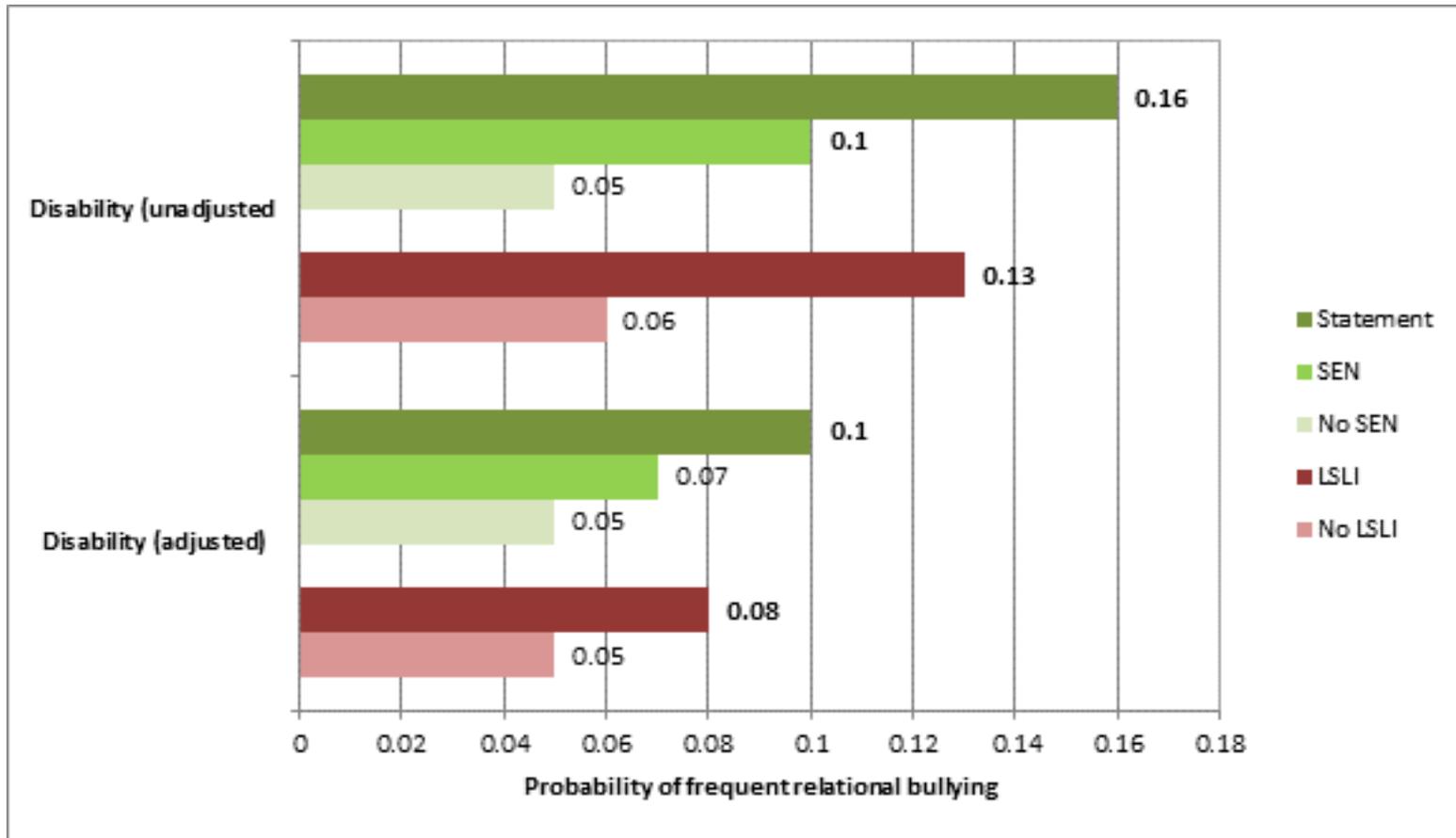
Controls

- Our statistical analyses examined the influence of a number of well-known risk factors for bullying. We were thus able to disentangle the effect of disability on the risk of being bullied from the effects of:
- Age for the school year, ethnicity, SES (housing tenure, single parent family, workless household, parental educational attainment), parenting style, family size, relationship with the mother, maternal health and disability, cognitive ability/educational attainment

