Against all odds: A study of enabling factors in early childhood for cognitive outcomes

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Introduction

- Parental socio-economic background: key role in children's cognitive development (e.g. Blossfeld et al., 2017; Bradley & Corwyn, 2002; Bradshaw, 2011; Knudsen et al., 2019).

  ➢ *Children from more disadvantaged families more likely to experience poorer outcomes.*

  ➢ *However, some children from disadvantaged backgrounds succeed against all odds.*

- With a few exceptions (e.g.Masten & Coatsworth, 1998; Pilling, 1990; Siraj-Blatchford, 2010), most research has focused on the factors which negatively affect children's outcomes → more to learn from the positive experiences.

- Resilient features more examined in the social-psychological literature but sometimes limited to the individual psychological traits→ more to learn about the protective environmental factors beyond individual (e.g. family, school).

Aim & research questions

To analyse the mechanisms behind the reproduction of social inequalities by focusing on the enabling factors which lead children from more disadvantaged backgrounds to be more successful than expected.

Research questions:

1) To what extent do children from disadvantaged backgrounds attain successful cognitive outcomes?

2) Are there certain time points in children's development when this is more or less likely to happen?

3) What are the key enabling factors that distinguish successful children from disadvantaged backgrounds from their peers who attain less?

Data

- Growing Up in Scotland (GUS), longitudinal survey, Birth Cohort 1

Sweep	SW1	SW2	SW3	SW4	SW5	SW6	SW7	SW8
Age	10 months	Age 2	Age 3	Age 4	Age 5	Age 6	Age 8	Age 10
Year	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2012/13	2014/15
N	5217	4512	4193	3994	3833	3657	3456	3150
Attrition		86%	80%	77%	73%	70%	66%	60%

2815 respondents who answered at all the sweeps up to SW 8 → 54% of SW1

Current working sample: **2307** respondents who answered at SW3, SW5 & SW8 + valid data on all key variables

Defining family disadvantage and succeeding 'against all odds' longitudinally

Family disadvantage:

Household bottom income quintile → equivalised total household income before tax at ages 3, 5 and 10.

**Cognitive skills:** number of times children attained a vocabulary scores above the overall group median

- **Age 3:** Naming Vocabulary →British Ability Scales (BASII)

- **Age 5**: Naming Vocabulary → BAS II

- **Age 10**: Expressive vocabulary →Weschler Individual Achievement Tests, 2nd Edition (WIAT-II)

- *To what extent do children from disadvantaged backgrounds attain successful cognitive outcomes?*

- *Are there certain time points in children's development when this is more or less likely to happen?*

Children attaining a score above the median at different ages by household income quintile (%)

