



Children of the new century: Mental health findings from the Millennium Cohort Study

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Questions covered in the report:

Focusing on mainly 11 year-old children:

- 1) Prevalence and co-morbidity of mental health problems?
- 2) Socio-demographic differences in the prevalence of mental health problems?
- 3) Trends in mental health problems between 1999 and 2012?
- 4) Patterns of incidence and persistence in mental health problems from ages 3 to 11?



Background on Children's Mental Health

- ❑ **10% of children suffer from a clinically diagnosable mental health disorder.**
- ❑ **60 to 70% of these children have not had appropriate interventions at an early age.**
- ❑ **Childhood mental health problems have a strong tendency to persist.**
- ❑ **These problems cast a long shadow for future outcomes.**



Why does it matter?

- ❑ **Reliable quantitative information on prevalence is in short supply.**
- ❑ **More than 10 years since the last national survey of child and adolescent mental health.**
- ❑ **Important for informing policy makers regarding resources for prevention and treatment, as well as those practitioners and educators who work with young people.**



MCS

- Longitudinal study of children born between September 2000 and January 2002**
- Over-sampled children in areas of high child poverty, minority ethnic populations and the three smaller countries of the UK**
- Weighting used to ensure a nationally representative sample**
- Five sweeps completed so far: 9 months, age 3, age 5, age 7, age 11**
- Age 11: 12,798 children with data from parents and 7,085 with data from teachers**



Strengths and Difficulties Questionnaire

- **Widely tested and validated screening questionnaire to improve detection and treatment of mental health problems**
- **Parents/Teachers in last 6 months**
- **25 questions:**
 - **conduct problems (e.g. often has temper tantrums);**
 - **hyperactivity/inattention (e.g. restless, overactive);**
 - **emotional problems (e.g. many worries...unhappy);**
 - **peer problems (e.g. solitary, plays alone)**
 - **prosocial behaviour (e.g. considerate, shares)**



Strengths and Difficulties Questionnaire

- **Total difficulties = conduct + hyperactivity /inattention + emotional + peer problems**
- **Externalising = conduct problems + hyperactivity/inattention**
- **Internalising = emotional + peer problems**
- **Bandings were defined based on a nationally representative survey so that 80% of children scored 'normal', 10% 'borderline' and 10% in the 'severe'**



Prevalence: What is the percentage having severe mental health problems (total difficulties)?

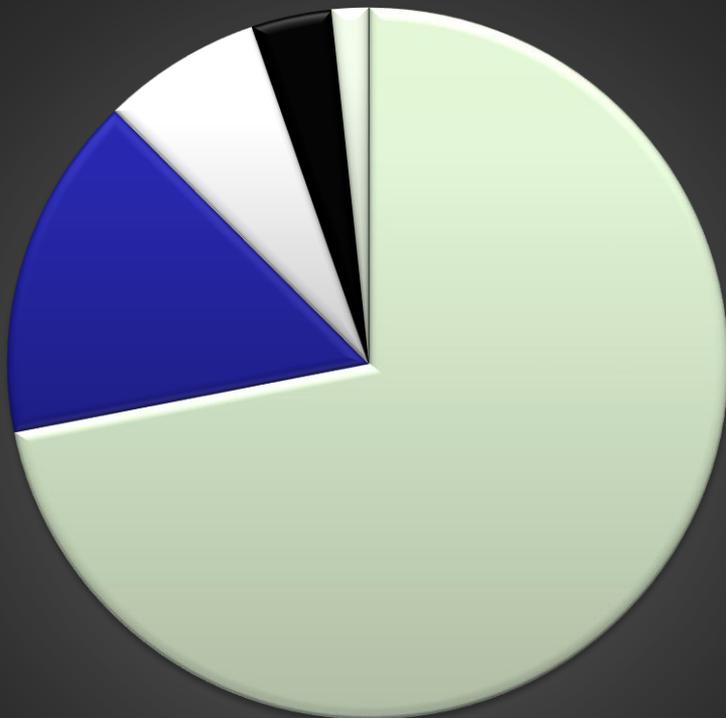
	Boys	Girls	All
Parent	12.7%	7.8%	10.3%
Teacher	11.3%	4.5%	8.0%

- **Wider gender differences in teacher than parent reports**
- **Among girls, internalising > externalising problems**
- **Among boys, externalising problems, peer problems > emotional problems**
- **Boys > girls of conduct, hyperactivity/inattention, peer problems**
- **Emotional problems: boys=girls**



Co-morbidity of Mental Health Problems:

What percentage have more than one problem at age 11?