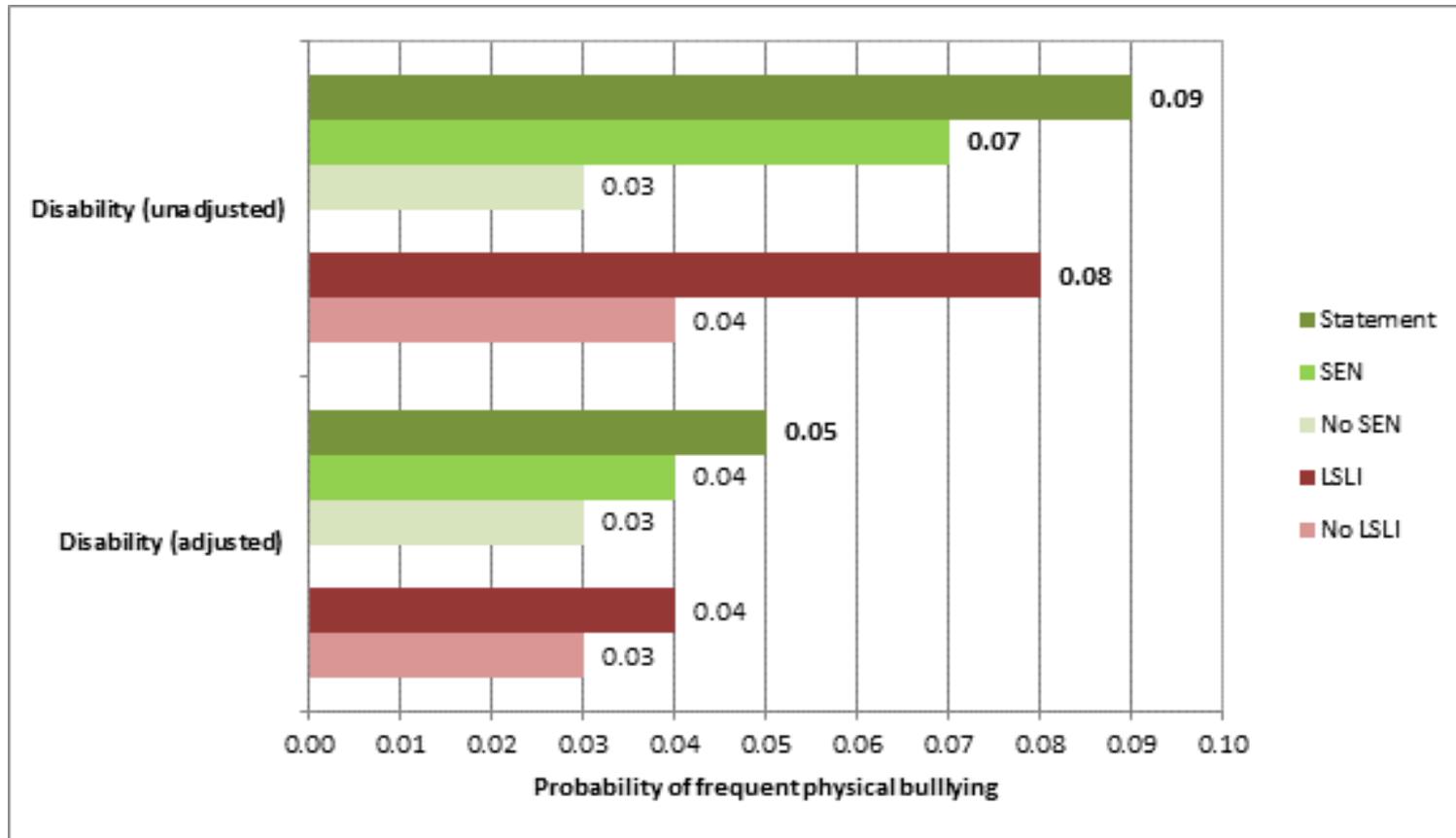
Predicted rates of bullying at age 7



Predicted rates of relational bullying at age 15



Predicted rates of physical bullying at age 15



Summary and concluding remarks

- ‘double disadvantage’ of bullying and disability at critical periods of school careers and development
- Both SEN and LSLI children significantly more likely to be bullied ‘all the time’, net of other risk factors
- During adolescence, higher risk for relational bullying and to some degree physical bullying
- Evidence for higher risk of children with a SEN statement; “othering” of children with learning needs in the school context
- school as a site of reproduction of social inequality & bullying as a potential mechanism leading to adverse psychological and educational outcomes



Research
Centre



Leading education
and social research
Institute of Education
University of London



Educational progress of disabled children

Samantha Parsons, IOE

Lucinda Platt, LSE

Background

- Most of our understanding of disabled children's educational progress is based on information from schools (and especially for older school children) and SEN status has been primarily used as a proxy for disability.
- However, we know that systematic differences in cognitive ability emerge early – and that there are some indications that for children of different class backgrounds they actually widen during the early school years.

Schools

- When starting school, it is hoped that schools will offer some 'compensation' to disabled children by providing additional support – especially for those designated SEN – and help them to 'catch up', at least in the early years.
- However, they may also exacerbate initial (pre-school) differences for disabled children. Existing analysis of administrative (schools) data, suggests they make poorer progress – but this data is not able to take account of pre-school cognitive scores or potentially relevant family, home and child specific factors.