Twitter: @U_Inequalities
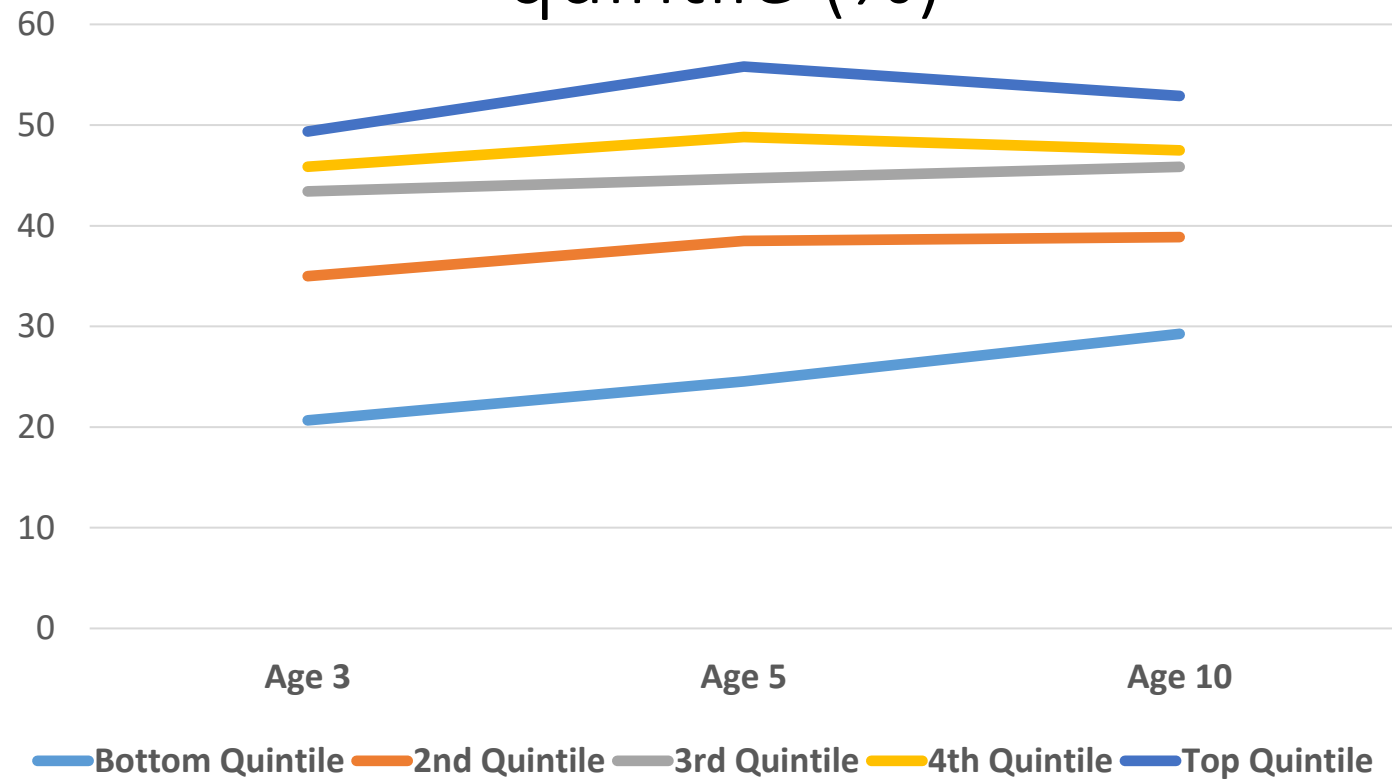
Individual longitudinal trajectories:
Number of times children attained a score above the median by age 10 by household income quintile (%)
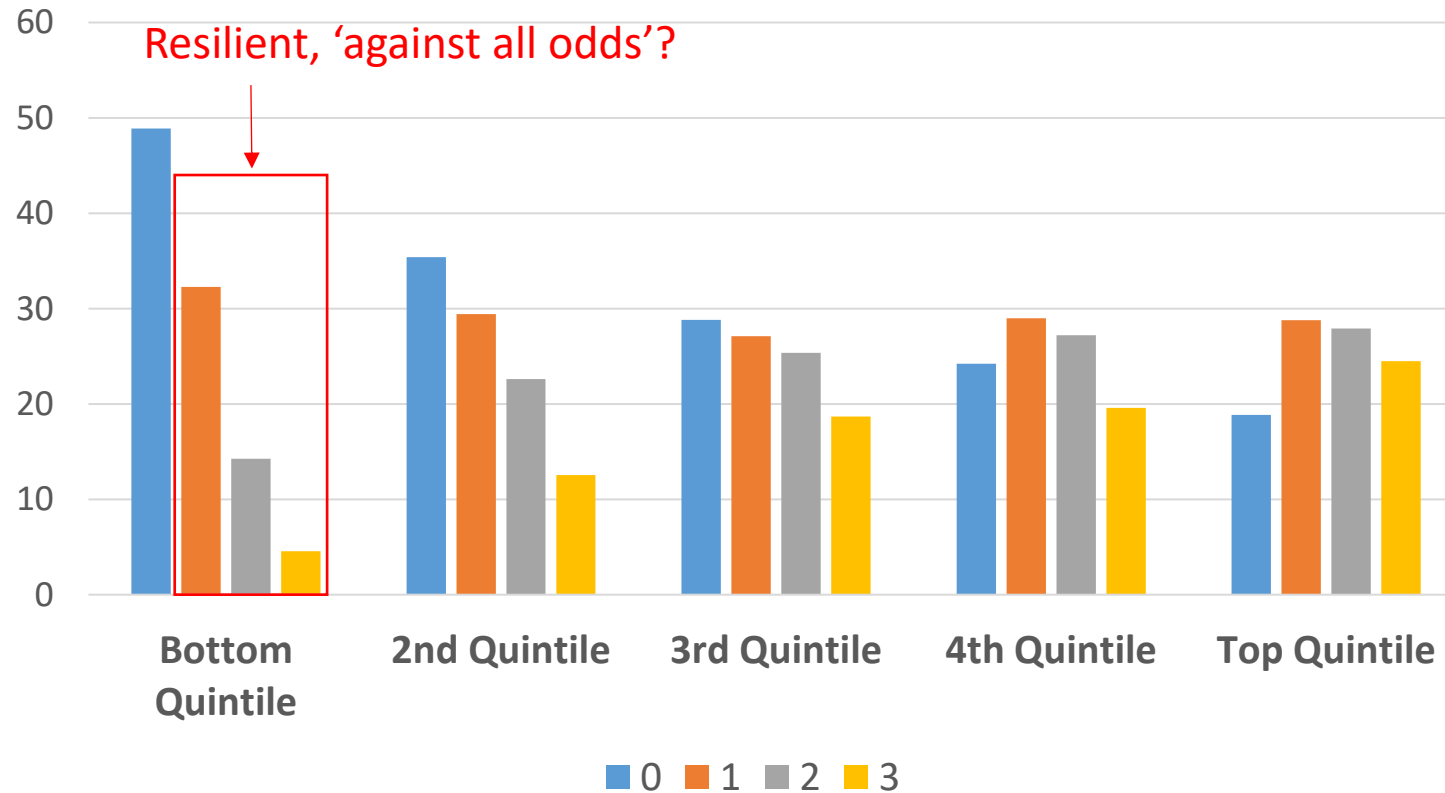
