

UNICEF

Office of Research - Innocenti

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Child well-being, education, and the lifecourse: complementarities and priorities

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In pursuit of the 'how'

- From monitoring to policy *or* from 'what' to 'why' to 'how'
 - Growing use of indices / scorecards etc.
 - Increasing list of desired policy outcomes
 - Siloed research (data, governance?)?
- Complementarity, priority, limited time and money
- Better use of longitudinal data
 - Assess how longitudinal can be used to inform responses to the SDGs
 - Transferability of findings across countries

The project

- Mapping 'outcome' to 'outcome' measures
 - Implications (gaps, patterns, and processes)
- Literature review, data collection and meta-analysis
- Development of a hypothesis
- Empirical tests using at least two available studies
 - Developing (Young Lives)
 - Developed country setting (LSAC)
- Future work?

Scope, Concepts and Methods

- Focus on children's well-being outcomes
 - Outcome categorization (UNICEF well-being framework - Dimensions comparable to SDG)
 - Emphasis on educational outcomes plus one other well-being outcome at a *different* point in time
 - Includes outcomes in adulthood

Literature review and dataset building

- Selected through systemized research (criteria)
- Longitudinal in nature;
- Include: family functioning, poverty, deprivation, health, risk behaviours, youth activity / employment;
- Associated this outcomes to an educational outcome at a different point in time;
- At least one of the outcomes before the age of 18 years;
- Controlling for standard socio-demographic controls, and obvious mediating factors; and...
- Report standardised coefficients, or information that allow this to be calculated, and information that allows for the quality of the studies and results to be broadly assessed (such as sampling methodology, sample sizes, significances, and regression statistics).

Final set and exclusions

- Original capture
 - 278 studies, 26 longitudinal datasets
 - Dates range from 1958 to present
- Final set
 - 62 studies from 278 identified
 - 614 effect sizes in total (140 OR – not yet standardized)
- Information collected for meta-analysis included:
 - ages, outcomes, StdB, Sig., sample size, subgroups, R2

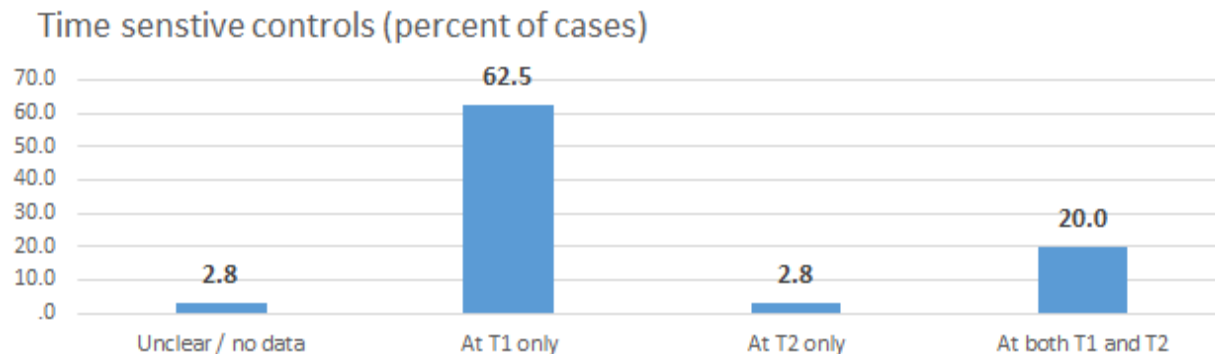
Cleaning and preparing the data

- Coefficient and Standard errors checks and adjustments
 - Less than 1 (all tests adjusted)
 - SD calculated using SE and sample size
- Unusual tests (incomplete results) excluded
- OR test excluded (140 of these)
- Negative and positive directions assigned
- P values from Z values etc.