■ None ■ One ■ Two ■ Three ■ Four

- One in three children have severe difficulties in at least one SDQ subscale
- One in ten children have multiple problems
- Boys more likely to have multiple problems than girls



Socio-Demographic Differences

□ Ethnicity

- Whites and mixed ethnic children have a higher prevalence of hyperactivity/inattention and conduct problems compared to other groups

□ Country of residence

- Children living in Scotland have lower prevalence of hyperactivity/inattention and peer problems than those living in England, Wales, Northern Ireland

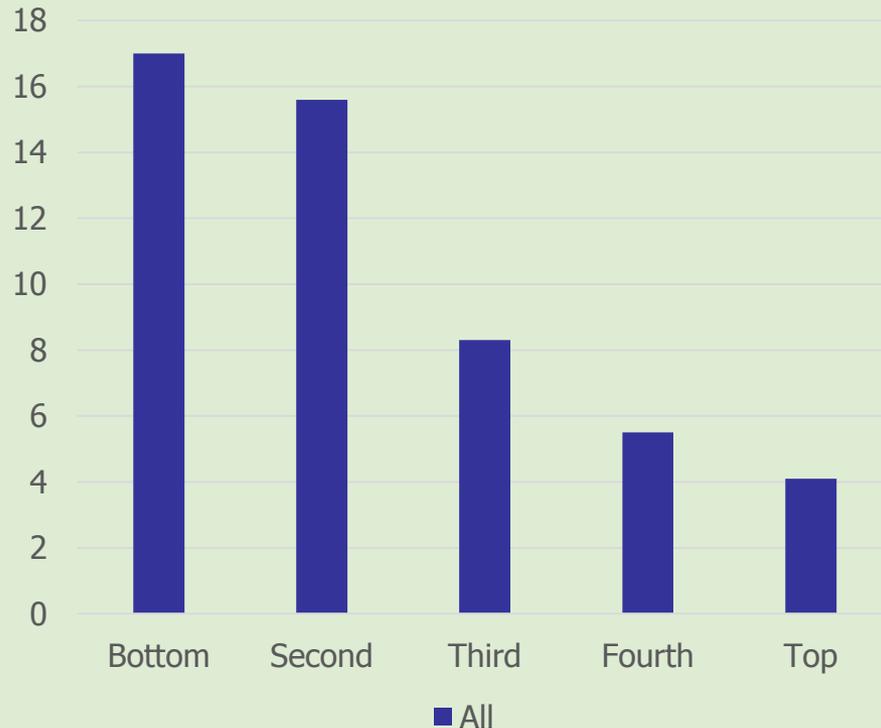
□ Parents' marital status

- Children living in single-parent families or step-families are twice to three times more likely to have mental health problems compared to those living with both their natural parents



Socio-Economic Differences

Family Income



- Strong inverse relationships between children's mental health problems and parents' education, occupation, and income
- Children from bottom fifth are four times more likely to experience mental health problems than children from the top fifth
- Targeting the lowest quintile only would miss 2/3 of the cases. Calls for prevention as a whole instead of targeting highest risk groups
- Evidence suggests socioeconomic gradient has become steeper in recent years and is steeper among children than it is among adults