Individual longitudinal trajectories:
Change and stability among those obtaining above-average vocabulary scores by household income quintile (%)
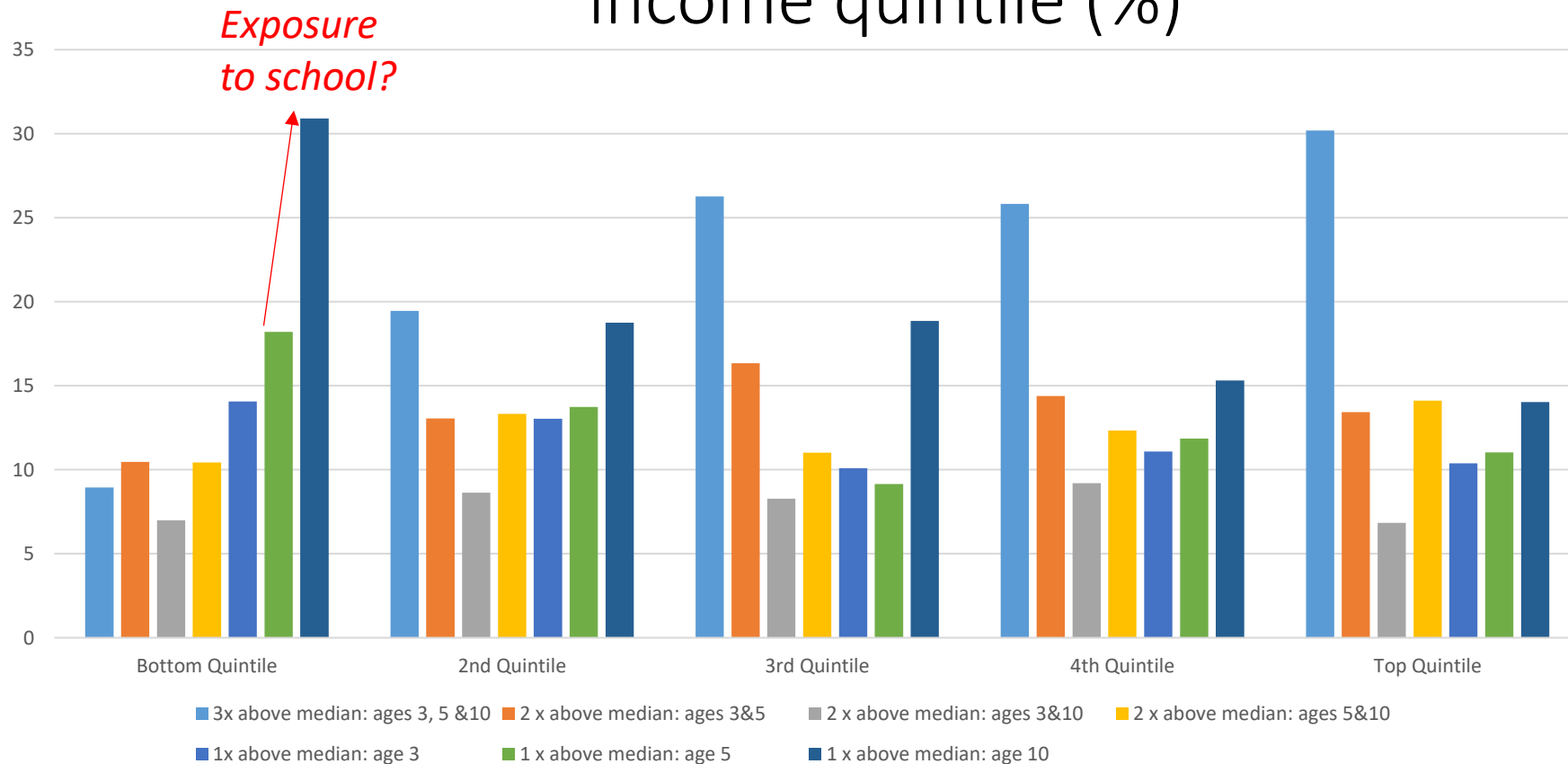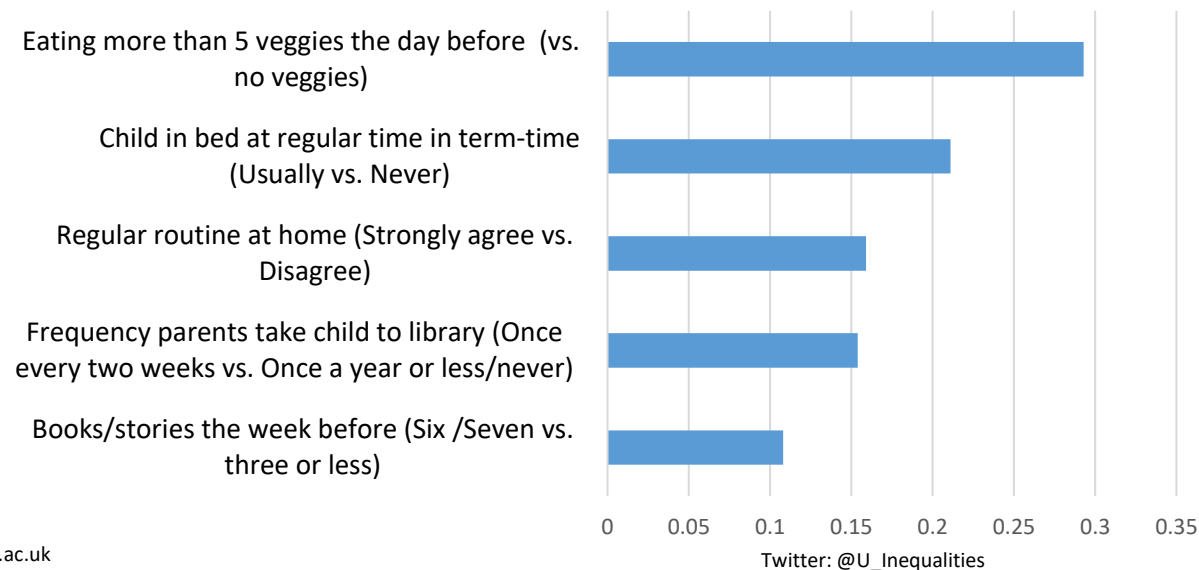
