



# State policymaking at the intersection of education and health

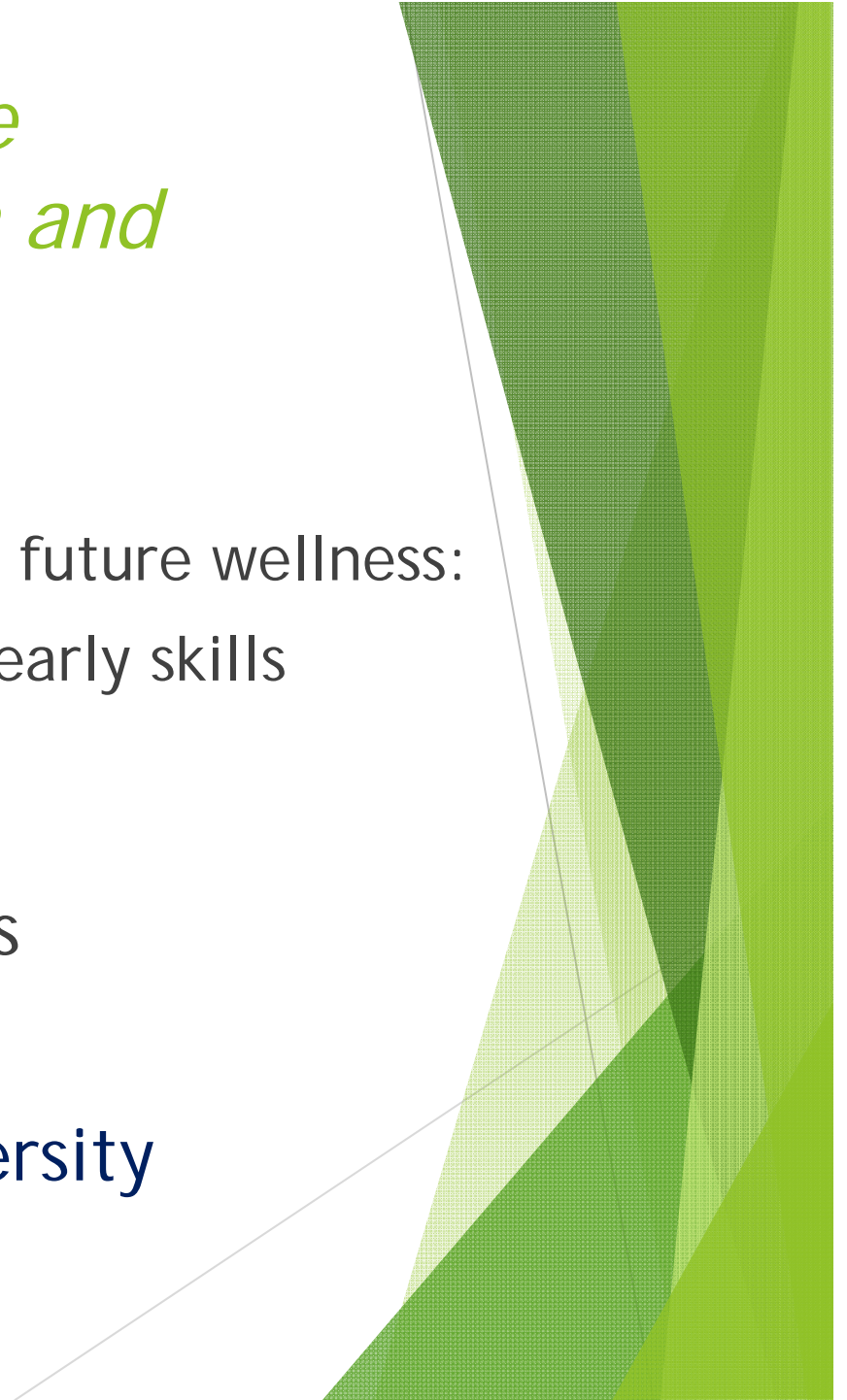
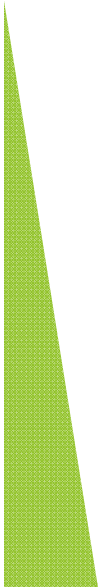
Sept. 15, 2016

# *State policymaking at the intersection of education and health*

Social-emotional learning and future wellness:  
The potential value of early skills

Damon Jones

Penn State University



# WHY THINK ABOUT “VALUE”?

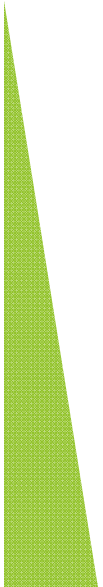
- Take home messages:
  - What do character skills have to do with dollars?
    - 1) Plenty
    - 2) That’s okay
  - Can we represent or consider the potential value of early skills (in children) in what we plan to do to address them?
    - 1) Yes
    - 2) It provides important information in multiple ways



# WHY THINK ABOUT “VALUE”?

- Three reasons to think about value:
  - Understanding child development
  - For program planning and evaluation
  - For the sake of policy
- More generally: It is important to understand how early “non-cognitive” skills may influence long-term well-being
- Message today:
  - Review findings from a study examining links between early *social-emotional* skills and adult outcomes many years later
  - Broader important issues when considering relevant program and policy issues for addressing social-emotional health

# CHILD DEVELOPMENT



# CHILD DEVELOPMENT

- Measures of value (i.e., that can be monetized) are good markers for well-being
  - Labor market success/productivity
  - Educational attainment
  - Health (general/mental health)
  - Avoidance of problems
- Measures of value are perceptible earlier as well
  - Good social and emotional competence helps children get a better start
  - Better relationships overall translate into better classroom environments
  - Better character reduces likelihood of more intense issues with behavior and learning problems (and thus the need for costly school services)



# PREVENTION?

- Bennett-Pierce Prevention Research Center at Penn State University (<http://www.prevention.psu.edu/>)
- Sometimes we focus on costs avoided/prevented
  - Personal costs
    - Problems in school (educational attainment)
    - Health costs
    - Victim costs
    - Problems staying employed (productivity)
  - System costs:
    - Healthcare costs
    - Criminal justice system costs
    - School costs for behavior problems
- Good programs aimed at helping children can change the course toward such costs

# CHILD DEVELOPMENT

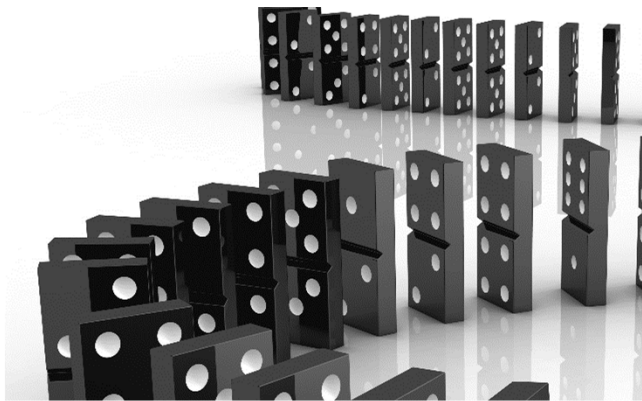
- Social-emotional skills in children are instrumental for healthy development that will be reflected in future adult outcomes
  - Common sense
  - Much research demonstrates this
- Harder to understand what early skills are important for what outcomes
  - e.g., what character skills are most influential to future success in school (in addition to innate and learned academic ability)?
  - It depends on many factors



# CHILD DEVELOPMENT

- Conventional thinking: parallel skills in development are most influential to future outcomes
  - e.g., early level of aggressive behavior → future likelihood to commit crime
  - e.g., early academic ability → future likelihood of educational success
- Resources and attention directed toward these early issues often occurs with this in mind
- Attention toward the whole child
  - context is important
  - complementary skills
- “Developmental cascades”

# DEVELOPMENTAL CASCADES



## CHILD DEVELOPMENT

Child Development, January/February 2013, Volume 84, Number 1, Pages 154–162

### Systems and Cascades in Cognitive Development and Academic Achievement

Marc H. Bornstein and Chun-Shin Hahn  
Eunice Kennedy Shriver National Institute of  
Child Health and Human Development

Dieter Wolke  
University of Warwick, Coventry

A large-scale ( $N = 552$ ) controlled multivariate prospective 14-year longitudinal study of a developmental cascade embedded in a developmental system showed that information-processing efficiency in infancy (4 months), general mental development in toddlerhood (18 months), behavior difficulties in early childhood (36 months), psychometric intelligence in middle childhood (8 years), and maternal education either directly or indirectly (or both) contribute to academic achievement in adolescence (14 years).