Some general statistics: I

- 53% significant findings
- 71% peer reviewed studies
- 70% OECD-focussed
- 80% national, 66% total population

- 87% control for family wealth or income
- 22% control for (parental) employment
- 12% control for parental education



Some (more) general statistics: II

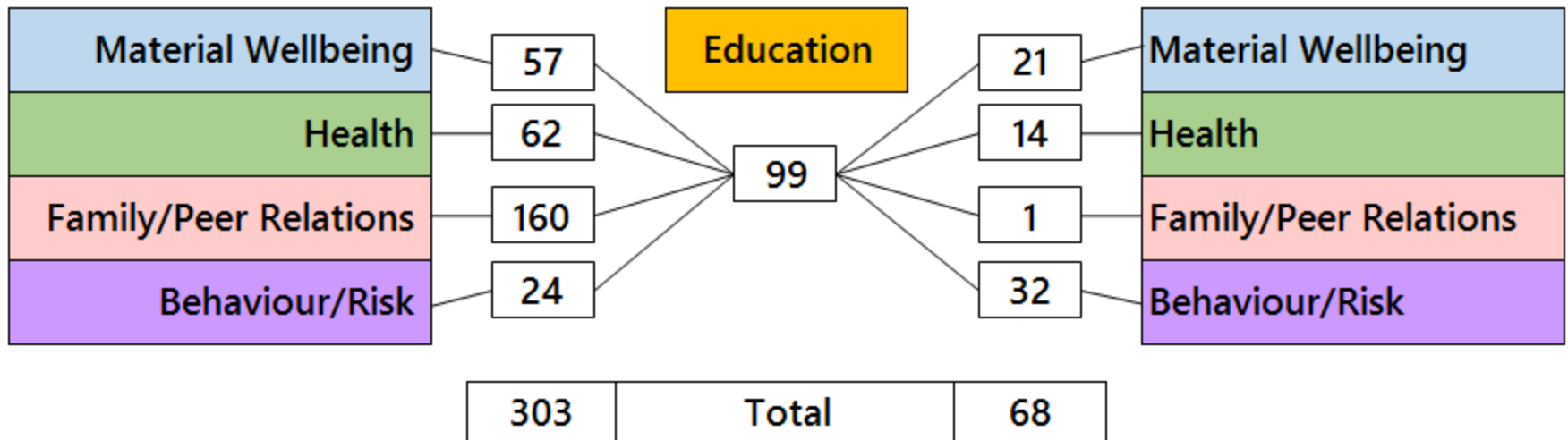
	Minimum	Maximum	Mean	Std. Dev
Age at T1	0	20	7.0	5.4
Age at T2	1	53	17.0	11.5
Beta	-.421	.850	.1	.1
R squared	.015	.477	.2	.1
Sample size	89	42988	4965.2	6381.1
Age gap	.00	46.00	10.0	10.3

How to interpret the findings?

- The inferred effect of a standard deviation change of the independent variable on the dependent variable (or category change).
- OECD defines the standardised mean effects sizes of around 0.2 as small, 0.5 as moderate, and 0.8 as large.

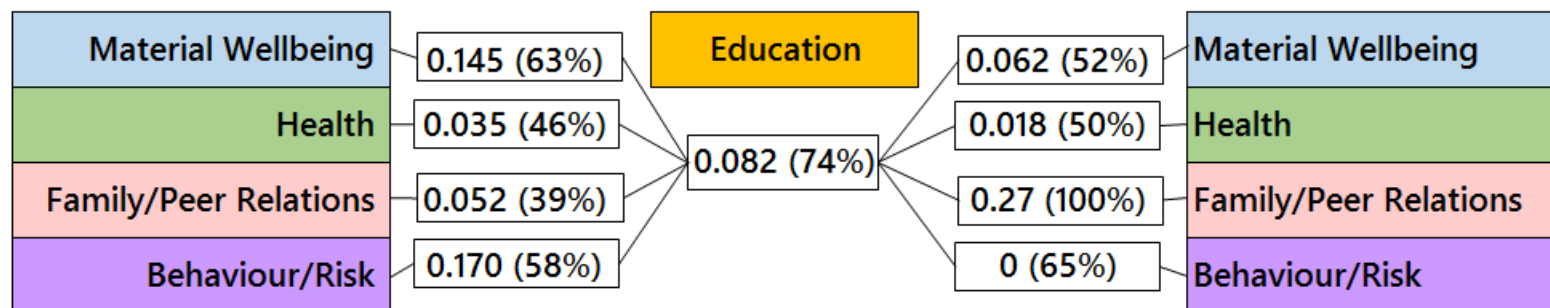
Descriptives: Over 400 effects sizes cover determinants of education (86%)