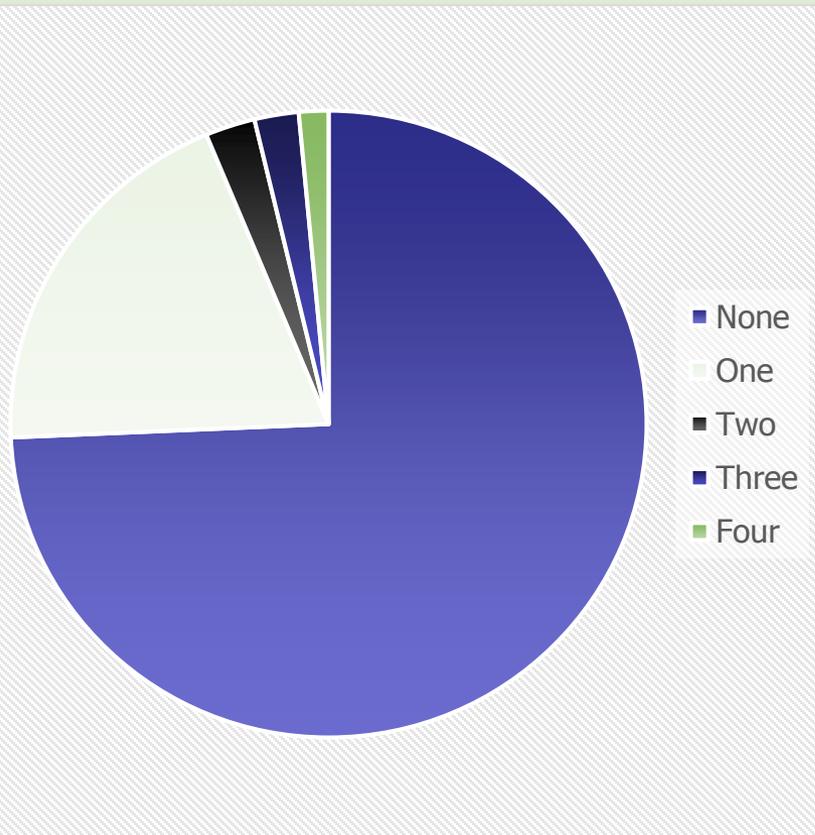


Trends from 1999 to 2012

- ❑ Compared 10- and 11-year-olds from the BCAMHS in 1999 and 2004 with MCS 2012.
- ❑ Teacher reports showed improving trends for 10/11 year-olds from 1999 to 2012, particularly for externalising behaviours (i.e., conduct problems and hyperactivity/inattention).
- ❑ Parent reports identified only one area of sustained improvement between 1999 and 2012, namely hyperactivity/inattention among boys.
- ❑ Parent reports of girls' mental health indicate improving trends from 1999 to 2004 in hyperactivity and peer problems, but these worsened from 2004.



Incidence: What percentage of children ever recorded a severe mental health problem between the ages of 3 and 11?



- One in five children had severe mental health problems at least once between ages 3 and 11.
- 12.3% had severe mental health problems at one age only, 4.7% had these problems at two different ages, 2.4% had problems at three ages and just 1.3% had severe problems at all four ages.
- As many as 7% of all children were classified as having severe problems at age 3 only.



Persistence: What percentage of children had severe problems at three or four surveys including at age 11?

- 3.6% classified as having persistent problems**
- 6.7% intermittent cases**
- 11.6% had a severe rating at least once but not at age 11**
- 78.1% had no severe problems at any age**
- Persistence was noticeably higher for externalising problems than internalising problems.**
- Twice as high among boys as among girls except in the case of emotional problems.**



Key Findings

- ❑ **One in ten children experienced a mental health problem in 2012.**
- ❑ **Steep socioeconomic gradient in mental health.**
- ❑ **Mental health problems twice as common in boys as girls.**
- ❑ **Teacher ratings showed improving trends for both boys and girls from 1999 to 2012, while parent ratings remained largely unchanged.**
- ❑ **One in five children experienced a mental health problem at some point between ages 3 and 11.**
- ❑ **Less than 5% showed persistent mental health problems, although these were more common for externalising than internalising problems and for boys than girls.**



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Policy reflection

Michael Parsonage



Prevalence – key facts

- around 10% of 11-year-olds have a diagnosable mental health problem
- prevalence has changed little in the last 10-15 years, at least in this age group
- problems are twice as common among boys as girls
- most families seek help for a child with problems but only a minority get it



Prevalence – issues and implications

- ❑ need for better identification in all settings, particularly schools
- ❑ is there a case for periodic universal screening?
- ❑ importance of behavioural problems – more likely to be missed than emotional problems but have more damaging long-term consequences



Social and demographic differences – key facts

- ❑ prevalence of children's mental health problems shows steep socio-economic gradients
- ❑ these gradients appear to be getting worse over time
- ❑ and are worse among children than adults



Social and demographic differences – issues and implications

- ❑ expand the health inequalities agenda to include mental health, particularly children's mental health
- ❑ make more use of the pupil premium to improve mental health support in schools?
- ❑ the link between socio-economic disadvantage and children's mental health is particularly strong for behavioural problems



Incidence and persistence: key facts

- over 20% of children experience a mental health problem at some time between ages 3 and 11
- this is more than double the numbers with problems at any one time
- two-thirds of all children with problems at age 11 also had problems at one or more earlier ages



Incidence and persistence – issues and implications

- ❑ the high numbers at risk during childhood strengthen the case for universal interventions, especially in schools
- ❑ opportunities for early intervention are clearly being missed
- ❑ is there too much focus in CAMHs on older children?