... what's past is prologue; what to come,  
In yours and my discharge.

Antonio in W. Shakespeare's *The Tempest*, Act 2,

On the basis of the ecological developmental perspective (Bronfenbrenner & Morris, 2006), dynamic systems theory emphasizes the advantages in understanding that are gained from simultaneous consideration of the interdependence and interdependence of

Developmental Psychology  
2005, Vol. 41, No. 5, 733–746

Copyright 2005 by the American Psychological Association  
0012-1649/05/\$12.00 DOI: 10.1037/0012-1649.41.5.733

### Developmental Cascades: Linking Academic Achievement and Externalizing and Internalizing Symptoms Over 20 Years

Ann S. Masten  
University of Minnesota, Twin Cities

Glenn I. Roisman  
University of Illinois at Urbana-Champaign

Jeffrey D. Long, Keith B. Burt, Jelena Obradović, Jennifer R. Riley,  
Kristen Boelcke-Stennes, and Auke Tellegen  
University of Minnesota, Twin Cities

A developmental cascade model linking competence and symptoms was tested in a study of a normative, urban school sample of 205 children (initially 8 to 12 years old). Internalizing and externalizing symptoms and academic competence were assessed by multiple methods at the study outset and after 7, 14, and 21 years. A series of nested cascade models was tested through structural equation modeling. The data supported 2 hypothesized cascade effects: Externalizing problems evident in childhood undermine academic competence by adolescence, which subsequently showed a negative effect on internalizing problems in young adulthood. A significant exploratory effect was consistent with a model in which internalizing problems in childhood lower the net risk for externalizing problems in young adulthood. Three cascade effects did not differ by gender and were not attributable to effects of IQ, ethnicity, or socioeconomic differences. Implications are discussed for developmental models of competence, symptoms, and preventive interventions.

Keywords: competence, cascade, internalizing, externalizing, academic

© 2005 by the American Psychological Association. 0012-1649/05/\$12.00 DOI: 10.1037/0012-1649.41.5.733

# EDUCATION/INTERVENTION

- Non-cognitive skills recognized as crucial, but...
  - emphasized less and less as children progress through school
  - the responsibility of others (e.g., parents?) or possibly a trait (“just the way he is”)
- Effective “evidence-based” interventions are not readily available to address the needs of all children covered in early childhood

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## Enhancing School-Based Prevention and Youth Development Through Coordinated Social, Emotional, and Academic Learning

---

Mark T. Greenberg  
Roger P. Weissberg and Mary Utne O'Brien

Joseph E. Zins

Linda Fredericks and Hank Resnik

Maurice J. Elias

*Collaborative for Academic, Social, and Emotional Learning and Pennsylvania State University*  
*Collaborative for Academic, Social, and Emotional Learning and University of Illinois at Chicago*  
*Collaborative for Academic, Social, and Emotional Learning and University of Cincinnati*  
*Collaborative for Academic, Social, and Emotional Learning and University of Illinois at Chicago*  
*Collaborative for Academic, Social, and Emotional Learning and Rutgers University*

*A comprehensive mission for schools is to educate students to be knowledgeable, responsible, socially skilled, healthy, caring, and contributing citizens. This mission is supported by the growing number of school-based prevention and*

*broader educational agenda that also involves enhancing students' social-emotional competence, character, health, and civic engagement (Metlife, 2002; Public Agenda, 1994, 1997, 2000; Ross & Gelman, 2000). In addition to*



# “VALUE” OF CHARACTER

- An important example: *social-emotional skills* in children
- Key skills, but what can we see long-term as far as predicting future well-being?
- A snapshot at school entry could be useful for considering the course a child is on
- We can learn a lot from good data!
  - Data with many good measures of early cognitive and “non-cognitive” characteristics in children
  - Data with measures of long-term adult outcomes, observed many years later
  - Having both is rare
  - Must consider other demographic and contextual factors (if represented in data)

# SOCIAL-EMOTIONAL SKILLS

- Social-emotional (SE) skills are vital across the lifespan
- Research demonstrates the importance of SE skills for improving academic outcomes<sup>1</sup>
- Programs to address SE skills have demonstrated effectiveness for improving other outcomes including social behavior and emotions management<sup>2</sup>
- SE skills can be improved throughout child and adolescent development, but are best addressed early

1-Zins, Weissberg, Wang, & Walberg (2004). *Building Academic Success on Social and Emotional Learning (SEL): What Does the Research Say?*

2-Durlak, Weissberg, Dymnicki, Taylor, & Schellinger (2011). *The impact of enhancing students' social and emotional learning: a meta-analysis of school-based universal interventions.*



# SOCIAL-EMOTIONAL LEARNING



Collaborative for Academic, Social, and Emotional Learning





# SOCIAL-EMOTIONAL SKILLS

- SE skills influence other aspects of development
  - Ability in children to manage conflicts and work with others (peers and teachers in school)
  - Ability to manage emotions
  - Ability to complete tasks and meet responsibilities (e.g., engagement in school)
- Aspects of SE skills are instrumental in education, relationships, workplace and society
- Good SE skills can influence positive developmental cascades

# SOCIAL-EMOTIONAL SKILLS

- For interventionists and educators:
  - They are malleable
  - Can be assessed efficiently
  - Can be targeted successfully through intervention
  - Are important at both individual and group levels (e.g., classroom)
  - May be costly if they are ignored
- Can we assess them at an early age?:
  - i.e., where long-term associations are detectable
  - When these skills in children can be assessed
  - To inform potential intervention; sometimes the earlier the better



# GOALS OF THE STUDY

- Understand the potential role of SE skills on overall health and well-being across the life-span
- Assess how such information could also be useful to educators and interventionists
- The study asks the following questions:
  - Could an 8-item teacher survey on a kindergartner's SE skills predict outcomes across childhood and the early adult years?
  - Are SE skills predictive after accounting for the child's own characteristics and his or her family/parent environment?
- Paper published in the American Journal of Public Health:

Jones, Damon E, Mark Greenberg, and Max Crowley. 2015. "Early social-emotional functioning and public health: The relationship between kindergarten social competence and future wellness." *American journal of public health* (0):e1-e8.



# FAST TRACK PROJECT DATA

- The Fast Track Project data<sup>1</sup>
  - Non-intervention subjects, data collection begun in 1991 (children who were part of the two control groups in the study)
  - N=753, four sites: Durham, Nashville, Seattle, Central Pennsylvania
  - Attended schools that were in neighborhoods with high rates of juvenile and adult crime, i.e., *higher risk* communities
  - Pro-social behavior rated by kindergarten teachers
  - Subjects followed through age 25, with many measures of well-being throughout development

▶ <sup>1</sup>[www.fasttrackproject.org](http://www.fasttrackproject.org)

# PRO-SOCIAL BEHAVIOR

- ▶ Teachers rated children on the following 8 items:
  - Resolves peer problems on own
  - Very good at understanding feelings
  - Shares materials
  - Cooperates with peers without prompting
  - Is helpful to others
  - Listens to other points of view
  - Can give suggestions without being bossy
  - Acts friendly toward others
- ▶ Scale: how well each statement describes the child, from 0 (“not at all”) to 4 (“very well”)
- ▶ Composite indicator of “Prosocial behavior skills”



# LONG-TERM OUTCOMES

- Multiple sources: observers, public records, parents, self-report
  - Crime outcomes
  - Substance use
  - Mental health
  - Employment
  - Education
  - Use of public services
- Outcomes from late adolescence as well as early adulthood (age 25)
- Simple check- what is the relationship between prosocial behavior as rated by teachers in kindergarten and these youth and adult outcomes?