Number of effect sizes reviewed

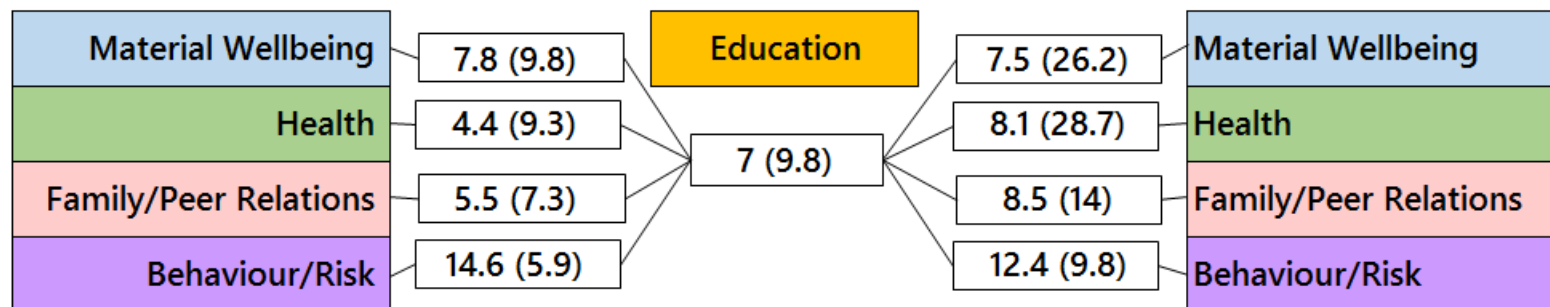


Effect sizes, significance and age gaps

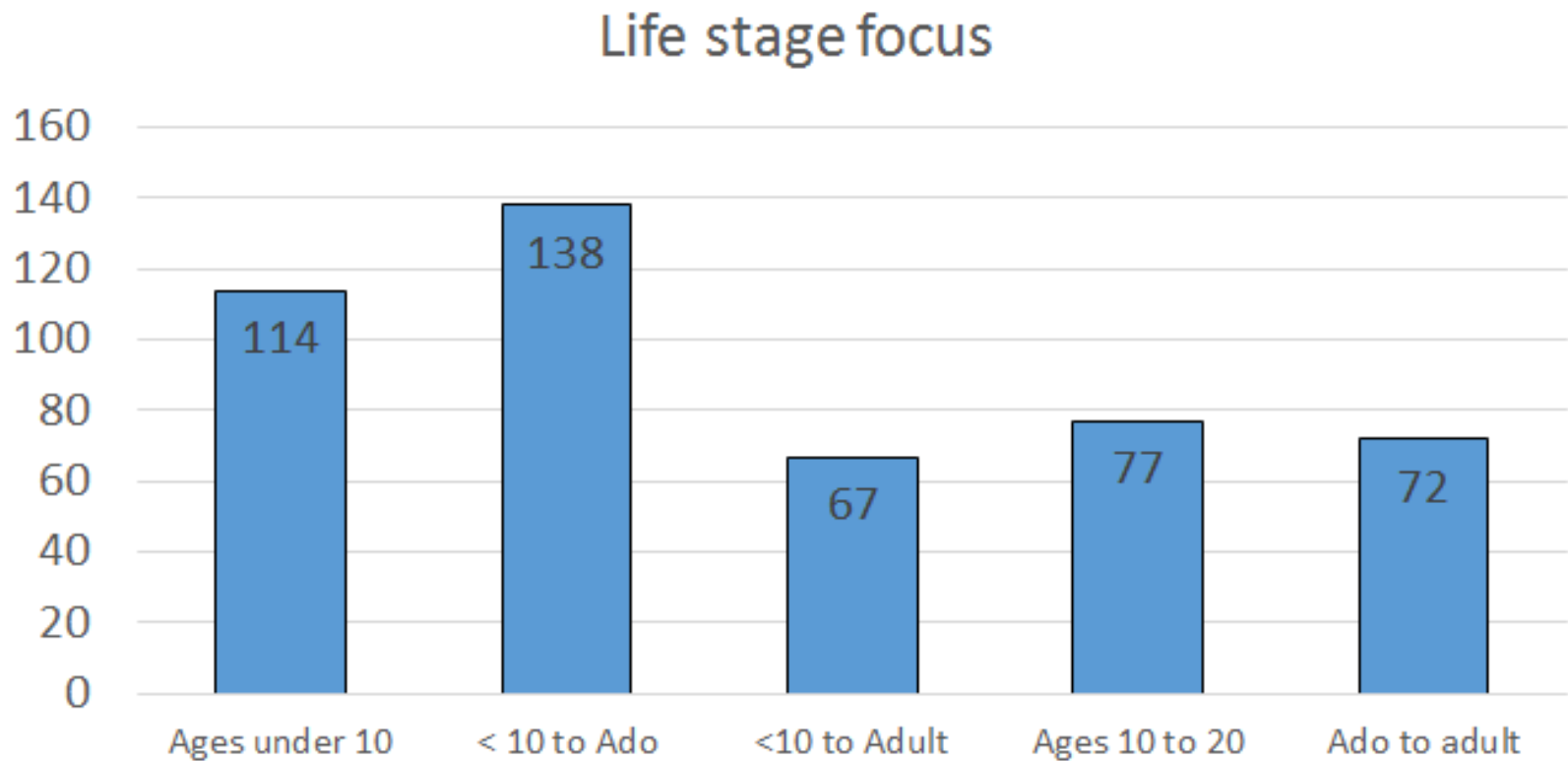
Average effect sizes reviewed



