

Evidence for Targeted and Universal Pre School/Childcare: Mind the Gap!

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Perhaps the most important contribution to research on early childhood education and intervention from North America is the results of experimental interventions into the lives of very disadvantaged children.

There is *good evidence* that high quality, preschool child care/education programs combined with parent support *targeted* at *children at risk* can have remarkable impacts.

Good evidence = random assignment.

Targeted = for a select group of children.

Children at risk = families of very low SES; children with cognitive abilities at the far (lower) end of the population distribution.

Examples:

Perry Preschool Study and the Abecedarian Project in the U.S.

The “Jamaican Study”.

Can we use this research for policy and programming?

It is a rare that we don't.

Most advocacy for early childhood interventions is liberally sprinkled with references to this experimental evidence.

If we want to use the experimental evidence to frame expectations we must understand the “fit”.

How can we use this research for policy and programming?

- 1) Scale them up within the at risk population
- 2) Extend them to other groups of children

Within this context there are key questions we need answered to understand the fit of this evidence to what we are proposing:

1. What is the objective?
2. What did we scale?
3. Who are we treating?

What is our objective?

Child development is one objective of these programs.

Other goals include increasing mothers' employment and helping families find work/life balance.

Evaluation should be true to a realistic conception of the goals.

The experimental interventions had child development as a goal, although in a strict, current application they might also target maternal employment.

The political constituencies for larger programs may put higher weight on different goals that in turn feeds into program design.

What did we scale?

Scaling up many of the experimental interventions may be prohibitively expensive.

For example:

Perry Preschool

- Program cost per child of \$17,759 (2006 USD) Heckman et al. (2010).
- Children aged 3 and 4 received a 2.5 hours per day pre school program delivered 8 months per year for up to two years.
- There were 4 teachers for every 20-25 students.
- Parents received weekly home visits of 1.5 hours and participated in monthly group meeting facilitated by program staff

Abecedarian project

- Program cost per child of \$13,900 (2002 USD) Masses and Barnett (2002).
- Centres open 7:30-15:30, 5 days/week; free transportation.
- Teacher/child ratio's of 1:3 for infants and toddlers and 1:6 for older children (up to age 5)
- Medical and nutritional services also provided

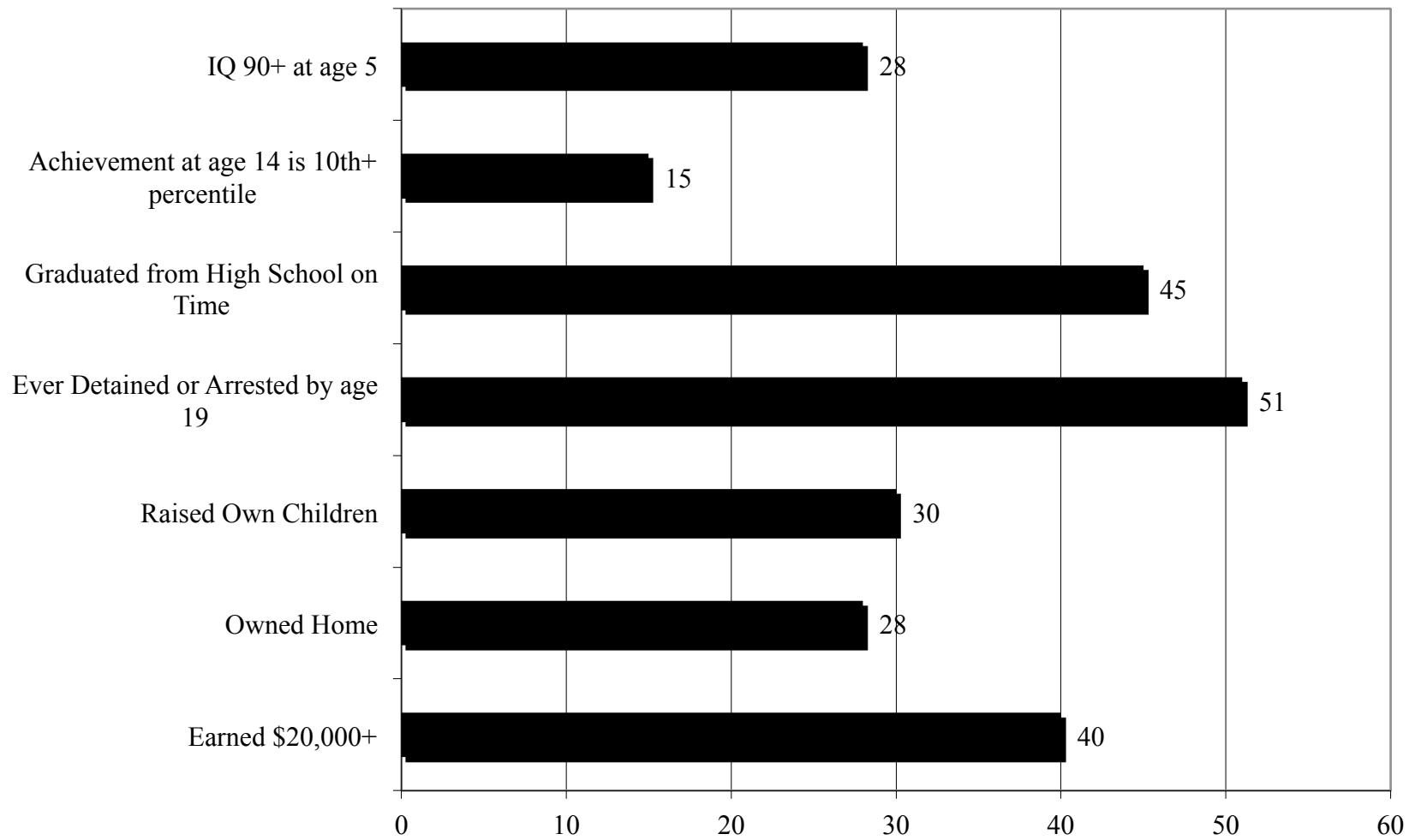
There is little guidance on where compromises can be made.