# ANALYTIC APPROACH

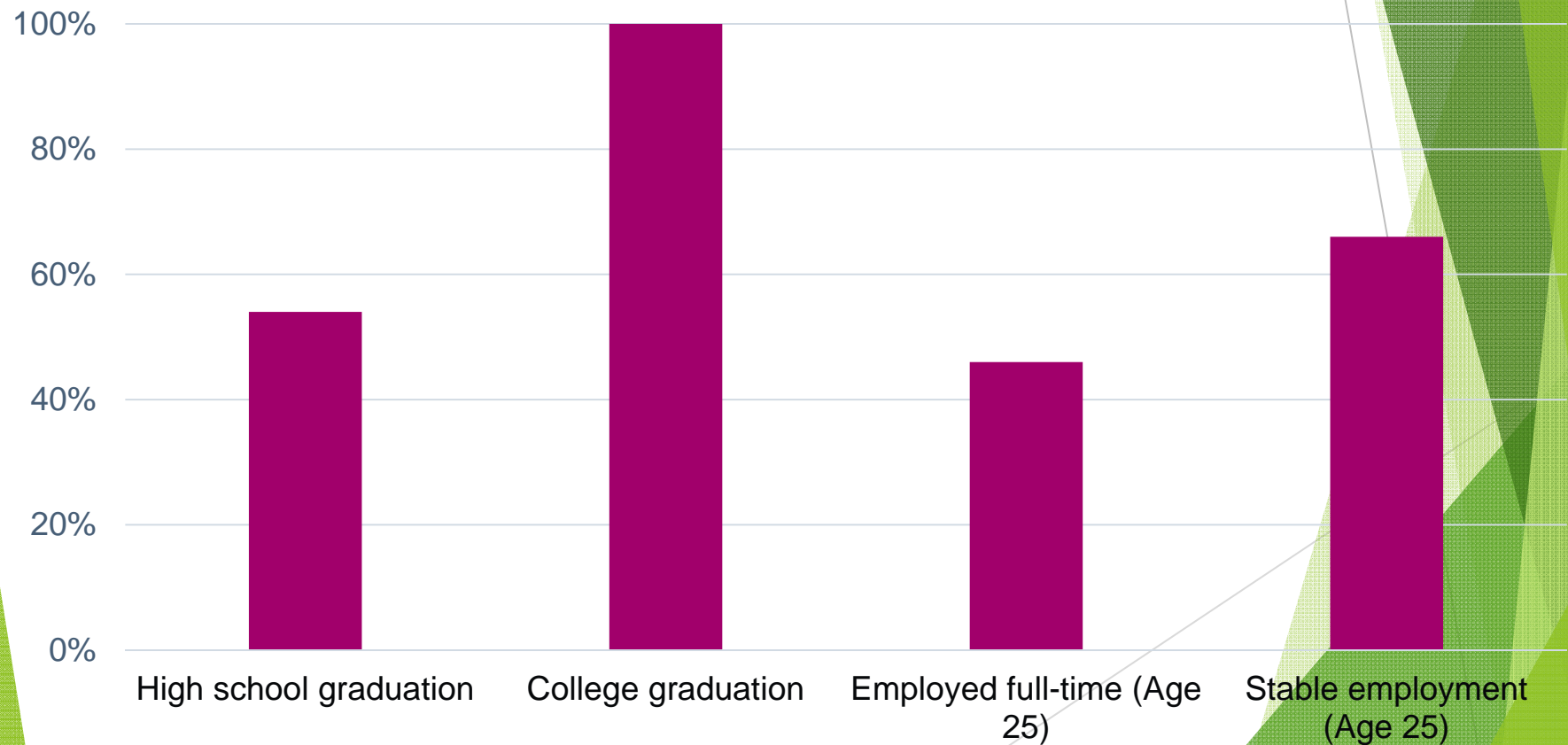
- Statistical models controlled for other key contextual and child characteristics at kindergarten. These included:
  - Family SES
  - Number of parents in the home
  - Family ethnicity
  - Family life stress
  - Neighborhood quality
  - Early academic ability (tested literacy skills)
  - Early aggressive behavior (at school and at home)
  - Child gender

# PREDICTING ADULT OUTCOMES FROM SOCIAL COMPETENCE AT SCHOOL ENTRY (FAST TRACK)

Outcome	Odds- ratio/IRR#	95% confidence limits	
<u>Education/Employment</u>			
High school graduation (on-time) (Age 25)	1.54*	1.09	2.19
College graduation (Age 25)	2.00*	1.07	3.75
Number of years special education services (through high school) (School records)#	0.54***	0.44	0.67
Number of years retained (through high school) (School records)#	0.79*	0.65	0.97
Currently full-time employed (Age 25)	1.46*	1.02	2.08
Stable employment (Age 25)	1.66**	1.13	2.43
<u>Public assistance</u>			
Whether on list for public housing (Age 25)	0.55**	0.36	0.85
Whether public assistance (Age 25)	0.63*	0.43	0.91
Whether unemployment compensation (Age 25)	0.89	0.55	1.45
<u>Crime</u>			
Number of arrests for severe offense (Age 25)#	0.68*	0.49	0.94
Whether arrested (Juvenile)	0.67	0.44	1.02
Whether arrested (YA)	0.60*	0.40	0.90
Whether court appearance (Juvenile)	0.70	0.47	1.03
Whether court appearance (YA)	0.63*	0.43	0.91
Whether stayed in detention facility (Juvenile/YA)	0.61*	0.40	0.94
Whether police contact (Juvenile)	0.65*	0.45	0.94

# EMPLOYMENT/EDUCATION

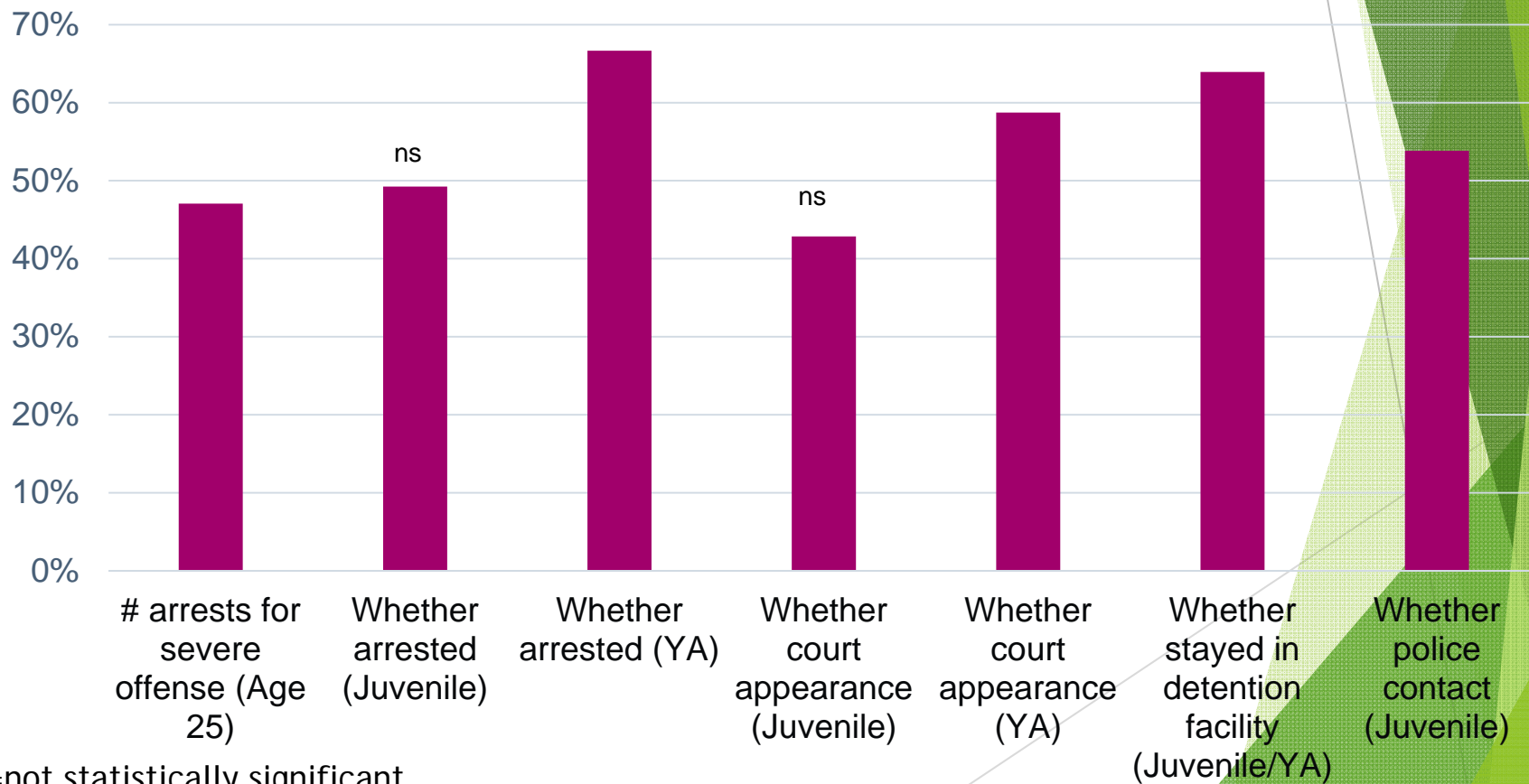
Odds increase in educational/employment outcomes  
per 1 point increase in social competence index