- *What are the key enabling factors that distinguish successful children from disadvantaged backgrounds from their peers who attain less?*
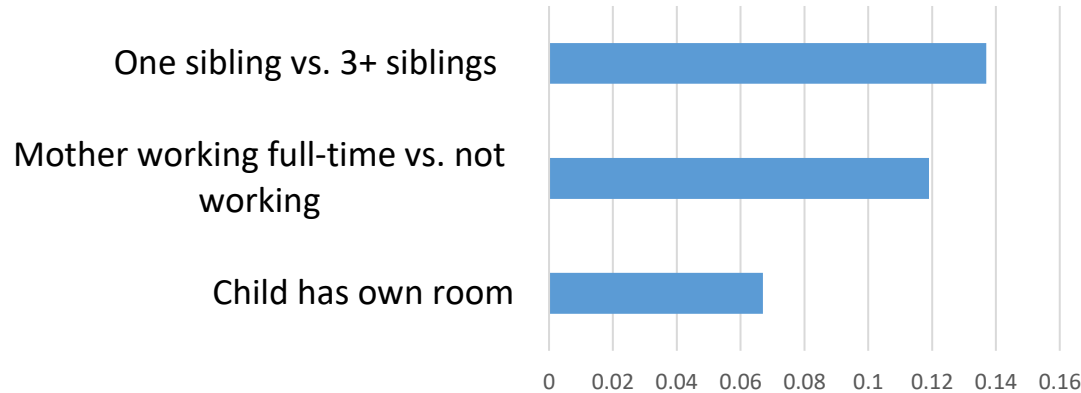
Twitter: @U_Inequalities

