

The **A** **B** **C**s
of improving health outcomes
with early childhood development.

Professor James Heckman

Nobel Laureate in Economics | Henry Schultz Distinguished Professor of Economics, University of Chicago



Henry Schultz 2012

- Labor economist
- Milton Friedman School of Economics
- One of the best living empirical researchers

Professor Heckman's analysis of Perry Preschool shows significant returns on investment based on increased productivity and a reduced need for spending on remediation and anti-social behavior.

“The rate of return for investment in quality early childhood education is 7-10% *per annum* through better outcomes in education, health, sociability, economic productivity and reduced crime.”

Professor James Heckman

The Abecedarian Project was a randomized trial to determine whether quality early childhood environments could prevent developmental delays among disadvantaged children.

Abecedarian is the only program that focused on early health and learning – and tracked life and health outcomes well into adulthood, including periodic physical exams for both the treatment and control groups in their mid-30s.

Professor Heckman and colleagues analyzed more than three decades of longitudinal data on the health effects of the Abecedarian program.

Society always assumed that education drives health; Abecedarian indicates that early health, nutrition and early education can drive better health.

Children received



two meals and an afternoon snack at the center and were offered periodic medical check-ups, screenings and follow-up care.

Abecedarian resulted in significantly better education, social and economic outcomes for treated children and society – and the positive effects on later adult health are substantial.

“Less obesity, lower BMIs, and higher levels of good cholesterol. When we look at conditions that are predictive of coronary disease, for example blood pressure (systolic and diastolic), we find differences for males in the treatment group that are substantial when we compare them with the control group, and we also find substantial differences for pre-hypertension in females.”

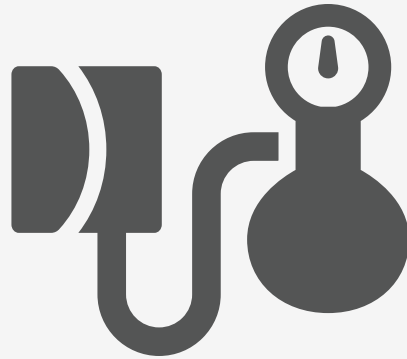
Professor James Heckman

Health effects of Abecedarian intervention at age 35

	Treatment Mean	Control Mean	Treatment p-value
Systolic Blood Pressure	125.79	143.33	0.018
Diastolic Blood Pressure	78.53	92.00	0.024
Pre-Hypertension	0.68	0.78	0.235
Hypertension	0.10	0.44	0.011
HDL Cholesterol	53.21	42.00	0.067
Cholesterol/HDL-C	3.89	4.69	0.057
Abdominal Obesity	0.65	0.87	0.136
Metabolic Syndrome	0.00	0.25	0.009

Source: Campbell, Conti, Heckman, Moon, Pinto and Pungello (2012)

Males had



**lower
systolic and
diastolic blood
pressure and
were less likely
to fall into
the stage one
hypertension
category**

And higher levels of “good” HDL cholesterol.



No treated males had metabolic syndrome – which dramatically increases one’s risk of heart disease, stroke and diabetes – while the prevalence among men in the control group was 25%.

Treated females were less likely to be affected by abdominal obesity and less likely to fall into the pre-hypertension category.

**Treated males and females
were also at significantly
lower risk for total coronary
heart disease.**

The study also showed that quality programs that combine early education with early health influence healthier lifestyle behaviors.

Treated women were significantly less likely to start drinking before age 17, more likely to engage in physical activity and more likely to eat nutritious food.

Treated men delayed the onset of smoking and marijuana use.

“What we hadn’t really appreciated before was how substantial the health impacts would be.”

Professor James Heckman

“The great promise of combining early education and early health is that it provides cognitive development with the impulse control, persistence and grit that help people avoid risky behaviors, self-diagnose, seek treatment and follow doctors' orders later in life.”

Professor James Heckman

“Abecedarian shows that investing in early learning programs that offer health components can boost education, health and economic outcomes.”

Professor James Heckman

“It also offers a different way to fight costly adult chronic disease: investing early in the development of children to build the knowledge and self-regulation necessary to prevent chronic disease and help them lead healthy, productive lives.”