Average ages and age gaps reviewed



Descriptives: around 30% of tests focused on adult outcomes



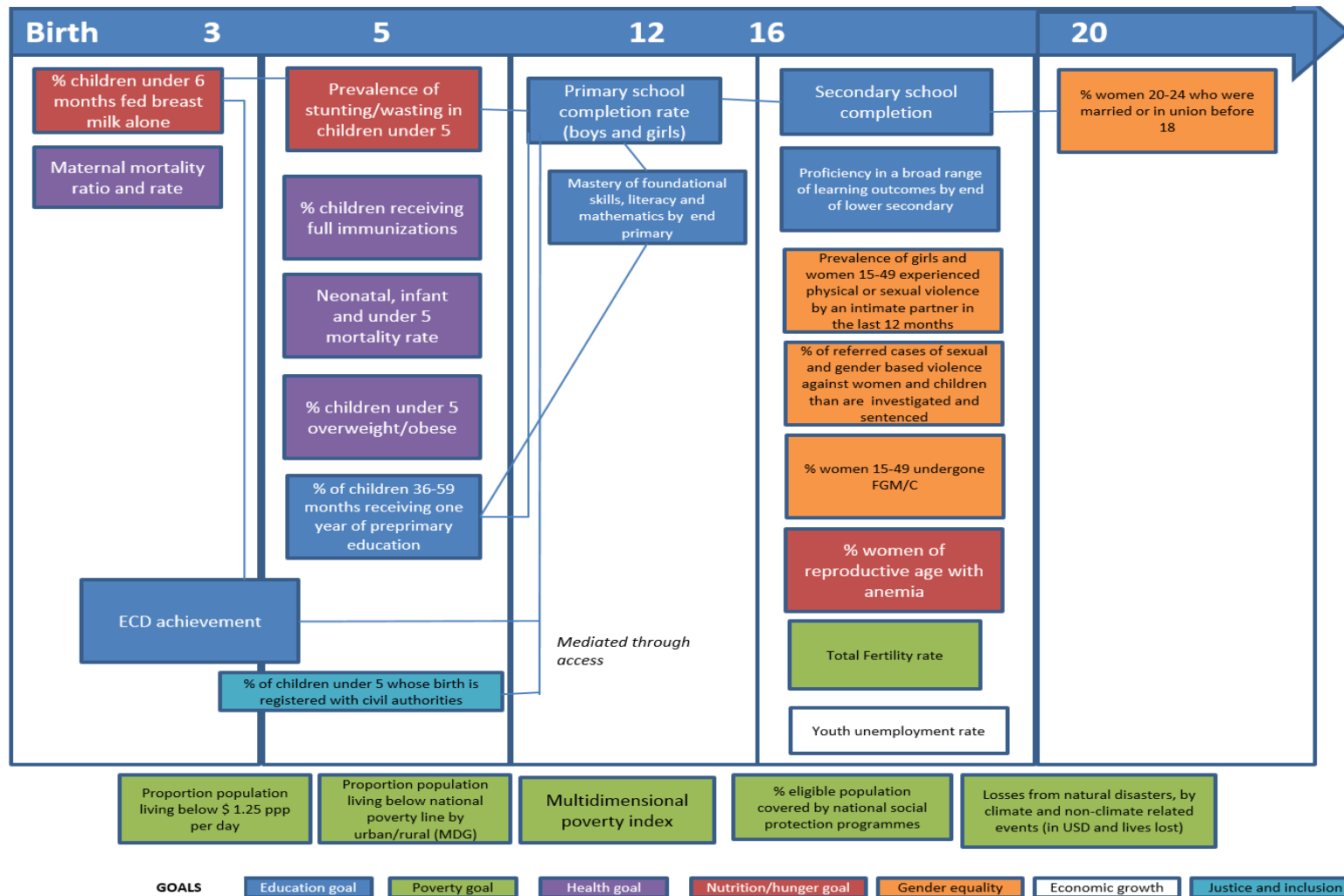
Do the model choices matter?