Who did we treat?

While we typically focus on the treatment groups of the experimental interventions, the control groups are equally informative.

For example:

The outcomes for the control group of Perry Preschool are quite poor.



Source: **Berrueta-Clement (1984) and Schweinhart (2004)**

So it's possible we might implement a program of much lower cost, for (mostly) very different children, with a very different objective than the experimental programs.

In this case, and relative to this research base, we might view an impact on child development as an unexpected bonus rather than the standard of evaluation.

An Example...

The Canadian province of Ontario is phasing in universal full day preschool for 4 year olds.

The background study for this policy (Pascal 2009) makes the requisite references to the experimental literature.

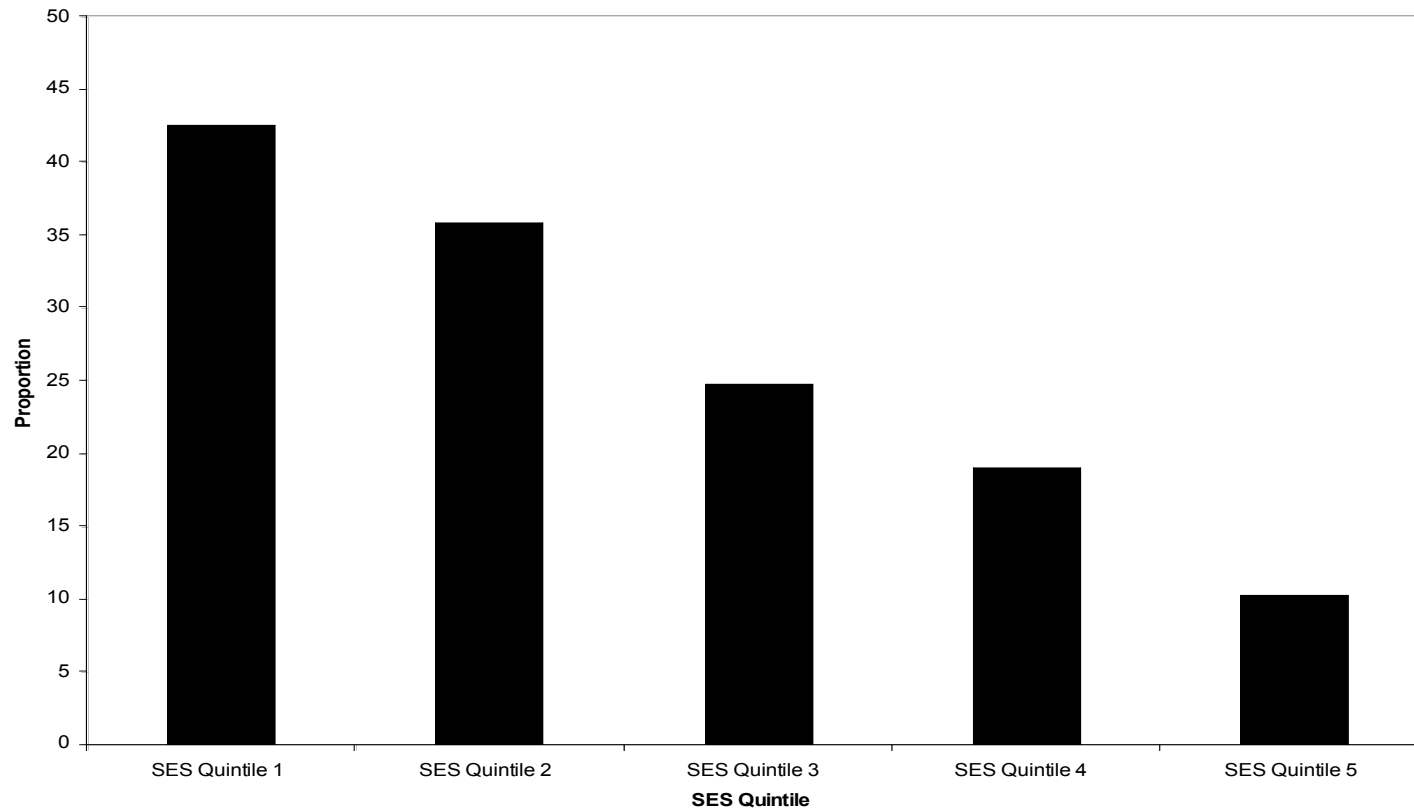
But,

The program: classes of 26 students (on average), that meet 9:00-15:30 over the school year, with one teacher and one early childhood educator.

“Modest” funding: the instructional component of Preschool-Grade 3 is funded at \$5523.59 per student in 2011 (Ontario Ministry of Education 2011)

The treated group: every 4 year old in the province. The early childhood cognitive deficits of many Canadian children remediate with age.

The probability a child among the bottom fifth of cognitive scores at age 0-3 remains there at age 12-15 by their family's SES



So while it may always be of some interest to find out whether a given program has impacts on child development and/or maternal employment...

...the lessons learned from this evidence should be received within the context of their objectives, their program and their target.

Research showing that a given program had no impact on the development of a certain group of children, may mean:

- 1) early childcare programs have no impact on that group of children (although they may have an effect on other groups),
- 2) the specific program implemented had no impact on that group of children (although another type of program might have, or that program may have had an impact on other groups).

It can be difficult to decipher whether the specific program worked or any program would work for those children or any children.

Which all makes summarizing the lessons from other countries a little challenging.

Lessons from North American Research for Child Development

1. There is good evidence that high quality, preschool child care/education programs combined with parent support targeted at children at risk can have significant impacts.

Many of these experimental programs have been extensively studied (e.g., Heckman et al. 2010).

While there are continuing debates over the exact magnitudes of the return on investment, and whether the impacts are heterogeneous within the treated groups, there is a fair amount of consensus that these programs worked.

Whether these results are scalable is an active area of research.

2. The evidence for an impact of larger programs for disadvantaged children is mixed.

There are recent experimental evaluations of the U.S. Head Start program relative to the other options available to low income families (U.S. Department of Health and Human Services. 2010 and 2012).