Early social, emotional and cognitive skills as predictors of later outcomes

Ingrid Schoon
UCL, Institute of Education

Childhood Mental Health and Social-Emotional Skills
ESRC Social Science Week
Early Intervention Foundation
11 November 2015



What is the evidence?

- Can early cognitive, social and emotional skills be reliably assessed?
- What are the long-term outcomes across domains?
- Which skills to prioritize and why?
- To what extent are skills malleable?

Measuring social, emotional and cognitive skills in early childhood

- The notion of social and emotional skills refers to a set of attitudes, behaviours, and strategies that are thought to underpin success in school and at work, such as motivation, perseverance, self-control and control of emotions.
- They are usually contrasted with the 'hard skills' of cognitive ability in areas such as literacy and numeracy, which are measured by academic tests.
- Social and emotional skills can reliably be measured, even at early age
 - Observations (Observation schedules, role play, check lists and rating scales)
 - Interview, rating scales, time diaries
 - Different informants: parents, teacher, health professions
 - Direct Assessment

Gutman & Schoon, 2013

What is the evidence regarding the long reach of early skills?

- Single study evaluations – often using observational cohort studies
 - focus on selected skills and distinct outcomes
 - few studies that examine simultaneously multiple skill sets, or assess associations across outcomes
 - Mostly association studies, do not establish causality
- Meta analytic reviews
 - summarize and synthesize findings across multiple studies
 - yield more reliable and precise estimation of impact than single evaluation studies
 - common metric known as effect size
 - can examine variation according to methodology of assessment, characteristics of target population, outcome
 - yet most reviews focus on a specific skill, population, or outcome
- ‘Review of review’ approach to summarize meta-analytic evidence
 - Maryland Scientific Evidence Scale to assess quality of evidence

Key skills needed to get ahead

- **Self-control, self-regulation, perseverance (grit):** the ability to resist short-term impulses in order to prioritise a higher pursuit
- **Self-perceptions:** belief in one's ability to accomplish a goal (*self concepts, self efficacy*)
- **Motivation:** intentions and underlying beliefs about why to accomplish a goal (*achievement goals; intrinsic/extrinsic motivation; expectancy-value*)
- **Social Competencies:** skills that allow one to get along with others (e.g. approaching and collaborating with others).
- **Emotional stability** often defined by the absence of psychological problems, neuroticism, anxiety or depression
- **Resilience:** the ability to succeed despite significant challenge, while **Coping** involves strategies such as problem-solving and optimistic thinking used to manage stressful situations.
- **Cognitive skills:** verbal and non-verbal capabilities (literacy, numeracy, executive function, creativity).
- **Metacognitive Strategies:** knowledge about and control over one's own cognitive system (planning, monitoring, regulating behaviour, learning strategies).

There is no silver bullet

- More than one skill is needed to promote successful development
- Social, emotional, and cognitive skills interact, shape and reinforce each other
 - For example, self-regulation, motivation and problem solving skills work together to explain academic learning and success in school
- Need to develop ‘the whole child’ with a balanced skill set comprising cognitive as well as social and emotional skills

To what extent are skills malleable?

- Evidence on interventions
 - Not many prospective longitudinal studies– mostly short term
 - Focus on follow-up studies of children; less evidence on adolescents
 - Available data sources do not necessarily cover a full range of skills measured in childhood nor of life domains in adults
- Causality
 - Observed associations are not causation – despite controls for factors which may have given rise to both the skill and the outcomes
 - Need for randomized controlled trials and long-term follow-ups
- Understanding of processes
 - How do skills develop and are maintained
 - Biological basis
 - what works why, how and when

What is the evidence on interventions?

Intervention type	Scope	Location	Target Age	Strength of Evidence of Causal Effect*
Mentoring	Selected	Community-Based**	School-Age	Low (works however best for at-risk kids)
Service Learning	Universal	School-Based***	School-Age and University	Low to Medium
Outdoor Adventure	Universal, Selected, Targeted	Outdoors	Older children and Adolescents	Low to Medium
SEL	Universal	School-Based	School-Age	Low to Medium

Note. * Large effect size on other outcomes ($d = .80$); Medium = Medium effect size ($d = .50$); Low = Low effect size or none given ($d = .20$). **Findings suggest that community-based compared to school-based programmes have larger effects.