Understanding Inequalities

- *Children from economically disadvantaged families are more likely to achieve above-average **cognitive scores** if they have **highly educated parents**: parent university degree vs. no qual. → 30 pp gap in the chance of attaining an above-average cognitive score*

- Some activities are particularly dependent on parental education→ strategies employed by parents with different levels of education which explain the difference in the cognitive scores:
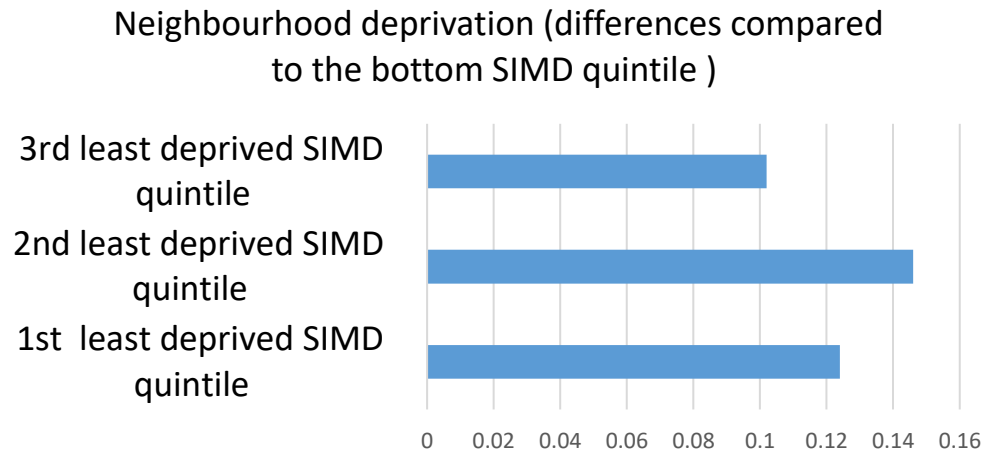
(1) Home environment:

Twitter: @U_Inequalities

(2) Socio-economic and demographic factors:

One sibling vs. 3+ siblings

Mother working full-time vs. not working

Child has own room

0   0.02   0.04   0.06   0.08   0.1   0.12   0.14   0.16

(3) Area-level factors:

Neighbourhood deprivation (differences compared to the bottom SIMD quintile)

3rd least deprived SIMD quintile

2nd least deprived SIMD quintile

1st least deprived SIMD quintile

0   0.02   0.04   0.06   0.08   0.1   0.12   0.14   0.16

- However, some factors indicate a higher chance of attaining an above-average cognitive score *regardless of parental education, social class and household income.*

- **Among the key factors enabling children from economically disadvantaged backgrounds to succeed net of parental SES:**
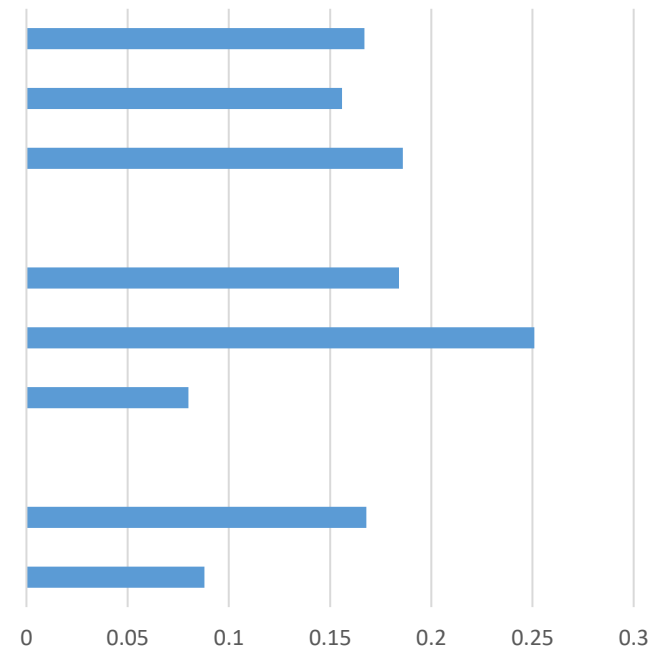
→ *Home learning environment:*

→ *Area of residence population density:*

→ *Housing tenure*

Summary

- Children from lower income households have much lower chances of attaining above average vocabulary skills from as early as age 3.

- These inequalities reduce at age 10, however, they remain strong (close to twice less chance of attaining a vocabulary score above average)

- Nevertheless, some children attain successful outcomes despite the disadvantaged circumstances.

- This is most likely to occur at the age of 10, after having had some exposure to school vs. those from top income households who are much more likely to do consistently better than the average, from age 3 to age 10.

- Among the factors enabling successful outcomes at age 10 for children from economically disadvantaged households are:

  - *Parental education, mainly operating through a more stimulating home environment, healthy routine, better housing and neighbourhood circumstances.*

  - *Frequent activities with the parents (painting, drawing, nursery rhythms in early childhood), living in remote rural/small towns and not living in social rent → regardless of parental education, social class etc.*

    ….more individual and school-related factors to be explored!

- By identifying the reasons for high attainment among disadvantaged children we can understand better how and at which level to intervene to improve attainment for all children.

Save the date!

Understanding Inequalities International Conference – 9-10th June 2020
The John McIntyre Conference Centre, University of Edinburgh

The conference will focus on two important contemporary themes:
1. Spatial inequalities and contextual effects
2. Inequalities over the life course

Call for papers now open! Deadline for abstracts – 1st November 2019

Find out more at:
http://www.understanding-inequalities.ac.uk/event/UIConference2020

Thank you!