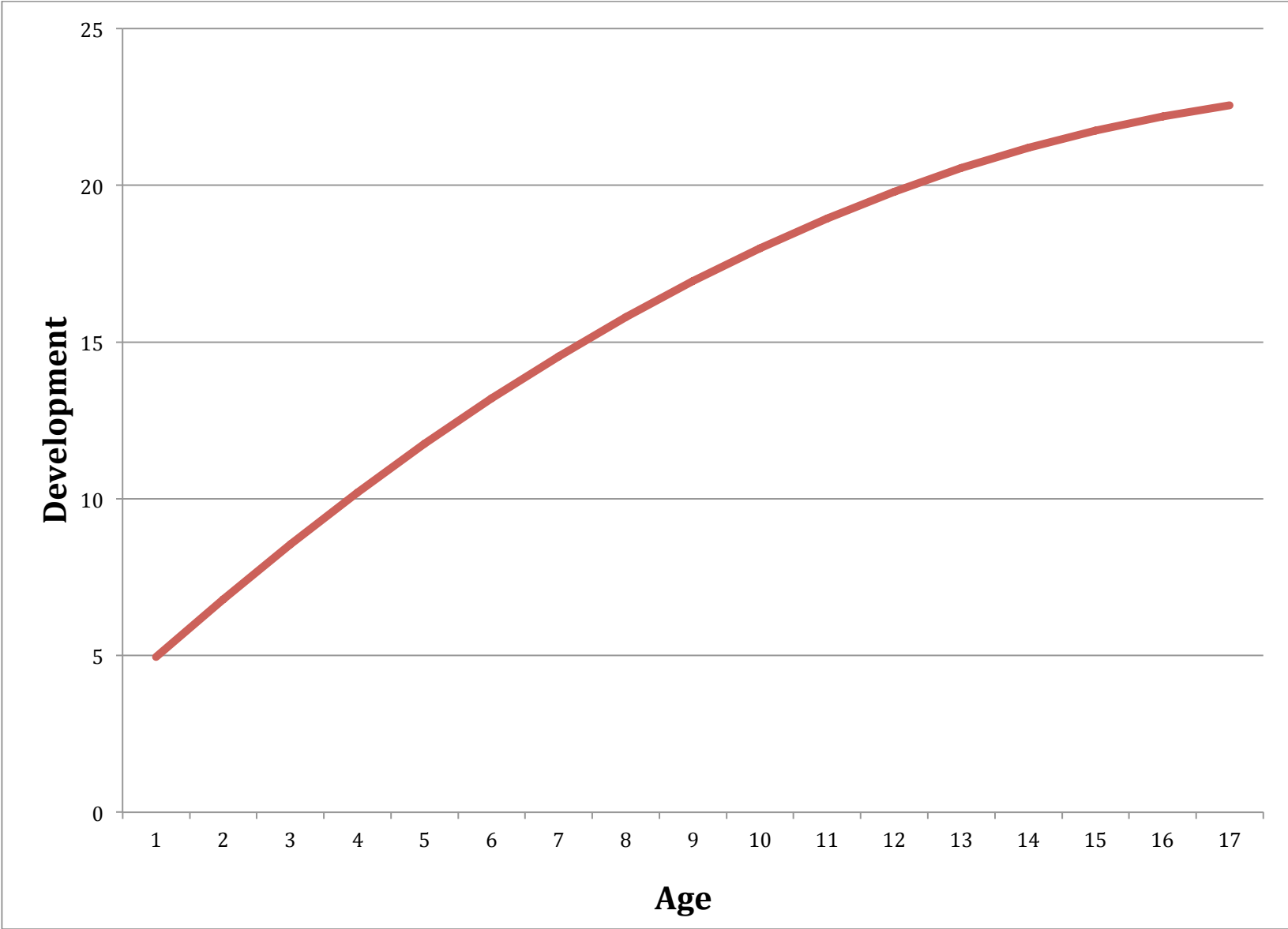
They report that Head Start has concurrent positive impacts on children's preschool experiences in many dimensions. For example, the Head Start children scored up to one-fifth of a standard deviation higher on a vocabulary test-PPVT).