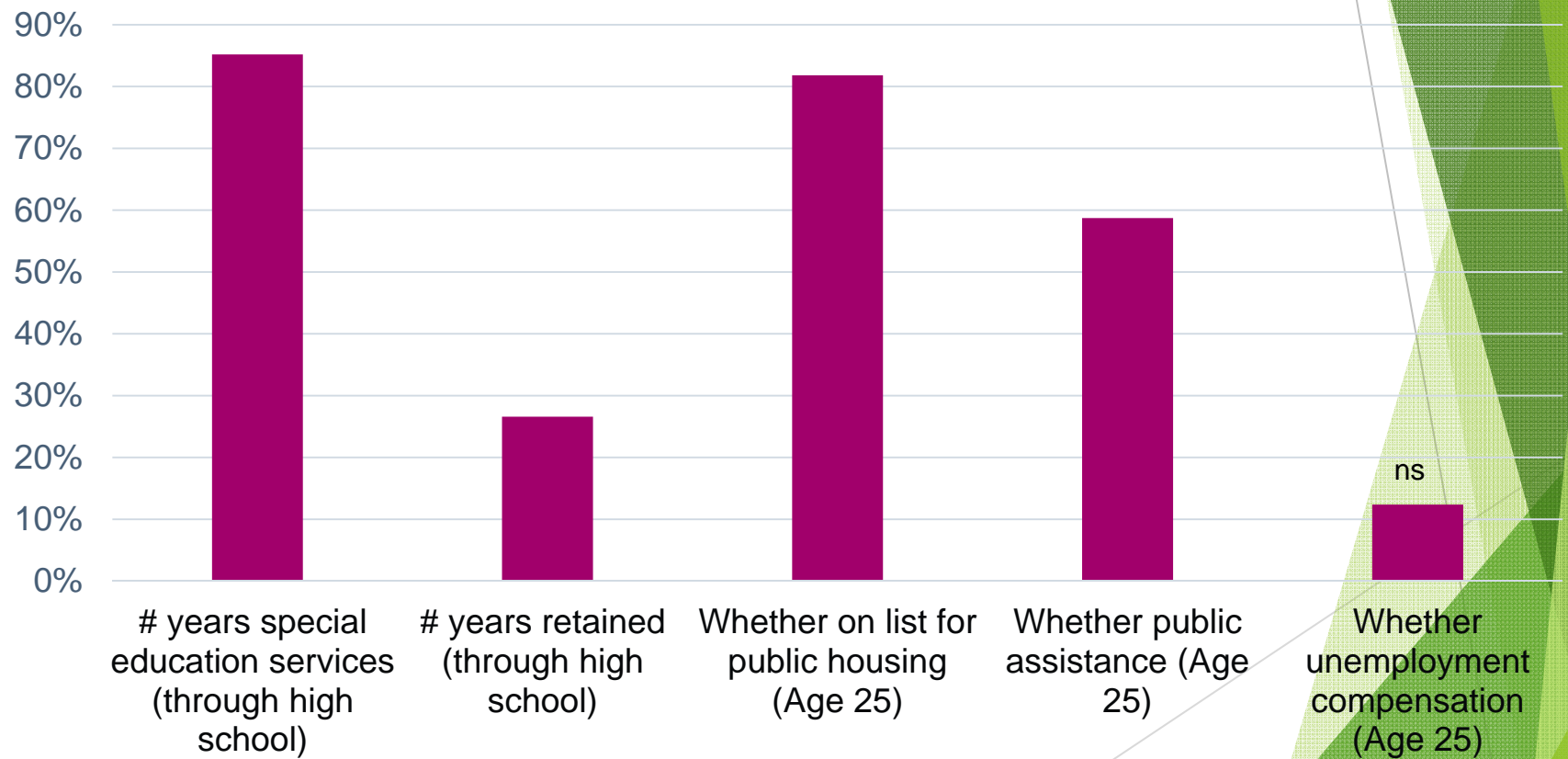
# CRIME

Odds increase in crime outcomes  
per 1 point decrease in social competence index



# SERVICES USE (EDUCATIONAL/PUBLIC ASSISTANCE)

Odds increase in services outcomes  
per 1 point decrease in social competence index



ns=not statistically significant

# IMPLICATIONS

- ✓ A child's pro-social behavior in kindergarten (rated by teachers) can predict his or her well-being into his or her twenties.
- ✓ Social and emotional development investments could increase ability to succeed in life.
- ✓ More research can help us understand the critical and complex role of social-emotional skills for influencing long-term economically-relevant outcomes.



# IMPLICATIONS

- ✓ These are not necessarily demonstrating causal impact
- ✓ Converging findings from other studies → collective evidence
- ✓ Evidence from experimental studies (where programs improved non-cognitive skills in children)
  - ✓ Perry Preschool program
  - ✓ Chicago Child-Parent Centers

# REFLECTS OTHER RESEARCH

- ▶ Many examples that parallel these findings (for instance):
  - ▶ Moffitt et al. (2011) - self-control (ages 5-11) predictive of many adult outcomes including physical health, personal finances, substance dependence and crime
  - ▶ A.Duckworth & Seligman (2005) - self-discipline outperforms IQ in predicting future academic performance
  - ▶ Cunha and Heckman (2010) - non-cognitive characteristics essential to link between cognitive ability and future earnings
  - ▶ K.Duckworth & Schoon (2012) - importance of attention on achievement
  - ▶ etc.

# WHETHER INCARCERATED (THROUGH POST-HIGH SCHOOL AGE)

PREDICTORS (GRADES 1-3)	OR	p-value
Family life stressors	0.46	.05
Family SES	0.99	.47
Neighborhood quality	0.76	.33
Whether African-American	4.06*	.00
Whether mother was a teen	0.65	.38
Academic ability (grades 1-2)	1.01	.82
Externalizing behavior (latent)	1.14*	.00
Social-emotional competence	0.52*	.04



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Social-emotional competence	0.52*	.04

# WHETHER COLLEGE GRADUATE (AGE 25)

PREDICTORS (GRADES 1-3)	OR	p-value
Family life stressors	1.32	.54
Family SES	1.06*	.00
Neighborhood quality	1.87	.08
Whether female	1.31	.54
Whether African-American	1.68	.28
Whether mother was a teen	0.15	.10
Academic ability (grades 1-2)	1.25*	.00
Externalizing behavior (latent)	1.00	.99
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Social-emotional competence	1.91*	.04



# “VALUE” OF EARLY SKILLS

- We understand the importance of these skills, yet...
- Less clear on *how* influence occurs, if it does
- Less clear *what* are the mechanisms of links between early skills and long-term outcomes
- Less clear for *how* and *who* might be involved in addressing certain character skills or traits