Factors linked to poorer educational progress & disability

A wide range of measures of disadvantage have long been associated with poorer educational progress and attainment during childhood.

And we know that disabled young children are

- more likely than other children to come from a disadvantaged background
- less likely to come from a home with a particularly stimulating learning environment
- more likely to be bullied in school, and to
- experience deteriorating behavioural problems

Research questions

1. Pre-school

Do disabled children have lower cognitive scores at age 3?

If so, is this still the case if we take account of other personal characteristics, family background and home learning environment?

2. Progress at school

How do disabled children progress on school entry (between 3 and 5) and in the early school years (between 5 and 7) in terms of cognitive ability and educational attainment?

Are the results robust to other factors that may impinge on children's progress – personal characteristics, family background, home learning environment, bullying and changes in behavioural problems?

Are the results consistent across disability measure and across different measures of educational / cognitive progress?

Key measures

- **two measures of child disability**
 - Special Educational Needs: 13% SEN, 4% Statement
 - Long-standing limiting illness: 11%
- **a range of cognitive and educational assessments**

Cognitive and Educational Tests

Age 3 (sweep 2)	Age 5 (sweep 3)	Age 7 (sweep 4)
BAS II Naming Vocabulary (Expressive Verbal Ability)	BAS II Naming Vocabulary (Expressive Verbal Ability)	
Bracken School Readiness Assessment (Knowledge/understanding of basic concepts – colours, letters, numbers, shapes)	BAS II Pattern Construction (Spatial Problem Solving)	BAS II Pattern Construction (Spatial Problem Solving)
School based education outcomes		
Early Years Foundation Stage Profile		Key Stage 1
Overall scores and and subdivisions: Maths and English (reading + writing)		

Other measures

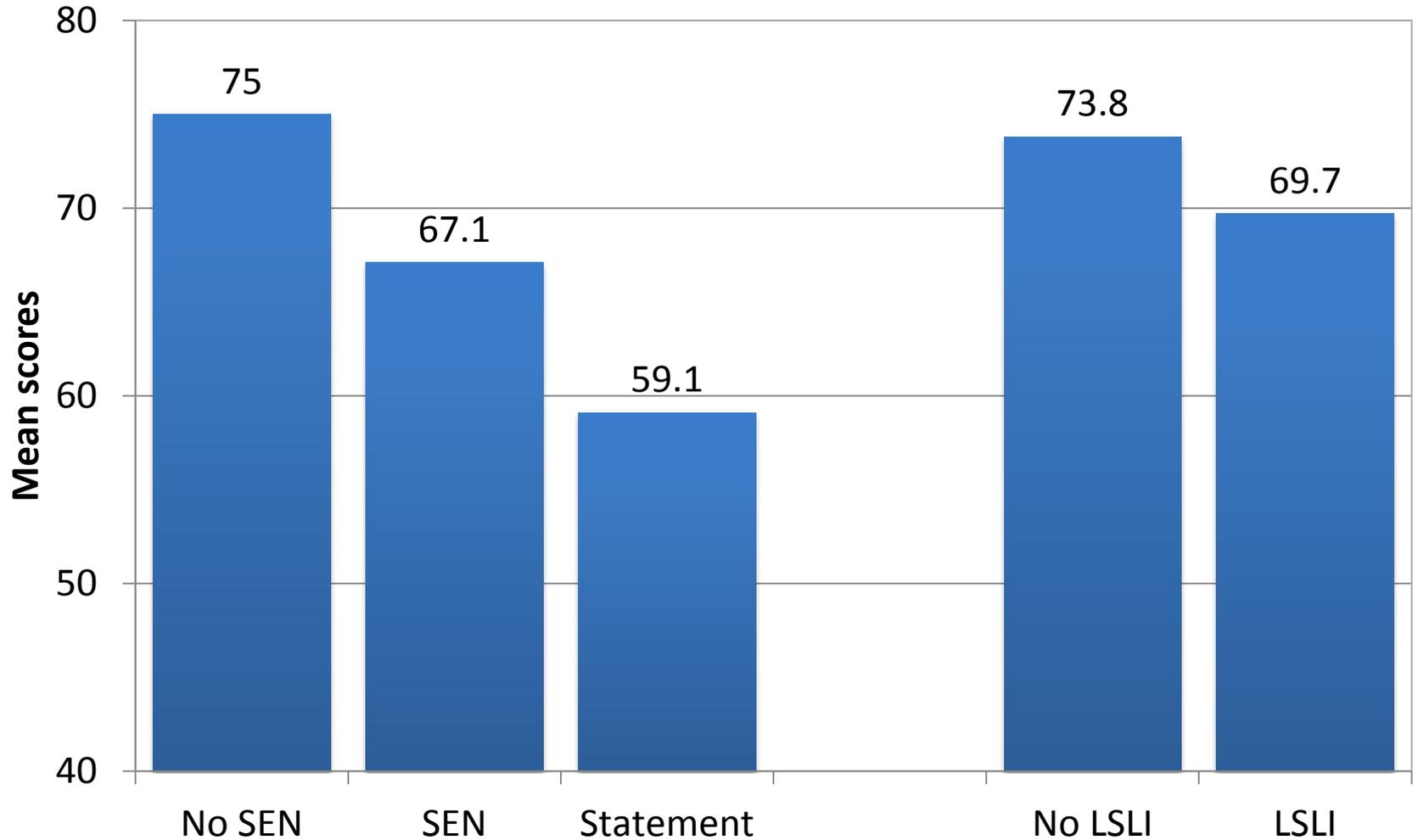
- **Child characteristics:** gender, ethnic group, season of birth , child's age change (progress analysis, cognitive assessments)
- **Family background:** no. of times in poverty, lone parent household, parental highest qualification.
- **Home Learning Environment:** score derived from measures covering parental activities with the child at age 3 (de la Rochebrochard 2012)
- **Behaviour:** Strengths and Difficulties Questionnaire (SDQ). Total difficulties score derived from parent reports at ages 3, 5 and 7. Use total score at age 3, change in score from T1 to T2 in progress analysis.
- **Bullying:** child self report at age 7 (only used in progress estimates age 5-7).