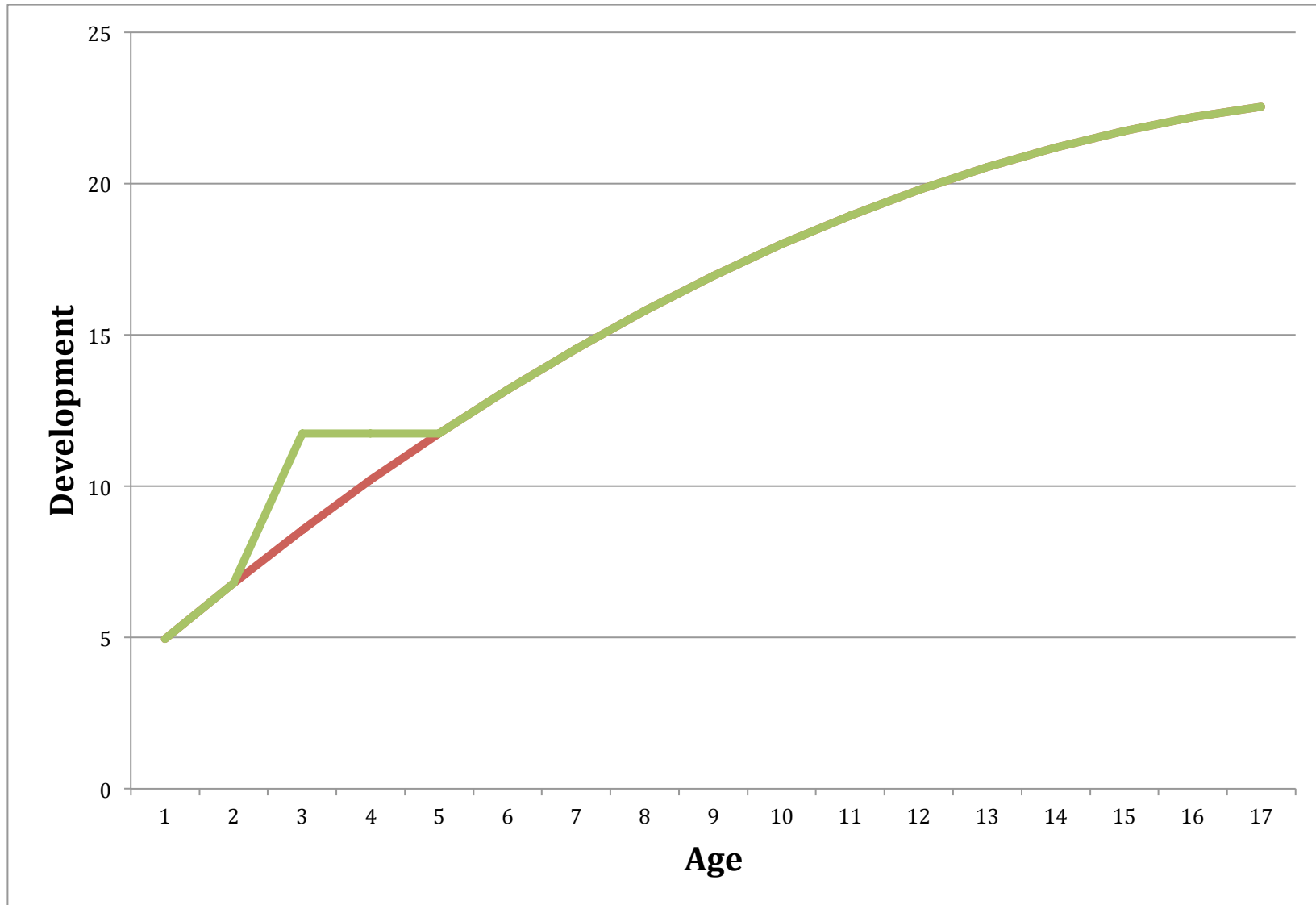
However, by the end of grade 1 the advantage of Head Start children was limited to a single cognitive indicator, health insurance coverage and some mixed evidence on parenting and children's socio-emotional outcomes.