SEL/  
Social-emotional  
skills



Adult/  
economic  
outcomes

# EXAMPLE: FOCUSING ON SOCIAL-EMOTIONAL SKILLS

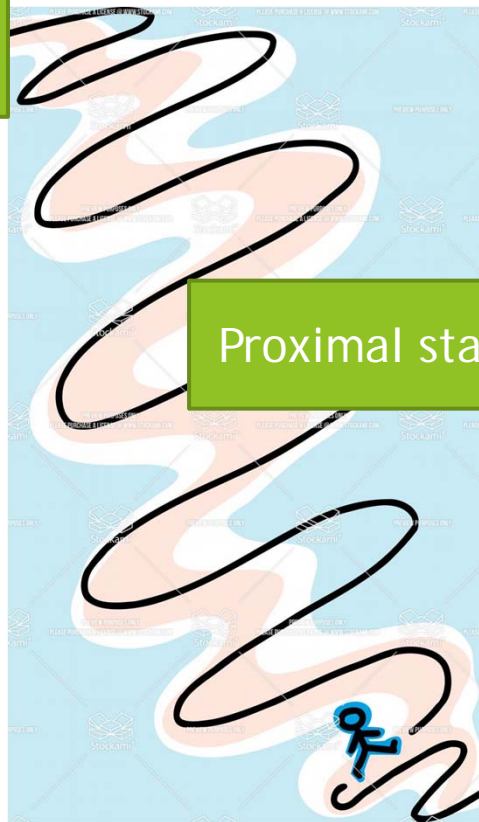
- Much depends on what we examine and when we examine...
- Will certain associations exist across ages and populations?
- Similar measures a few years later show the same associations?
- If not, what does this imply?



# IMPORTANT TO UNDERSTAND THE COURSE OF INFLUENCES OVER TIME

Distal state

Proximal state



# FT: WHETHER HIGH SCHOOL GRADUATE (On-TIME)

PREDICTORS (MID-ELEMENTARY)	OR	p-value
Family life stressors	1.25	.39
Family SES	1.05*	.00
Neighborhood quality	1.31	.23
Whether female	1.94	.05
Whether African-American	1.40	.45
Whether mother was a teen	1.42	.41
Academic ability (grades 4-5)	1.11*	.00
Externalizing behavior (latent)	1.00	.97
Social-emotional competence	1.61	.40

# CLS: WHETHER GRADUATED HIGH SCHOOL (ON-TIME)

PREDICTORS (MID-ELEMENTARY)	OR	p-value
Mother non-high school graduate	0.57	.12
Risk index	1.10	.85
Eligible for school lunch	0.99	.99
>60% poverty in school area	0.72	.35
Single parent (child age 0-3)	0.48	.22
Whether female	2.10*	.02
Whether mother was a teen	0.48	.06
Academic ability	1.30*	.00
Externalizing behavior	0.95*	.04
Social-emotional maturity	1.04	.36



# Indirect paths

Fast Track Project data, N=792  
Mediation model

Controls:

SES  
Gender, race  
Neighborhood quality  
Teen mother  
Early academic ability  
Externalizing (latent)

Early social-  
emotional skills  
(school entry)

Academic achievement  
(late elementary, WJR)

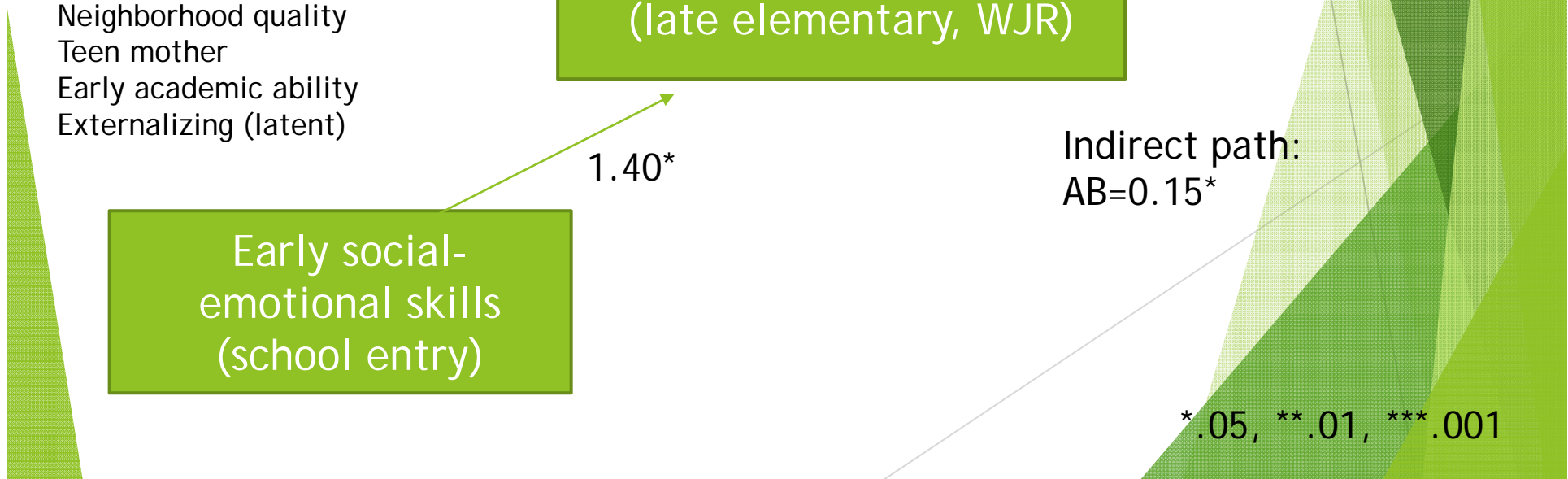
HS graduate (on  
time)