Professor James Heckman

Similar to ABC, the British Cohort Study tracks children in Great Britain who received early childhood education and assesses their adult outcomes over time.

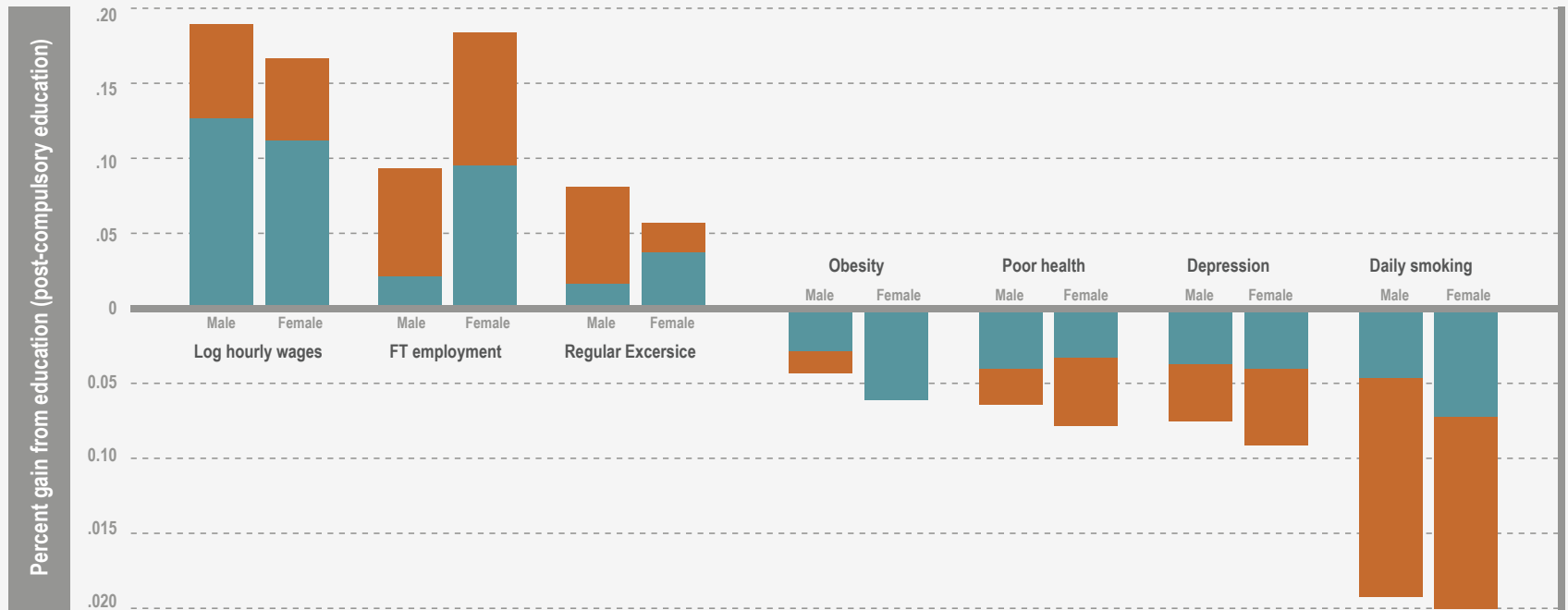
The British Cohort Study shows that early health and development are as important as education in promoting wages, employment and even later health.

Heckman and Conti's analysis shows the overall effect of education on a variety of adult economic and health outcomes – and then breaks them down by the causal effects of education and early life experiences.

