



THE UNIVERSITY
of ADELAIDE

“Impact”

from

Childhood Interventions

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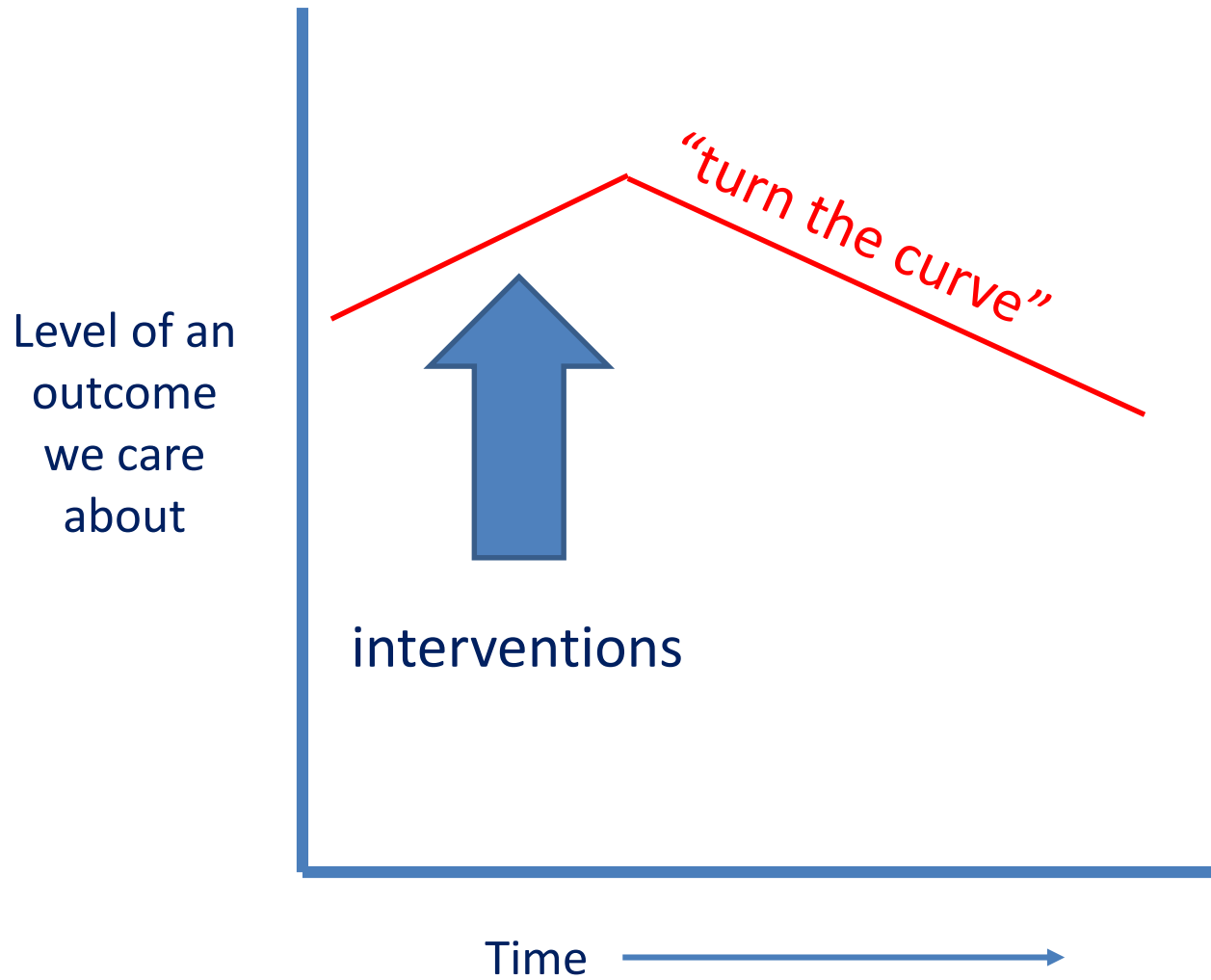
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BetterStart
Child Health and Development
Research Group



THE UNIVERSITY
of ADELAIDE
SCHOOL OF PUBLIC HEALTH

Impact at population level



Social Policy Report

Giving Child and Youth Development Knowledge Away

Volume XVII, Number 1

2003

Do You Believe In Magic?: What We Can Expect From Early Childhood Intervention Programs

Jeanne Brooks-Gunn

2003

Forty Years of Believing In Magic Is Enough

Edward Zigler, Yale University

Magic beliefs sprouted alongside Head Start and its precursors. Magic was in the air in 1965 when President Lyndon Johnson told the nation that the young children who attended a new summer school program called Head Start were going to grow up to be taxpaying and productive citizens instead of welfare dependents and prison inmates. Prominent behavioral scientists like J. McVicker Hunt and Benjamin Bloom were telling an eager public that small changes in a child's rearing



“Are we sure there is no magic potion that will push poor children into the ranks of the middle class?

Only if the potion contains health care, child care, good housing, sufficient income for every family, child rearing environments free of drugs and violence, support for all parents in their roles, and equal education for all students in schools.