1.40\*

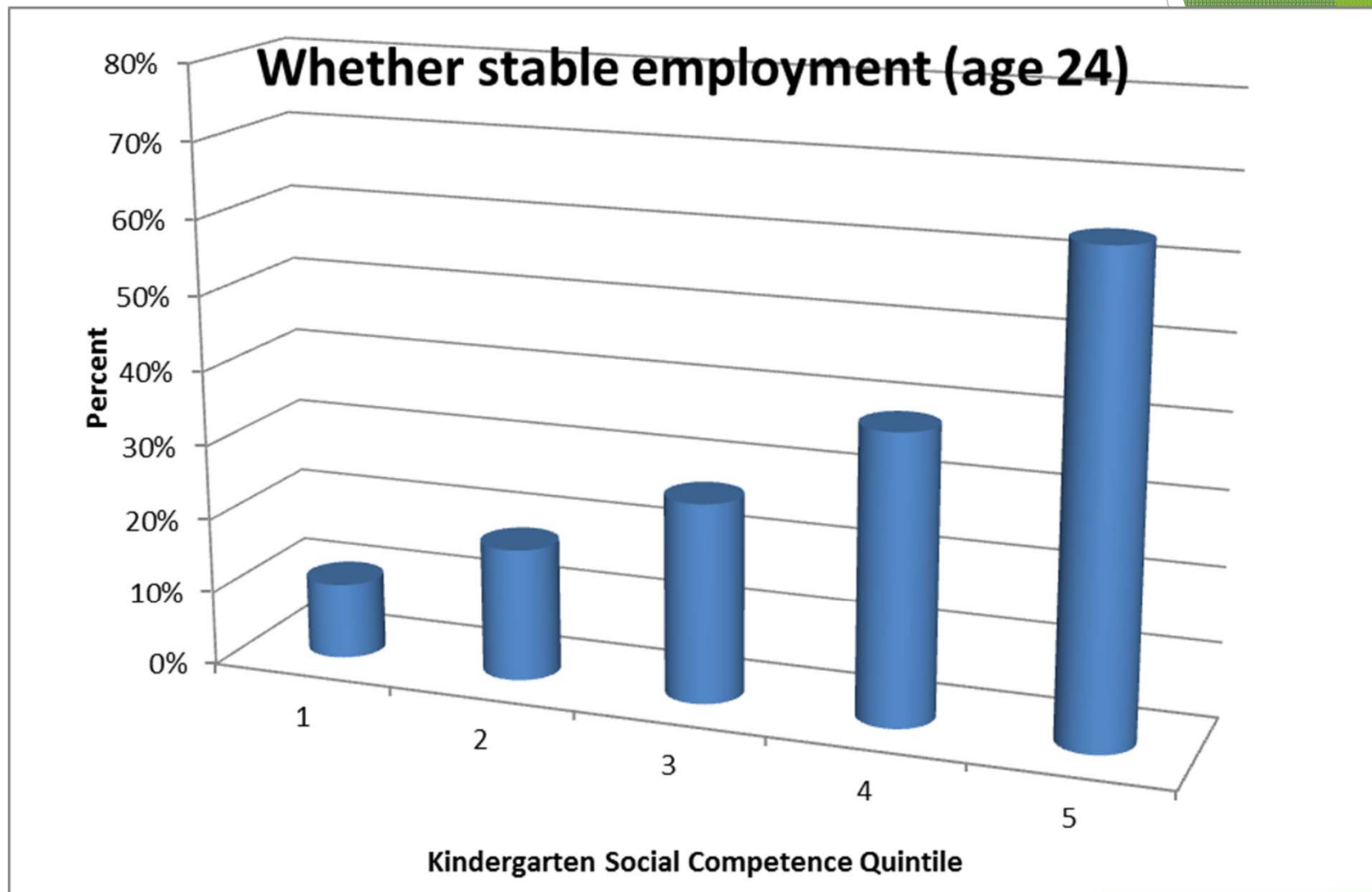
.10\*\*\*

Indirect path:  
AB=0.15\*

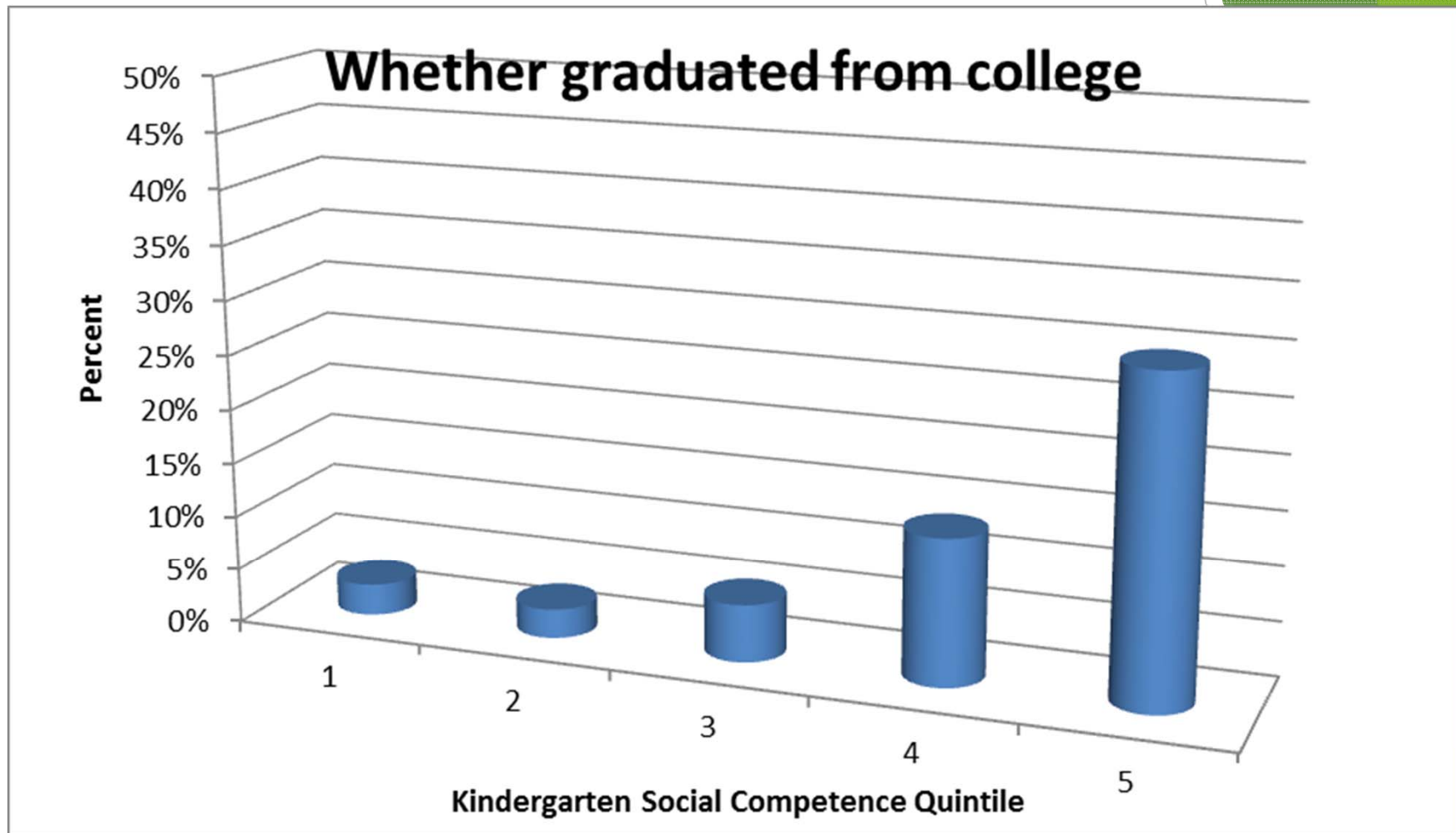
\*.05, \*\*.01, \*\*\*.001



# PREDICTED PROBABILITIES BY QUINTILE



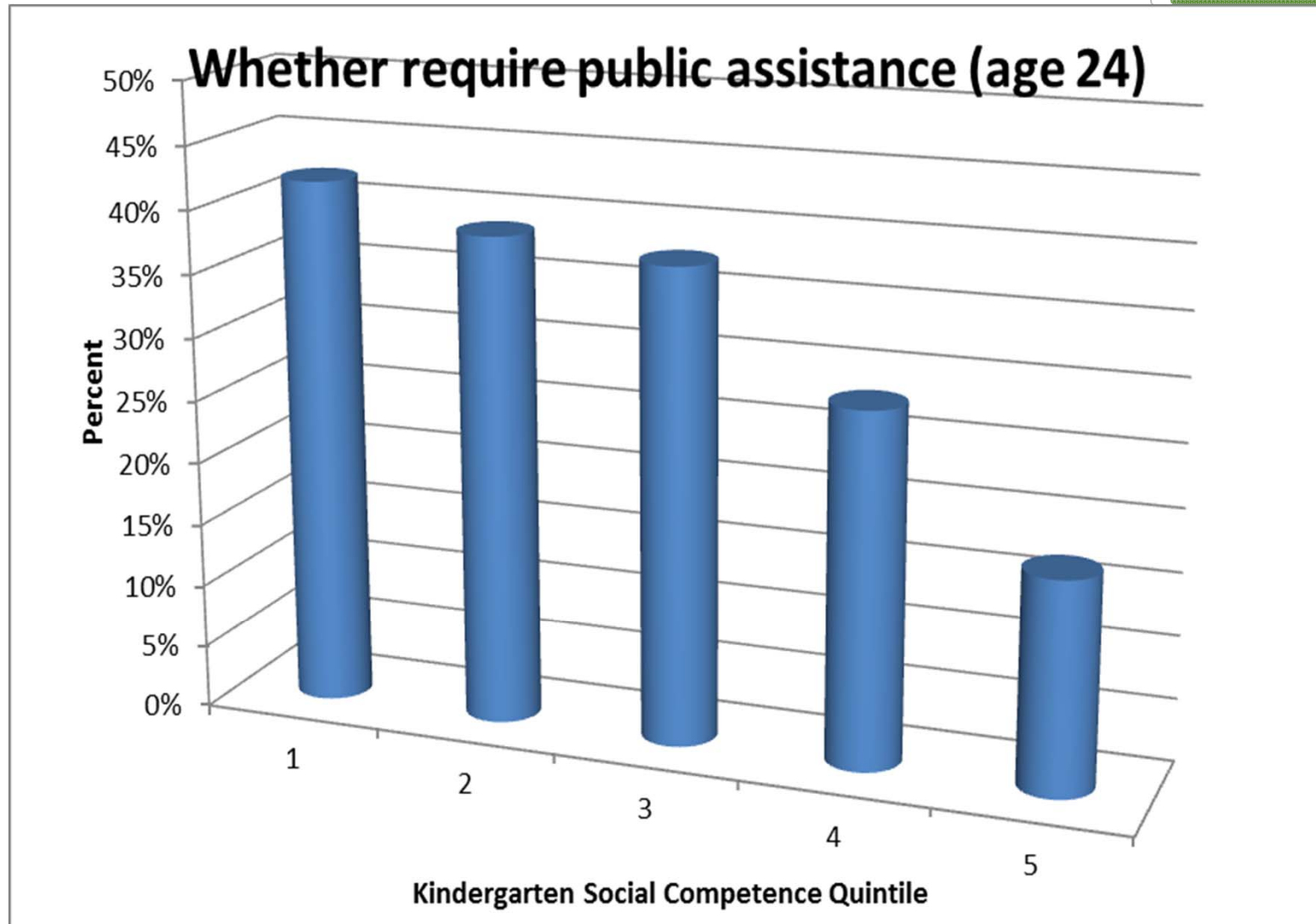
# PREDICTED PROBABILITIES BY QUINTILE



Predicted probability, conditional on other background variables



# PREDICTED PROBABILITIES BY QUINTILE



# DATA

- Long-term intervention projects can provide useful data for understanding these links
- Better coverage of non-cognitive skills
- For instance:
  - Fast Track (FT) Project (Conduct Problems Prevention Research Group, 1992)
  - Chicago Longitudinal Study (CLS) (Reynolds, Bezruczko, Mavrogenes, & Hagemann, 1999)
  - Child Development Project (Dodge, Bates, & Pettit, 1990)
- Data covering roughly the same timeframe
- Measures provided by multiple sources (parents, teachers, self, records)
- Data from both high-risk and normative backgrounds
- Non-intervention samples
- Good measures of both early skills, risk and protective factors, and long-term adolescent and young adult outcomes

# PROGRAM PLANNING & EVALUATION

An abstract graphic design featuring various shades of green. On the right side, there is a large, complex geometric shape composed of several overlapping triangles and polygons. A thin, light gray line extends from the top of this shape, crossing the page diagonally. On the left side, there is a smaller, solid green triangle pointing upwards.



# INTERVENTION/PREVENTION

- Efforts to improve social-emotional skills in children could pay off
- We can consider the possibility of universal or

## CHILD DEVELOPMENT



Child Development, January/February 2011, Volume 82, Number 1, Pages 405-432

### The Impact of Enhancing Students' Social and Emotional Learning: A Meta-Analysis of School-Based Universal Intervention

Joseph A. Durlak  
*Loyola University Chicago*

Roger P. Weissberg  
*Collaborative for Academic, Social, and Emotional Learning (CASEL)  
University of Illinois at Chicago*

Allison B. Dymnicki and  
Rebecca D. Taylor  
*University of Illinois at Chicago*

Kriston B. Schelling  
*Loyola University Chicago*

This article presents findings from a meta-analysis of 213 school-based, universal social and emotional (SEL) programs involving 270,034 kindergarten through high school students. Compared to control participants, participants **demonstrated significantly improved social and emotional skills, attitudes, behavior, and academic performance** that reflected an **11-percentile-point gain in achievement**. School teaching staff fully conducted SEL programs. The use of 4 recommended practices for developing skills and the implementation problems moderated program outcomes. The findings add to the growing empirical base regarding the positive impact of SEL programs. Policy makers, educators, and the public can promote the healthy development of children by supporting the incorporation of evidence-based SEL programs into standard educational practice.

Teaching and learning in schools have strong social, emotional, and academic components (Zins, Weissberg, Wang, & Walberg, 2004). Students typically do not learn alone but rather in collaboration

A key challenge for 21st-century schools is serving culturally diverse students with varying abilities and motivations for learning (Alliance, 2001). Unfortunately, many

possibility for this

Article

## THE ECONOMIC VALUE OF SOCIAL AND EMOTIONAL LEARNING

February 2015 (Revised)



Clive Belfield  
Brooks Bowden  
Alli Klapp  
Henry Levin  
Robert Shand  
Sabine Zander

# PROGRAM EVALUATION

- Measures of well-being (currently or future) can be good gauges of how well a program works
- More and more, “system” outcomes are included in program evaluation
- More and more, evaluators consider how certain program outcomes translate into dollar amounts