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Characteristics of successful interventions

- Informed by developmental theory, prevention science and previous evidence
- Universal aimed at the general population
- Provide structure and limits that are developmentally appropriate, supportive relationships and sense of belonging
- Targeted interventions need a strategy and knowledge about how to reach the most disadvantaged (gaining trust and cooperation)
- Involve parents, teachers and the wider community
- Continuity of staff
- Providing somewhere to go to, something to do, and someone to talk to (safety, structured activity, reflection)
- Execution and implementation are well planned and designed, well trained staff, clear goals, rules and sanctions

Gutman & Schoon, 2013, 2015

Future Research – some suggestions:

- Evidence is constrained by the availability of high quality, large scale longitudinal data including appropriate measures and controls
- Evidence depends on prevailing research interests and available knowledge
- There is no consensus regarding conceptualisation and assessment of skills.
- Need for harmonization of concepts and measures
 - Consensus about definitions of key skills
 - Attention to bias in measurement and response
 - Test development using new technologies
 - Better understanding of processes of skill development
- Need for longitudinal data on skill development – focus on early childhood and subsequent transitions
 - Contextual factors, intergenerational transmission
 - Biological foundations

Thank you

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References

- Goodman, A., Joshi, H., Nasim, B., & Tylor, C. (2015). Social and emotional skills in childhood and their long-term effects on adult life. <http://www.eif.org.uk/wp-content/uploads/2015/03/EIF-Strand-1-Report-FINAL1.pdf>.
- Gutman, L., & Schoon, I. (2013). The impact of non-cognitive skills on outcomes for young people. A literature review. http://educationendowmentfoundation.org.uk/uploads/pdf/Non-cognitive_skills_literature_review.pdf
- Gutman, L. & Schoon, I. (2015). Preventive interventions for children and adolescents: A review of meta-analytic evidence. *European Psychologist*, 20(4), 231-241.
- OECD. (2015). Skills for social progress. The power of social and emotional skills.: OECD Skills publishing. http://www.oecd-ilibrary.org/education/skills-for-social-progress_9789264226159-en

Social and emotional skills in early childhood – how do they matter for later life?

Alissa Goodman

Co-authors: Heather Joshi, Bilal Nasim, Claire Tyler

Motivation



- Gaps in social and emotional development among children of different backgrounds open early and persist through childhood
- These have lasting consequences for life chances across a range of life's domains
- Important area for policy (child mental health policy, and 'character education')
- Our contribution: literature review and data analysis, showing how different 'skills' in childhood are linked to a range of outcomes in later life

'Character education' high on political agenda

Rugby coaches from 14 professional clubs to be drafted into schools to instill character and resilience in disruptive pupils.

One of 14 projects set to receive funding from the Department for Education's (DfE) £3.5 million character grants scheme.

(Telegraph, July 2015)

Nicky Morgan: top rugby coaches to teach pupils 'grit and respect'

Premiership rugby coaches will work with pupils to build resilience as part of the Government's drive to develop 'character education' in schools

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Schools across the country will soon be preparing to welcome premiership rugby stars into the classroom Photo: Adam Holt/Al

The Telegraph

Character education' high on research agenda



By Marc Sternberg: We're pledging \$6.5 million over the next three years to support character research.

Social and emotional skills framework

Self-perceptions, -awareness (e.g. self-esteem, efficacy, self-concept)

Motivation (e.g. intrinsic and extrinsic motivations)

Self-control and self-regulation (e.g. lack of these reflected in conduct problems)

Social skills (e.g. extroversion, friendships)

Resilience and coping (outcomes turning out better than predicted given a specific adversity, e.g. low SES)

Emotional well-being



A gradient of childhood self-control predicts health, wealth, and public safety (2011)

Terrie E. Moffitt^{a,b}, Louise Arseneault^b, Daniel Belsky^a, Nigel Dickson^c, Robert J. Hancox^c, HonaLee Harrington^a, Renate Houts^a, Richie Poulton^c, Brent W. Roberts^d, Stephen Ross^a, Malcolm R. Sears^{e,f}, W. Murray Thomson^g, and Avshalom Caspi^{a,b,1}