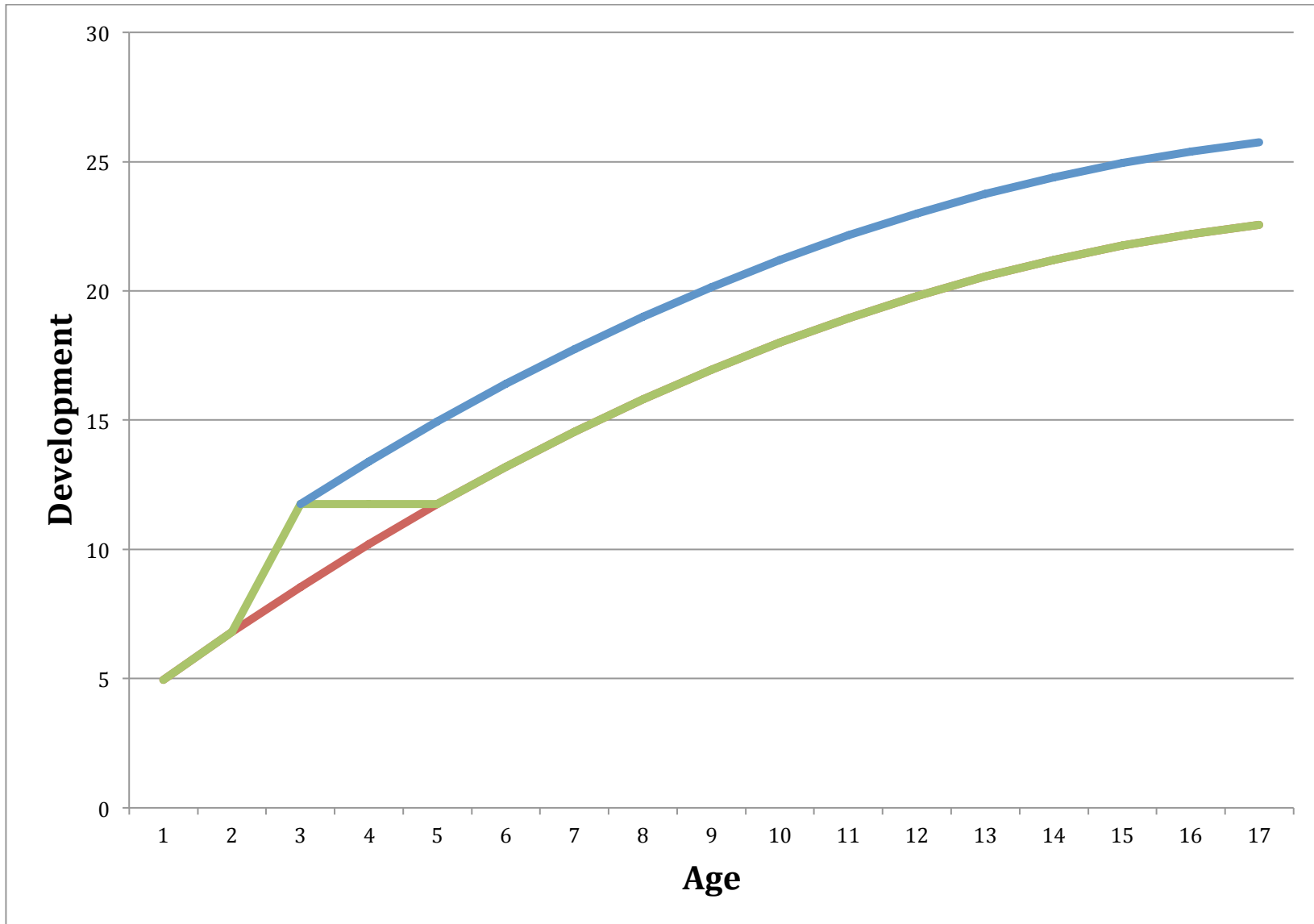
By grade 3, overall there were almost no relative cognitive benefits for the Head Start children. There were some scattered benefits for parenting and socio-emotional outcomes.

These results highlight an issue that had been initially documented in non-experimental evaluations of Head Start – **fadeout**.

Does Head Start simply provide a transitory deviation from a child's inevitable development path, or does it permanently change their developmental trajectory?







Why do we fail to see the permanent benefits that the experimental programs provided to less advantaged children?

It is not clear that this is because the Head Start program is diluted relative to the experimental counterparts, or that the marginally more advantaged children treated in a larger program are unresponsive to treatment.

These experimental evaluations of Head Start speculate that perhaps the children will exhibit benefits later in life – “sleeper effects” – of the type observed in Perry Preschool.

3. The lessons from universal programs are even less clear.

In the U.S. targeting is far more common.

Recently there has been a campaign for universal pre-school following research that suggests some promising outcomes in specific state level programs.

A careful reading of the evidence does not clearly establish, however, that these programs need to be universal to achieve their child development outcomes.

State	Outcome	At Age	Finding
<i>Oklahoma-Gormley and Gayer. (2005)</i>	Cognitive, motor and language	4 years	Positive effect for Hispanics and blacks
<i>Oklahoma-Gormley et al. (2005)</i>	Cognitive	4 years	Positive effect for broader population
<i>New Mexico-Husted et al. (2008)</i>	Math, vocabulary and literacy	4 years	Positive effect – over sample of Native Americans and Hispanics

<i>State</i>	Outcome	At Age	Finding
<i>Georgia-Fitzpatrick (2009)</i>	Cognitive	9 years	Positive effect for disadvantaged children in small towns and rural areas
<i>MI, NJ, SC, OK, WV-Wong et al. (2007)</i>	Vocabulary, math, print awareness	4 years	Positive effect for 8/14 outcomes – program in one state is universal
<i>Lots of States-Cascio (2009)</i>	High School dropout, Institutionalization	6-35 years	Positive effect for whites

In Canada, much of the research focus has been on the introduction of highly subsidized, universal childcare in the province of Quebec.