Cognitive scores at age 3

- Average cognitive scores: BAS II Naming Vocabulary and Bracken School Readiness
- OLS regression of cognitive scores on disability and other covariates (measured prior to or at age 3).

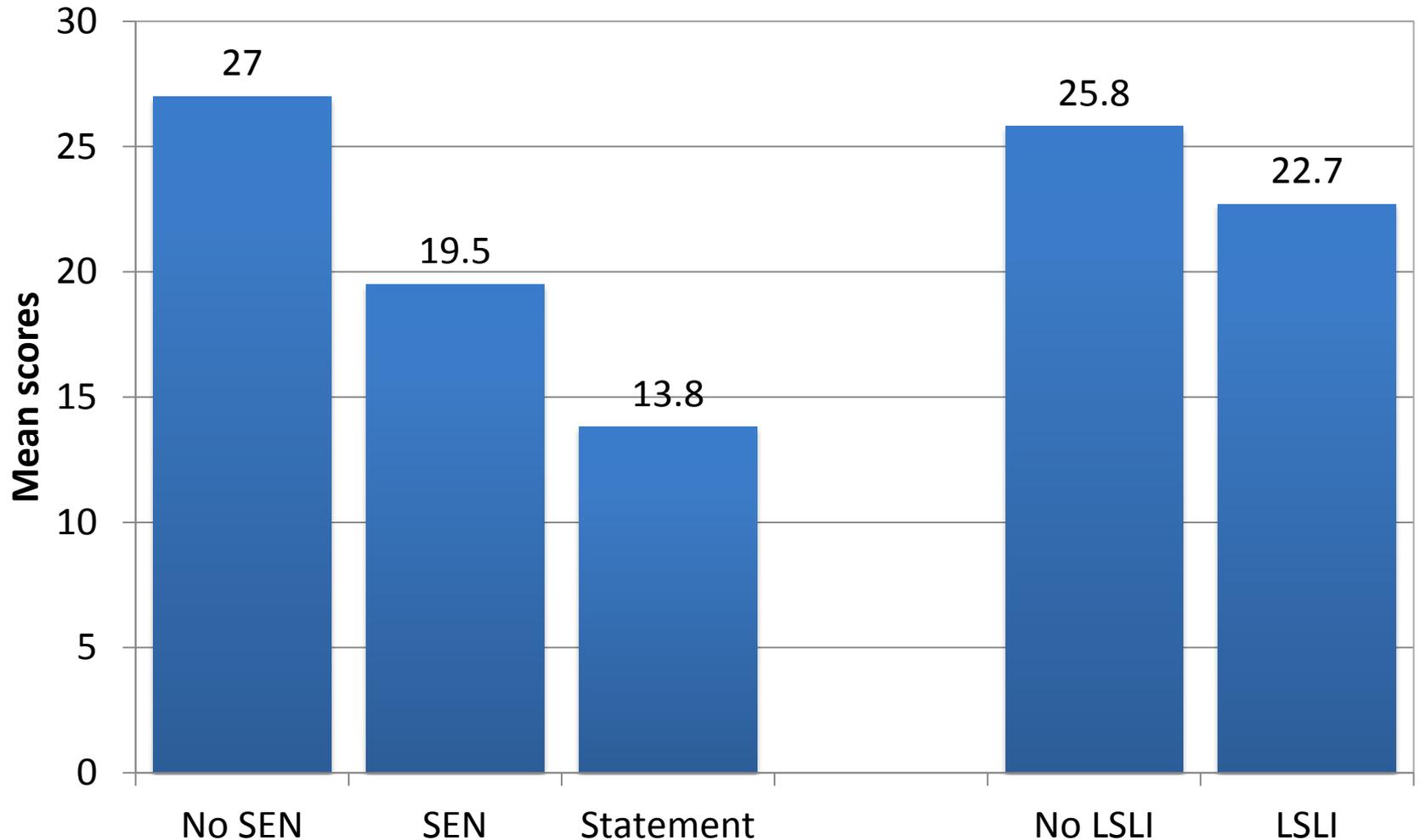
Mean cognitive scores age 3

BAS II Naming Vocabulary (range 10-141)



Mean cognitive scores age 3

Bracken school readiness (range 0 – 84)



Regression results: age 3 scores

	Naming Vocabulary		School Readiness	
	Unadjusted	Adjusted	Unadjusted	Adjusted
No SEN v SEN	-.16**	-.12**	-.16**	-.14**
No SEN v Statement	-.18**	-.12**	-.18**	-.14**
R²	.05	.25	.05	.27
N	6409	6409	5984	5984
No LSLI v LSLI	-.08**	-.05**	-.08**	-.05**
R²	.01	.22	.01	.23
N	6445	6445	6017	6017

Regression results: age 3 scores

	Naming Vocabulary		School Readiness	
	Unadjusted	Adjusted	Unadjusted	Adjusted
No SEN v SEN	-.16**	-.12**	-.16**	-.14**
No SEN v Statement	-.18**	-.12**	-.18**	-.14**
R²	.05	.25	.05	.27
N	6409	6409	5984	5984
No LSLI v LSLI	-.08**	-.05**	-.08**	-.05**
R²	.01	.22	.01	.23
N	6445	6445	6017	6017

Assessments capturing progress

- **Age 3 – 5**
 - BAS II Naming Vocabulary

- **Age 5 – 7**
 - BAS II Pattern Construction
 - FSP (age 5), KS1 – overall, maths, English – (age 7)