- More and more, evaluators consider the potential return-on-investment
- More and more, funders and policy makers expect evaluators and interventionists to determine the potential cost-effectiveness of the program

THE BENEFITS AND COSTS OF HEAD START

Jens Ludwig  
Deborah A. Phillips

Working Paper 12973  
<http://www.nber.org/papers/w12973>

Age 21 Cost-Benefit Analysis of the Title I Chicago  
Child-Parent Centers

Arthur J. Reynolds  
University of Wisconsin-Madison

Judy A. Temple  
Northern Illinois University

Dylan L. Robertson  
Emily A. Mann  
University of Wisconsin-Madison

*We conducted the first cost-benefit analysis of a federally financed, comprehensive program. The Title I Chicago Child-Parent Centers are located in public schools and provide educational and family support services to low-income children from ages 3 to 5. This paper reports on the results of a cost-benefit analysis of the program for a cohort of 1,539 program and comparison-group children born in 1980 who were followed through age 21.*

NATIONAL BUREAU OF ECONOMIC RESEARCH  
1050 Massachusetts Avenue  
Cambridge, MA 02138

# Early Childhood Investments Substantially Boost Adult Health

Frances Campbell,<sup>1</sup> Gabriella Conti,<sup>2</sup> James J. Heckman,<sup>3,4,5\*</sup> Seong Hyeok Moon,<sup>3</sup>  
Rodrigo Pinto,<sup>3</sup> Elizabeth Pungello,<sup>1</sup> Yi Pan<sup>1</sup>

High-quality early childhood programs have been shown to have substantial benefits in

Prev Sci (2012) 13:150–161  
DOI 10.1007/s11121-011-0259-9

## Cost-Benefit Analysis of Communities That Care Outcomes at Eighth Grade

Margaret R. Kuklinski • John S. Briney •  
J. David Hawkins • Richard F. Catalano

### PERSPECTIVE

## Skill Formation and the Economics of Investing in Disadvantaged Children

James J. Heckman

This paper summarizes evidence on the effects of early environments on child, adolescent, and adult achievement. Life cycle skill formation is a dynamic process in which early inputs strongly affect the productivity of later inputs.

Early family environments are major predictors of cognitive and noncognitive abilities. Research has documented the early (by ages 4 to 6) emergence and persistence of gaps in cognitive and noncognitive skills (3, 4). Environments that do not stimulate the young and fail to cultivate these skills at early ages place children at an early disadvantage. Disadvantage arises more from lack of cognitive and noncognitive stimulation given to young children than simply from the lack of financial resources.

This is a source of concern because family



# ECONOMIC BENEFITS OF EARLY EDUCATION

- ▶ Pre-kindergarten program in Georgia has reduced future drop-out, special education need, and grade retention; estimates saving the state \$35.6-million in 2010; an additional net savings of over \$210-million over the next six years<sup>1</sup>
- ▶ Michigan's Great Start Readiness Program has saved the state at least \$1-billion over the past 25 years (savings due to reduced grade repetition, reduced special education, lower crime/criminal justice services, lower welfare spending, and reduced unemployment benefits).<sup>2</sup>
- ▶ In Kansas, early childhood education brings a return of \$1.68 for every dollar invested, outperforming other sectors of the economy including transportation, retail trade, construction and manufacturing<sup>3</sup>

1- The Southern Education Foundation (2011). *The Promise of Georgia Pre-K: UPDATE Building Life-Long Education, Current Budget Savings and Long-Term Economic Growth in Hard Times.*

2- Citizens Research Council of Michigan (2011). Early Childhood Education: Report 366.

3- America's Edge (2012) Strengthening Kansas Businesses through Investments in Early Care and Education How Investments in Early Learning Increase Sales from Local Businesses, Create Jobs and Grow the Economy.