Disparities by education

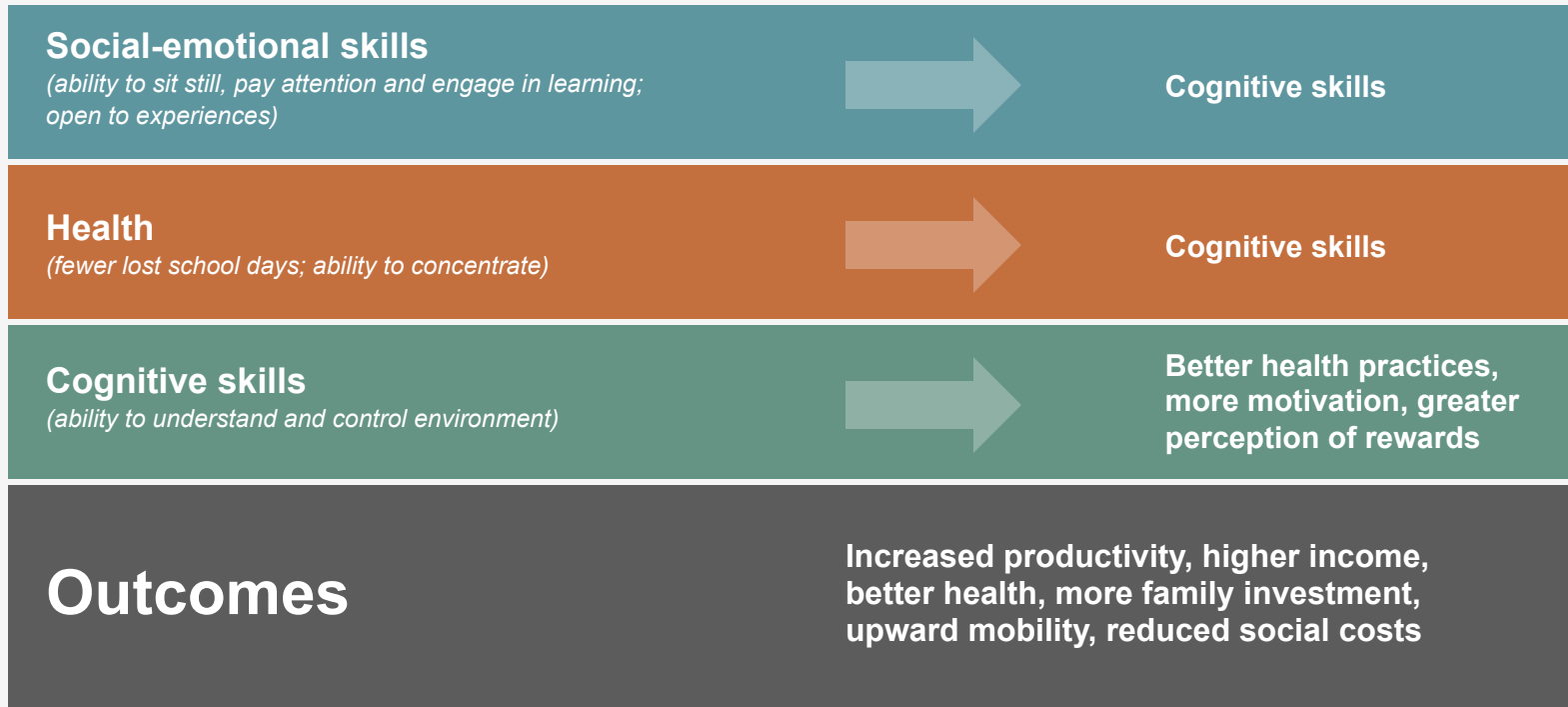
(post-compulsory education)

■ Early life factors
■ Causal effects of education



Source: Conti & Heckman (2010). Authors' calculations using BCS70.


Skill begets skill




**We can act on this research
by taking the following steps:**




**Use quality birth-to-five early
childhood development
programs to boost
productivity and prevent
costly chronic disease.**




**Understand that quality
early childhood programs
begin at birth for children
and include early health
and nutrition.**




**Develop the whole child:
health, cognitive and
character skills.**



Remember that current investments in Head Start, Early Head Start, CHIP, Medicaid and health care can be critical building blocks for disease prevention and economic advancement.



Increase investments in early childhood programs that combine health, nutrition and early learning —the outcomes are more likely to pay for the costs.