Without these necessities, only magic will make that happen.” pg 10

“Research Evidence Industry”



Policy Frameworks

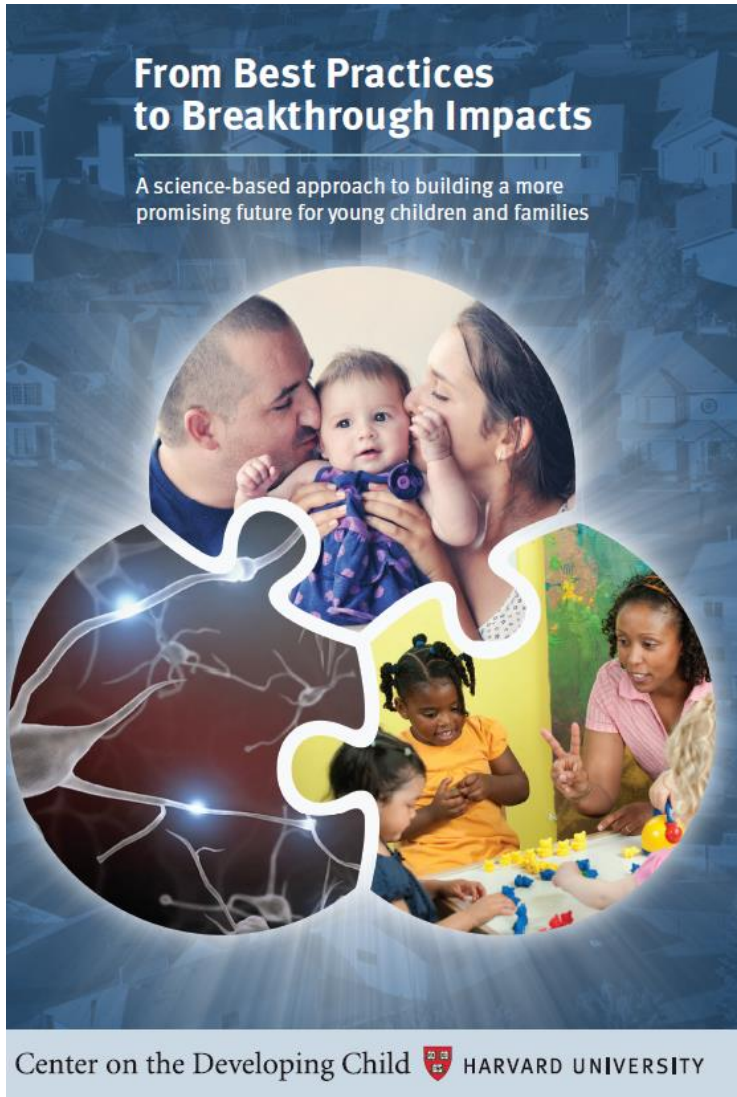
Reviews

Reviews of Reviews

on

Child Health and Development





(2016)

“This widespread preference for “evidence-based” programs, many of which have produced small effects on random categories of outcomes that have not been replicated, seriously limits the likelihood of achieving increasingly larger impacts at scale over time.”

Harvard Center on the Developing Child

From Best Practices to Breakthrough Impacts

Home Visiting Programs

- Of 44 Home Visiting Programs – only 19 (43%) were “Supported by Evidence”
- Of 231 eligible studies – only 96 (42%) were high/moderate quality

Less than 50% of research evidence involving home visits
is high/moderate quality

<http://homvee.acf.hhs.gov/>

The research cupboard is not bare ... but we need a re-stock ... soon



- Better community driven theory underpinning interventions
- Better design to make sure they generate evidence that is “good enough”
to inform practice

Researchers can do better on impact

- Our RCTs are chronically under-powered and effect sizes on anything are almost always modest – large RCTs almost always yield smaller effects than effects shown in small studies
- Investigating “what works for whom under what conditions” only compounds power problems
- Effects from small RCTs are usually unreliable, regardless of whether they are “significant” or not – “statistically significant” is not a statement of impact
- If you are addicted to using the bright line of “significance”, set thresholds at $P < 0.005$ or even < 0.001

Researchers can do better on impact

- Systematic reviews show the effect ceiling hovers around 0.2-0.3 SD
- Whether such effects are big or small “impacts” should be judged in the context of the field – 0.2SD in reading might be large but in obesity be small in absolute terms
- One way forward is to put effects on a scale that has meaning in the real world

Translating the Statistical Representation of the Effects of Education Interventions Into More Readily Interpretable Forms

NOVEMBER 2012

Mark W. Lipsey, Kelly Puzio, Cathy Yun, Michael A. Hebert, Kasia Steinka-Fry,
Mikel W. Cole, Megan Roberts, Karen S. Anthony, and Matthew D. Busick

Researchers can do better on impact

- “Standardized” effects do not make things comparable – they are inherently confounded by the SD in the particular study population and different measurement errors across outcomes
- And we should project those within-study effects to the population level – is it plausible that modest effects among those willing to be subjected to our interventions will actually ‘turn the curve’ at the population level? If so, how many individuals would need to change and by how much?

A Role for Big Data

- There will never be enough RCTs. We will have to use quasi-experimental methods and emulating RCTs that evaluate service innovations in the real world to generate evidence of impact = “practice based” evidence
- Enhancing administrative systems capability to improve outcomes for disadvantaged populations requires information infrastructure to know whether service innovations work
- But that depends crucially on the what data is collected through administrative systems across the whole population level
- We will need community-researcher partnerships into what information needs to be collected, and who has access to, and use of that data
- In the end these data must be returned to source – the community that offered them up and paid for them – part of the social contract for use of big data