Policy-makers are considering large-scale programs aimed at self-control to improve citizens' health and wealth and reduce crime. Experimental and economic studies suggest such programs could reap benefits. Yet, is self-control important for the health, wealth, and public safety of the population? Following a cohort of 1,000 children from birth to the age of 32 y, we show that childhood self-control predicts physical health, substance dependence, personal finances, and criminal offending outcomes, following a gradient of self-control. Effects of children's self-control could be disentangled from their intelligence and social class as well as from mistakes they made as adolescents. In another cohort of 500 sibling-pairs, the sibling with lower self-control had poorer outcomes, despite shared family background. Interventions addressing self-control might reduce a panoply of societal costs, save taxpayers money, and promote prosperity.

WHAT PREDICTS A SUCCESSFUL LIFE? A LIFE-COURSE MODEL OF WELL-BEING* (2014)

Richard Layard, Andrew E. Clark, Francesca Cornaglia, Nattavudh Powdthavee and James Veroit

Policy makers who care about well-being need a recursive model of how adult life-satisfaction is predicted by childhood influences, acting both directly and (indirectly) through adult circumstances.

We estimate such a model using the British Cohort Study (1970). We show that the most powerful childhood predictor of adult life-satisfaction is the child's emotional health, followed by the child's conduct. The least powerful predictor is the child's intellectual development. This may have implications for educational policy. Among adult circumstances, family income accounts for only 0.5% of the variance of life-satisfaction. Mental and physical health are much more important.

Key findings literature review

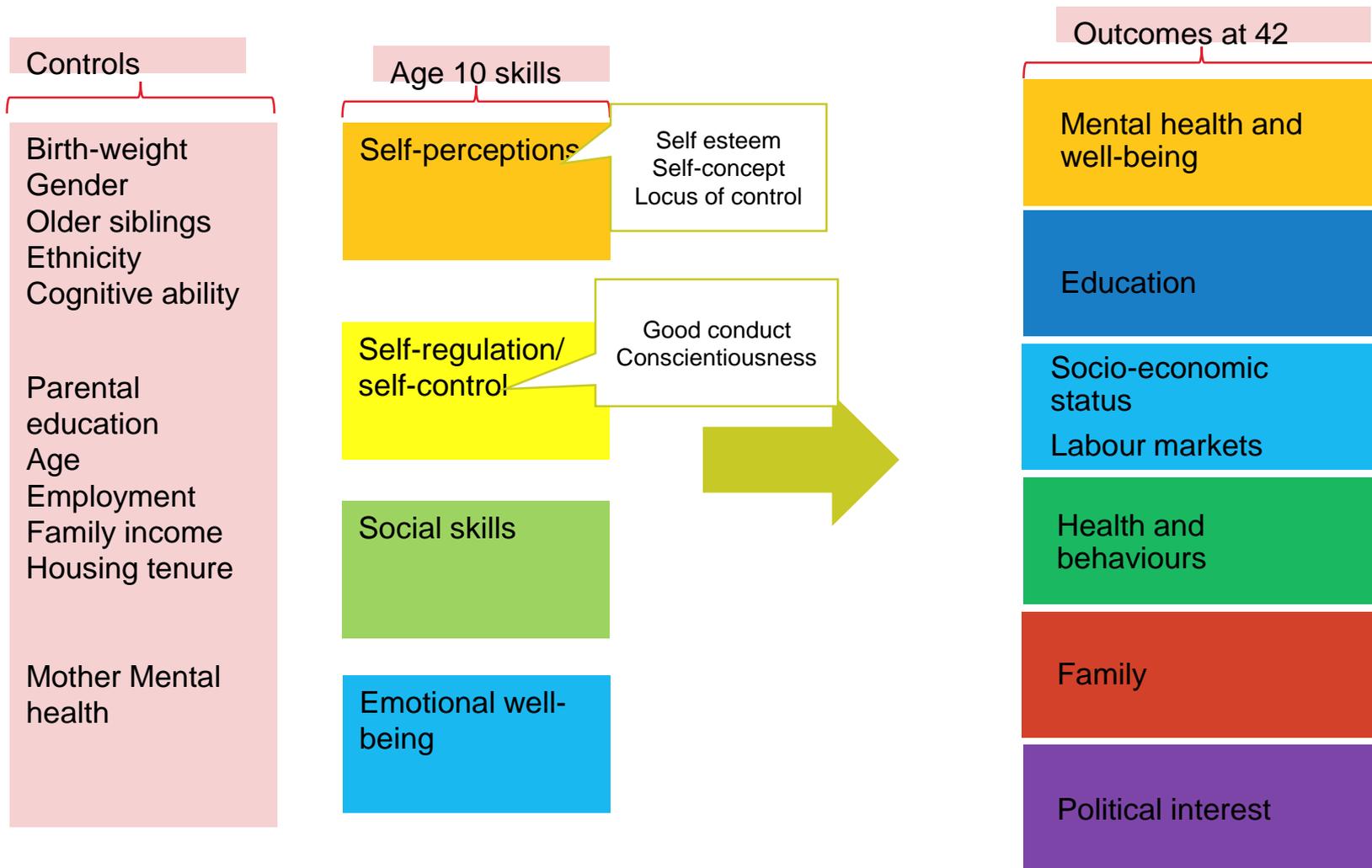
- **Self-control and self-regulation** strongly associated with mental well-being; good physical health and health behaviours; and socio-economic and labour market outcomes.
- **Self-esteem, locus of control, social skills, emotional well-being matter**, differently for different outcomes
- Relative **lack of evidence** on the long-term importance of motivation and resilience. Whether this means these skills are unimportant for adult outcomes, or that these skills are just under-researched, is unclear.