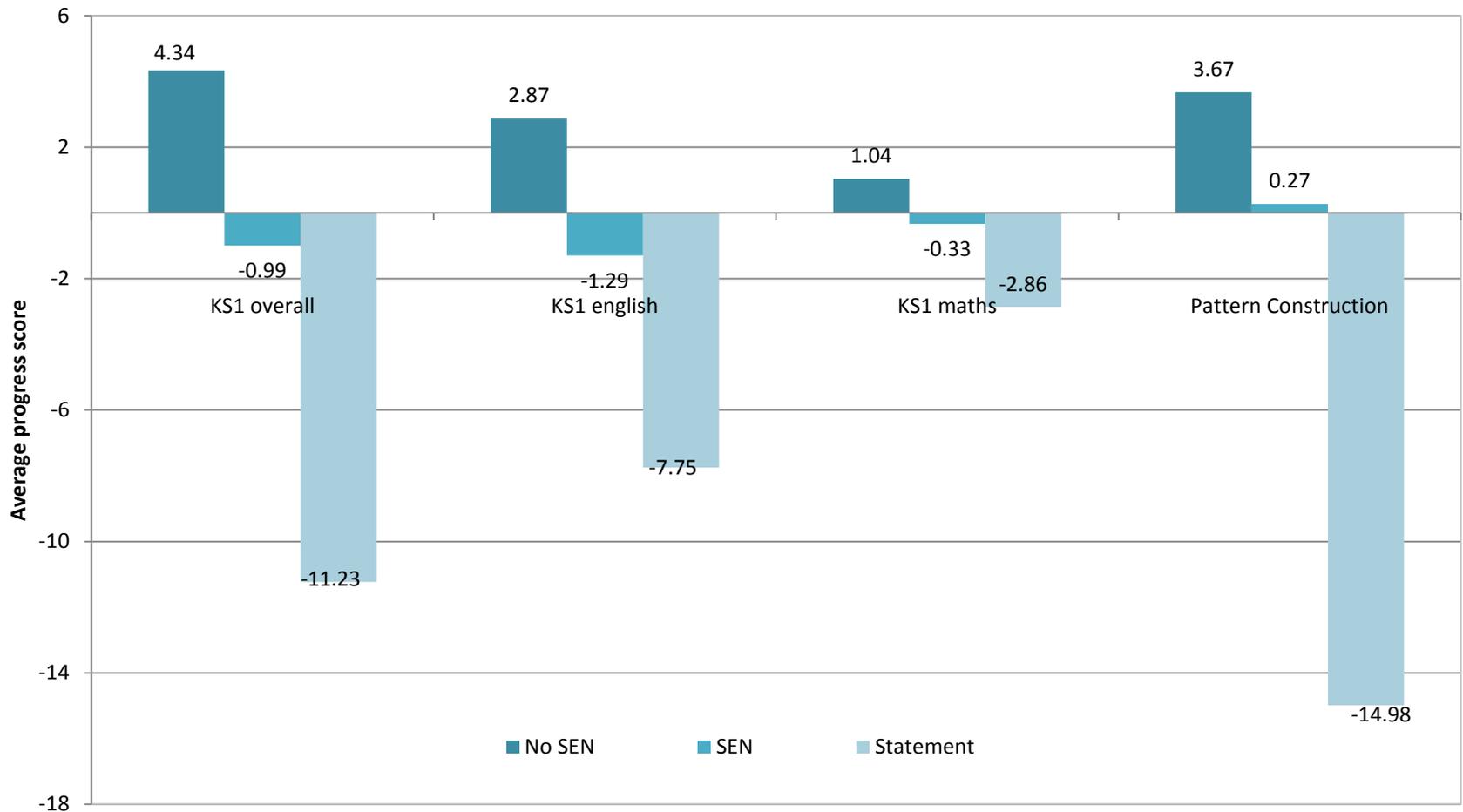
Calculating progress

Progress between age 3-5 and age 5-7 was measured in terms of 'value added scores', and scores were compared with similarly performing peers

How progress was calculated?:

- Performance at T1 was grouped into deciles (bottom 10%....top 10%)
- We then took the average scores in assessments at T2 for these groups
- For each child within a group at T1, the average group score at T2 was taken away from their actual score at T2
 - 0 indicates a child made average progress for their group
 - < 0 worse than average progress
 - > 0 better than average progress
- NB: a series of robustness checks were carried out to take account of the distribution and possible assumptions about the variance in different ways

Average progress by age 7 for children performing in the bottom 10% at age 5 by SEN/ Statement



Progress: 3-5 and 5-7

	Key Stage 1 measures						MCS measures			
	Overall		English		Maths		Pattern Const		Naming Voc	
	Unadj	Adj	Unadj	Adj	Unadj	Adj	Unadj	Adj	Unadj	Adj
SEN	-.19**	-.17**	-.21**	-.18**	-.17**	-.15**	-.05**	-.04**	-.12**	-.09**
Statement	-.19**	-.16**	-.21**	-.18**	-.15**	-.14**	-.06**	-.05*	-.09**	-.07**