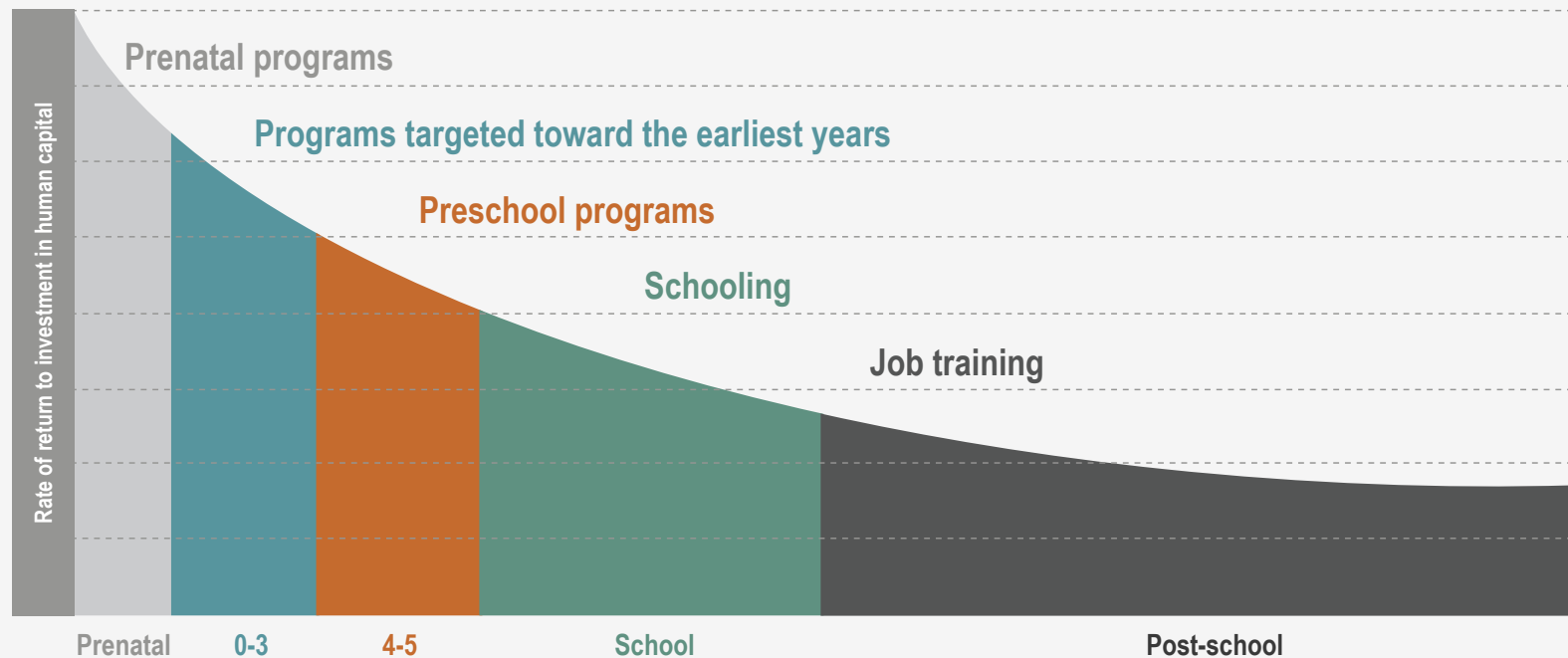


**Support the Strong Start for
America's Children Act to
help states provide quality
early childhood programs
that prepare children for
healthy, successful lives.**

The choice is yours: create for economic gain or remediate for economic pain.

Returns to a unit dollar invested

Source: Heckman (2008)



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Heckman
The economics of human potential.

Anyone looking for upstream solutions to the biggest problems facing America should look to Nobel Prize winning University of Chicago Economics Professor James Heckman's work to understand the great gains to be had by investing in early and equal development of human potential.

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Understanding the Mechanisms through Which an Influential Early Childhood Program Boosted Adult Outcomes

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Published in October 2013, findings from Nobel laureate economist James Heckman and co-authors Rodrigo Pinto (University of Chicago) and Peter Savalyev (Vanderbilt University) reveal that non-cognitive skill development, not IQ enhancement, is the primary factor underpinning the success of high-quality preschool.

The economics of human potential.

Thank you.



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