- Analysis of coefficient sizes and significance based on:
 - Country of test
 - Sample size
 - Model fit (adjusted R-square)
 - Inclusion of appropriate controls at both time points
 - Publication type
- Changes to the final interpretation of results

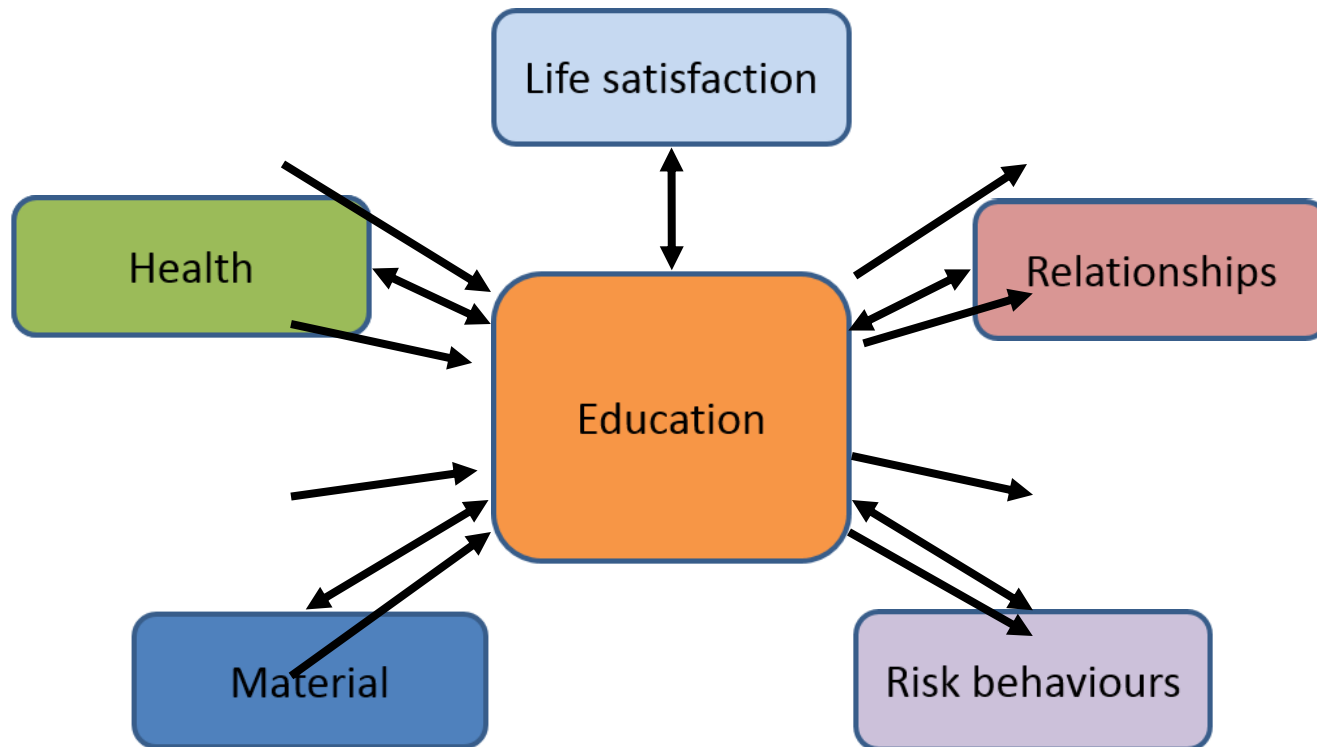
Regression analysis

	Coefficient size		Significance	
	Model I	Model II	Model I	Model II
Age at T1			++	+
Years to T2				
Sample size			++	++
Family SES / income				
Employment				
Parental Education				
Controls at both (t1 and T2)				
Controls not clear			-	
Controls at T1	++	+		
Controls at T2	++	++		
Study type (1 = peer review)				
Developing country (1 = yes)	--	--		
Sub-national (1 = yes).	++	++		
Sub sampling (1=yes)	++			
Education to education				
Material to		++		
Health to				-
Family to				-
Risk to		+		
...to material				-
...to health				-
...to family				
...to risk		--		-
R2 (adj)	0.07	0.17	0.10	0.17

Trying to create order I



Trying to create order II



Pathways through education: Attainment

Parental employment status (15.6)	0.134
Household income (9.7)	0.140
Own income (in adulthood) (5.5)	0.150

Birth weight (10)	0.179
Morbidity (7)	0.291
Stunting (5)	0.009
Nutrition (1.5)	0.002

Family change (12.7)	0.169
Maternal Factors (7.8)	0.102
Paternal Factors (16)	-0.075
Bullying (8)	0.016
Parental Relations (12.7)	0.142

Substance use/abuse (16)	0.537
Maltreatment (15)	0.348
Computer Gaming (17.2)	-0.011
Hyperactivity (5)	0.080

Attainment (2.5)	0.023	Attainment (20)
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0.012	Parental employment status (37.5)
0.220	Household income (26.2)
0.025	Own employment status (in adulthood) (37.5)

-0.042	Substance use/abuse (22)
-0.010	Sexual behaviour (19.7)
-0.079	Criminality (24)

Pathways through education:

Household income (4.7)	0.138
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Birth weight (4.3)	0.030
Morbidity (10.3)	0.180
Stunting (0.5)	0.053
Body weight (12)	0.116

Family change (4.8)	0.047
Maternal Factors (0.75)	-0.002
Paternal Factors (5)	0.047

Substance use/abuse (13.7)	0.027
Child labour (12)	0.152

Achievement (9.4)		Achievement (15)
	0.245	