R ²	.07	.10	.08	.11	.05	.09	.01	.04	.02	.12
N	5018		5021		5019		6319		6213	
LSLI	-.05**	-.04*	-.07**	-.05**	-.05**	-.04*	-.04**	-.03*	-.06**	-.05**
R ²	.00	.06	.01	.06	.01	.06	.00	.04	.00	.11
N	5021		5024		5022		6334		6246	

Progress: 3-5 and 5-7

	Key Stage 1 measures						MCS measures			
	Overall		English		Maths		Pattern Const		Naming Voc	
	Unadj	Adj	Unadj	Adj	Unadj	Adj	Unadj	Adj	Unadj	Adj
SEN	-.19**	-.17**	-.21**	-.18**	-.17**	-.15**	-.05**	-.04**	-.12**	-.09**
Statement	-.19**	-.16**	-.21**	-.18**	-.15**	-.14**	-.06**	-.05*	-.09**	-.07**
R ²	.07	.10	.08	.11	.05	.09	.01	.04	.02	.12
N	5018		5021		5019		6319		6213	
LSLI	-.05**	-.04*	-.07**	-.05**	-.05**	-.04*	-.04**	-.03*	-.06**	-.05**
R ²	.00	.06	.01	.06	.01	.06	.00	.04	.00	.11
N	5021		5024		5022		6334		6246	

The role of HLE, SDQ & Bullying (5-7 progress)

	FSP to KS1						Cognitive	
	Overall		English		Maths		Pattern con	
	SEN	LSLI	SEN	LSLI	SEN	LSLI	SEN	LSLI
SDQ	-.08**	-.10**	-.08**	-.10**	-.07**	-.09**	-.00	-.01
HLE	.04*	.06**	.02	.05**	.04*	.05**	.03	.03*
SB*	-.00	-.00	-.00	-.01	-.01	-.01	.01	.01
AB*	-.03*	-.05**	-.03	-.06**	-.06**	-.08**	-.03	-.04*