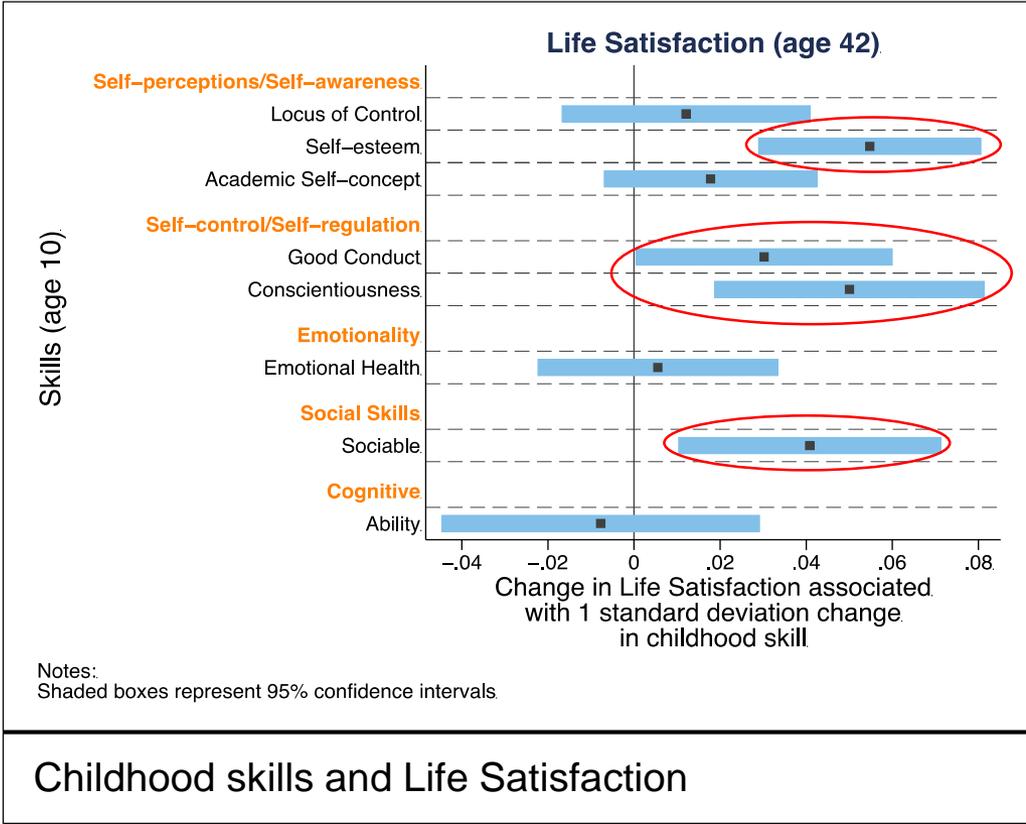
Limitations of the literature

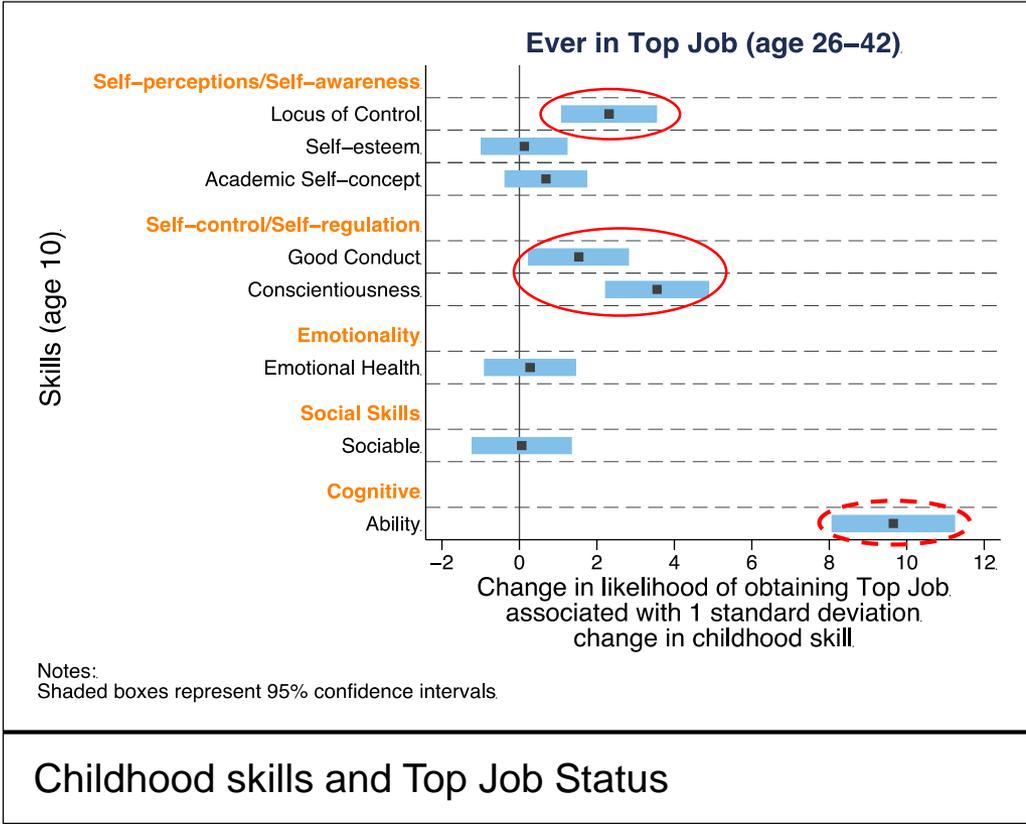
- **Consistency:** differences across studies in:
 - How skills are measured, at what age and what they are called
 - How heterogeneity across children and families is accounted for
 - Age at which adult outcomes are measured
- **Multiple skills and outcomes:**
 - Most studies examine effect of a single domain skill – few studies simultaneously considered multiple, distinct measures
 - Most studies explore effect on a single outcome, rather than multiple outcomes

Data analysis

- We estimated the association between a number of social and emotional skills measured at age 10, and a wide range of outcomes measured at age 42 using new data from 1970 British Cohort Study
- We use this analysis to assess the extent to which different skills matter, making comparisons across different outcomes in a consistent way







Childhood skills and Top Job Status

What is the evidence for which 'skills' matter most for later life

- Social and emotional skills are especially important for:
 - mental well-being and health outcomes,
 - some SES/labour market outcomes, e.g. family income, and if in employment
 - But less important for other SES/labour market outcomes (wages, attaining a 'top job' in your career)
- Potentially significant benefits to effective interventions which enhance social and emotional skills, as a complement to cognitive learning
- Measures of self-control (conduct, conscientiousness) and an internal locus of control especially important

Implications for policy

- Interventions that improve social and emotional skills are important as an end in themselves, as well as a potential means for improving attainment
- Overlap with mental health policies, especially among children who are most challenged
- EIF reviews of early and school aged-interventions – evidence suggests both can be effective and are important
- Well-evidenced approaches within schools: combination of whole school, whole classroom and targeted interventions
- Schools track the attainment of their children over time, but do not routinely capture data about social and emotional learning - there could be a sea change in our understanding and ability to test policies if even a little more was captured at the individual level

Thank you
Any questions?