0.030	Own employment status (in adulthood) (33)
0.124	Own income (in adulthood) (33)

-0.020	Substance use/abuse (20.3)
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Pathways through education: cognitive skills

Household income (1.9)	0.146
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Morbidity (1)	0.019
Stunting (0.86)	0.041
Nutrition (1.5)	0.086

Family change (6.9)	-0.007
Maternal Factors (0.8)	0.017
Paternal Factors (1.7)	0.027
Parental factors (1)	0.119

Cognitive Skills (9.4)		Cognitive Skills (38.1)
	0.171	

0.034	Own employment status (in adulthood) (42)
0.026	Own income (in adulthood) (34)

0.014	Morbidity (39.3)
-0.006	Body weight (34)
0.019	Mental health (36)

0.026	Substance use/abuse (29.5)
0.033	Sexual behaviour (16)
0.010	Criminality (34.5)

Pathways through education: Non-cognitive skills

Household income (2.5)	0.047
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Birth weight (3)	-0.044
Morbidity (2)	0.017
Stunting (7.5)	-0.048

Family change (2.6)	0.119
Parental factors (1)	0.124

Non cognitive skills (6.5)	0.251	Non cognitive skills (11)
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0.010	Own employment status (in adulthood) (42)
0.016	Own income (in adulthood) (42)

0.019	Morbidity (42)
0.018	Mental health (42)

0.270	Socialisation (23)
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0.013	Substance use/abuse (16)
0.010	Sexual behaviour (16)
0.014	Criminality (34.5)
0.012	School trouble (16)

Implications: How far from the how?

- The potential to inform policy response
 - Magnitude of effects means choices...
 - Diminishing/increasing returns?
 - Timing
- Yet it remains incomplete
 - Gaps in coverage
 - Concepts / countries
 - Does it create a hypothesis to test?
 - Divergent developed / developing country findings (external reliability)?
 - Endogeneity?!?

Next steps

- Useful datasets we might want to look at
- Existing literature we may be missing (language)

- How valid is this approach?
- Suggestions for improvement?

- Ideas for future work:
 - A focus on SDG measures?
 - Linking the findings to inputs / implementation practices?

Thanks!

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