Research on the average outcomes of the program report negative impacts on children's behavioural and cognitive outcomes at ages 2-5.

Country	Outcome	At Age	Finding
<i>Canada- Baker et al. (2008)</i>	Behaviour	2-4 years	Negative
<i>Canada- Lefebvre et al. (2008)</i>	Cognitive- PPVT	4-5 years	Negative

Subsequent research (Kottelenberg and Lehrer 2013a, 2013b) indicates that these negative outcomes are not the growing pains of a new system, and are more prevalent for boys than for girls.

However, there may be some benefits for more disadvantaged children (Kottelenberg and Lehrer 2012).

Therefore, a clear case for a universal intervention that delivers benefits for all (most) children is difficult to make on the basis of North American evidence.

There is evidence that highly targeted (and expensive) programs can have benefits.

Also, that universal delivery can have benefits for children from disadvantaged backgrounds.

Many summaries of the literature seamlessly combine evidence from universal and targeted programs, and it's not clear that this is appropriate.

Some important things we don't know:

1. Are the documented, limited benefits of universal programs due to ineffective treatments; a result of the tremendous costs of mounting a program for all children?
2. Alternatively, are children from higher socio-economic families simply not responsive to common early childhood education treatments?
3. Can we successfully scale the programs from experimental studies to benefit larger groups of disadvantaged children?

Other Objectives

This may all not matter if our primary objective is to promote female labour market participation and help families find work/life balance.

A simple model of labour supply suggests that a child care subsidy can have at least two effects:

1. It can encourage women with children to enter the labour force by lowering their reservation wage.
2. It can change the amount of time women already in the labour force work, through a positive income effect.

If the childcare provided is of fixed duration, a subsidy may also increase the labour supply of women with children, who currently work less than that duration.

The early research on the response of mothers' labour supply to childcare prices yields a wide range of estimates (e.g., Anderson and Levine 2000 and Blau 2003).

Many of the studies may suffer from important problems of identification and method.

In response a trend in research is to find variation in childcare costs that is external to the mother or to the family; for example, variation caused by public policy.

An interesting episode in this literature is U.S. research on the impact of a child's entry into kindergarten on his/her mother's labour supply.

A very influential study, using data from 1980, shows large impacts on the labour supply of single mothers whose youngest child is 5, and somewhat smaller (although still positive) impacts on married mothers (Gelbach 2002).

Cascio (2009) provides an historical perspective examining the impact of increases in funding for public funding of kindergarten in the 1960s and 1970s. She confirms an impact for single mothers with no younger children.

Recently, Fitzpatrick (2012) revisits this question using more recent data (2000). She reports a positive impact on the employment of single mothers with no younger children, but no effect for other mothers.

Why?

The differences here do not appear to be driven by methodology

Fitzpatrick concludes they are due (by default) to fewer mothers being on the margin, and more mothers facing different circumstances than their counterparts in earlier decades.

The conclusion is consistent with other studies that report recent universal programs have small/no effect on labour supply (e.g., Fitzpatrick 2010), and evidence that the responsiveness of married females' labour supply to wages is in secular decline (e.g., Heim 2007).

It is also consistent with evidence from childcare subsidies in targeted programs (e.g., welfare reform) that find positive impacts for single mothers.

Therefore, it is possible that a universal childcare subsidy may deliver labour market participation effects for a limited group of mothers.

If the childcare is not publicly provided, the more widespread effect will be a positive income effect for families.

If the childcare is publicly provided, the more widespread effect will be a positive income effect for families and possible crowd out of alternative care providers.

These latter two points draw our attention back to child development goals.

Some Closing Comments:

1. In constructing an evidence base for a policy it is important to understand the fit between the supporting research and the proposed program. In the absence of a good fit, at a minimum, it is likely expectations will not to be realized.
2. While follow up evaluation is critical to understanding fadeout, it is not common. For example, the power of the evidence from the Perry Preschool Study is repeated follow up evaluation of the project's children that comes to essentially the same conclusion.