*SB = sometimes bullied, AB = always bullied

Conclusions

- Disabled children start off with lower cognitive scores than non-disabled children and make less progress on entry to school and in the early school years, even when being compared with their similarly (poorly) performing peers
- Findings consistent across tests and measures of disability but are particularly marked for those with SEN/Statement and for school-based (rather than home-based) assessments
- Proposed influences (HLE, Bullying, SDQ) were associated with progress, but did not account for the poorer progress of disabled children specifically
- Family and background factors account for a large share of the differences in scores at age 3, but less so for progress
- Results are consistent with DfE findings for progress between age 7-11 (Key Stage 1-2) (though without the same range of covariates) – suggests that this pattern continues across primary schooling

Robustness checks

- Given the sparse number of ‘high-attaining’ disabled children at the earlier time point we carried out the value added analysis just for those in the lower eight tenths of the distribution. Our results were robust to this alternative specification.
- To reduce measurement error, we averaged attainment over standardised performance in an assessment at age 3 (Bracken School Readiness Assessment) and age 5 (Foundation Stage Profile), and used this average value as the basis of estimating the value-added to Key Stage 1 performance,. Our results were robust to this alternative specification.
- We also used children’s performance at age 3 in the Bracken School Readiness Assessment (percentile scores) to estimate their age 5 FSP performance. We then used these estimates instead of their actual age 5 scores, as the basis of calculating value added by age 7. Again, our results were robust to this alternative specification.
- Finally, given the heterogeneity among those with SEN, where numbers permitted, we estimated the models for individual types of SEN (e.g. behaviour problems, ADHD, speech difficulties, etc.). Once again, the findings were consistent with the main analysis presented.

Disabled young people's educational aspirations and attainment

Stella Chatzitheochari, Warwick

Lucinda Platt, LSE

Research Aims

- a) whether disabled children have lower educational expectations / aspirations than their non-disabled peers and
- b) whether this contributes to lower GCSE attainment
- c) how expectations and subsequent transitions evolve for those who do achieve the expected threshold for post-compulsory educational participation.

Background

- Child and parental aspirations / expectations are part of the mechanism leading from social background to differential educational and subsequently occupational outcomes
- There is some existing evidence of lower educational expectations among disabled young people
- We expect that 'labelling' and experience of disability impacts on self-efficacy and goal-oriented behaviour – and hence educational orientations
- Negative school experiences, as a result of behavioural challenges or bullying or stigma of disability (as are well evidenced in the literature) may lead to lower school engagement / alienation and therefore reduced expectations (of both parents and children).
- Some studies have suggested that parents of disabled children are more likely to be 'protective', may lead to lower expectations

Key questions for the analysis

1. Do disabled young people have lower educational expectations, conditioning on prior attainment (which will itself incorporate social class effects and cumulative impacts of disability) and social class background?
2. Do lower expectations among disabled young people lead to lower rates of key educational attainment/educational transitions?
3. Are remaining associations with disability linked to school alienation or peer exclusion?
4. Among those who do 'succeed', do they have equivalent subsequent educational expectations and HE entry as their peers?

Educational expectations and educational outcomes

- Expectations of tertiary education (1-4 scale) measured at 14/15 and at 16/17
- 5 or more GCSE at Grades A*-C: typical threshold for staying on to study for Advanced (A') level (and subsequently possibly to go on to university)
- University entry by age 19: binary measure; includes those who have secured a University place but have not started their studies

Approach

Use temporal ordering to explore successive transitions

1. Outcome: **Early Expectations** (W2): Determinants: Disability (W1/2), Parental Education (W1), Parental Expectations (W1), Prior attainment (age 11); plus potential mechanisms measured at W1; (full sample)
2. Outcome: **GCSE attainment** (W3): Determinants: Disability (W1/2), Early Expectations (W2), Prior attainment (age 11), early expectations (W2), parental education (W1) (full sample)
3. Outcome: **post-GCSE expectations** (W4): Disability (W1/2), GCSE attainment (W3), parental education (W1) (full sample and conditional sample)
4. Outcome: **University attainment** (W7). Determinants: disability; expectations (W4); parental education (W1)

Results

- Key results from 1-4 provided in turn.
- Potential influences on school engagement (school is a waste of time, bullying, peer effects) did not contribute to the models and so are not included in what follows
- Key control is KS2 attainment: is differently distributed across groups, but nevertheless a distribution:

Descriptives

	No SEN	SEN	Statement
KS2 (age 11): mean (SD)	28 (.06)	24 (.22)	21 (.43)
Expectations age 14/15 (SD) (low - high)	2.9 (.02)	2.3 (.06)	1.9 (.06)
Parental Expectations age 13/14 (SD)	3 (.02)	2 (.06)	1.8 (.06)
% Attaining GCSE threshold	67 %	26 %	12 %
Expectations 16/17 (uncon.)	2.8 (.02)	2.2 (.07)	1.8 (.07)
Expectations 16/17 (condit.)	3.2 (.02)	3.06 (.11)	3.2 (.14)
% HE entry (uncond.)	45 %	22 %	12 %
% HE entry (cond.)	60 %	55 %	48 %
% Parental Education: Degree or Above	19 %	14 %	9 %
% Bullying Victimization	12 %	25%	25%
% strongly disagree school waste of time	56%	40%	34%
% think most friends stay in education (w2)	81%	63%	58%
% Gender	47 %	59 %	67 %
Unweighted N	6610	380	287

Model 1: early expectations (Ordinal Regression)

Independent Variables	Disability	Fully Adjusted
No SEN	1	
SEN	0.34 (0.27-0.41)	1.08 (0.83-1.41)
Statement	0.17 (0.13-0.22)	0.79 (0.59-1.04)
Male		1
Female		1.28 (1.14-1.43)
Degree or above		1.16 (1.32-2.02)
HE below degree		1.04 (0.85-1.27)
GCE Grade A Level		0.86 (0.72-1.05)
GCSE A-C		0.84 (0.70-1.02)
Level 1 and below		0.72 (0.54-0.96)
Other		1.02 (0.56-1.83)
No qualifications		1
Prior Attainment (KS2)		1.12 (1.10-1.15)
Parental Expectations		3.41 (3.17-3.67)

Model 2: GCSE attainment (Logit)

Independent Variables	Disability	Fully adjusted
No SEN	1	1
SEN	0.18 (0.4-0.22)	0.55 (0.39-0.76)
Statement	0.64 (0.45-0.92)	0.37 (0.22-0.63)
Male		1
Female		1.34 (1.14-1.58)
Prior Attainment (KS2)		1.60 (1.54-1.65)
Prior Expectations (1..4)		1.90 (1.73-2.09)
Degree or above		3.72 (2.64-5.24)
HE below degree		1.95 (1.49-2.57)
GCE Grade A level		1.68 (1.30-2.17)
GCSE A-C		1.42 (1.11-1.80)
Level 1 and below		1.07 (0.75-1.52)
Other		0.61 (0.29-1.25)
No Qualifications		1

Model 3a: post-GCSE expectations (Ordinal)

Independent Variables	Gender	Fully Adjusted
No SEN	1	1
SEN	0.37 (0.29-0.45)	0.69 (0.55-0.85)
Statement	0.20 (0.16-0.26)	0.57 (0.43-0.70)
Achieved GCSE threshold		7.44 (6.58-8.41)
Not achieved GCSE threshold		1
Degree or above		2.46 (1.99-3.05)
HE below Degree		1.28 (1.05-1.57)
GCE Grade A Level		0.85 (0.70-1.05)
GCSE A-C		0.67 (0.56-0.82)
Level 1 and below		0.59 (0.45-0.70)
Other		0.79 (0.48-1.32)
No qualifications		1
Female (Ref: Male)		1.42 (1.27-1.58)

Model 3b: post-GCSE aspirations (restricted sample)

Independent Variables	Disability	Fully adjusted
No SEN	1	1
SEN	0.76 (0.52-0.11)	0.67 (0.46-0.97)
Statement	0.87 (0.54-1.40)	0.72(0.43-1.21)
Male		1
Female		1.47 (1.28-1.69)
Parental Education		
Degree or above		2.28 (1.76-2.95)
HE below degree		1.20 (0.93-1.54)
GCSE Grade level		0.77 (0.61-0.98)
GCSE A-C		0.58 (0.46-0.74)
Level 1 and below		0.48 (0.33-0.68)
Other		1.19 (0.74-2.30)
No qualifications		1

Model 4: disability and university entry (restricted sample)

Independent Variables	Disability	Disability + Aspirations
No SEN	1	1
SEN identified	0.81 (0.56-1.16)	0.92 (0.60-1.43)
Statement	0.60 (0.36-1.02)	0.47 (0.23-0.95)
Post-GCSE aspirations (1...4)		4.42 (3.98- 4.90)
Male		2
Female		1.02 (0.88-1.20)
Parental Education	.	
Degree or above		1.88 (1.40-2.55)
HE below degree		1.18 (0.88-1.59)
GCSE Grade level		0.87 (0.64-1.18)
GCSE A-C		0.85 (0.64-1.12)
Level 1 and below		0.68 (0.43-1.08)
Other		0.47 (0.18-1.20)
None		1

Summary

- Disabled young people have lower educational expectations than their peers, even when taking into account prior attainment, and parental expectations make a difference
- Subsequent transitions not explained by lower expectations, though these are influential
- Likewise, subsequent expectations and university attendance not fully explained by attainment
- Disability appears to suppress educational transitions and the development of 'ambitious' expectations at each point

Discussion

And see further: www.cls.ioe.ac.uk/childhooddisability

S.Chatzitheochari@warwick.ac.uk

S.Parsons@ioe.ac.uk

L.Platt@lse.ac.uk