# PROGRAM EVALUATION

- The ability to monetize program benefits differs across studies:
  - Adult or late adolescent outcomes
  - Timeframe of evaluation
- Economic assessment not usually part of an evaluation of programs for children
- Still, one must consider the potential value, given trends in program evaluation requirements



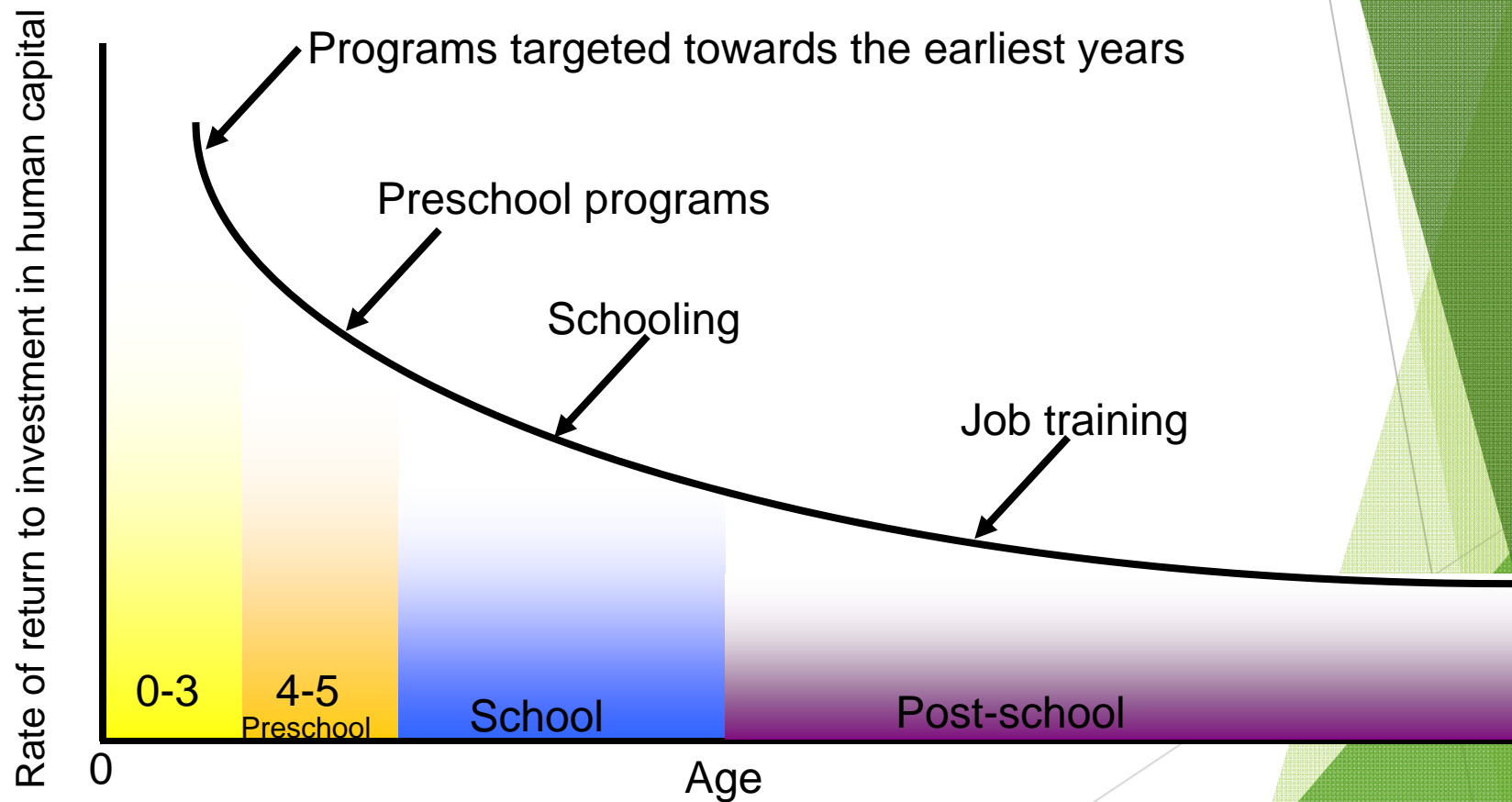
# INCREASED USE OF ECONOMIC EVALUATION OF PROGRAMS FOR CHILDREN

Contrasting implications?

- Social policy may be more tilted toward more immediate pay-off
  - Rapid assessment
- Potentially increased economic benefit if we reach people earlier (developmental cascades?)



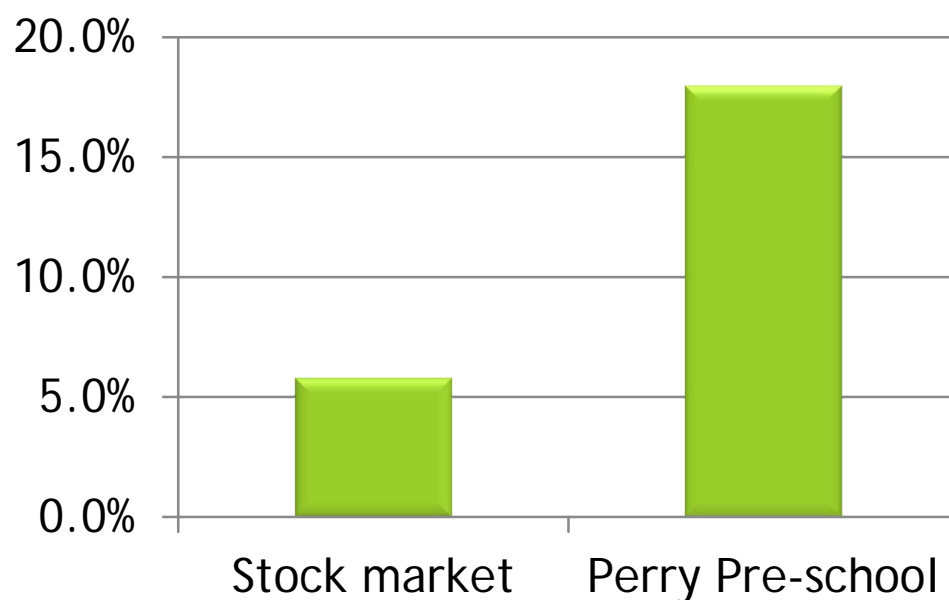
# Rates of RETURN TO HUMAN CAPITAL INVESTMAN



From James Heckman, "Investing in Disadvantaged Young Children Is Good Economics and Good Public Policy" presentation, 2007

# RETURN ON INVESTMENT (comparing annual returns)

- Favorable numbers compared to other standards:<sup>1</sup>



- Spending on prevention may seem worth considering given how much is spent to address societal problems:
  - e.g., \$427.7-billion welfare costs (federal) in FY 2011<sup>2</sup>

1-Stock market based on annual returns, post-WWII; Art Rolnick - Economic Case for Early Childhood Development, TedX TC , 2010

2-Usgovernmentspending.com



# POTENTIAL POSITIVE IMPACT ON ECONOMY?

- How we might use early intervention/prevention programs to help balance the budget (Brookings Institution, 2007)<sup>1</sup>:
  - High-quality early childhood education programs for three- and four-year-old children (\$94 billion over five years);
  - Nurse home-visiting programs to promote sound prenatal care and the healthy development of infants and toddlers (\$14 billion over five years);
  - School reform with an emphasis on programs in high-poverty elementary schools that improve the acquisition of basic skills for all students (\$17 billion over five years); and
  - Programs that reduce the incidence of teenage pregnancy (\$8 billion over five years)

<sup>1</sup>-Isaacs (2007). Cost-Effective Investments in Children. Brookings Institution.





## Key Noncognitive Skills

### 1. Self-Efficacy

Students are confident in their ability to obtain academic success, persist to overcome challenges, and are not defeated by failure (Cattell, Cattell, & Cattell, 1993; Conley, 2005, 2007, 2010, 2012; Duckworth, 2005, 2007; Dweck & Reppucci, 1973; Dweck, 1988; Farrington et al., 2012; Marsh, 1984; Marzano, Gaddy, & Dean, 2000; Payton et al., 2000; Richardson, Abraham, & Bond, 2012; Robbins, et al., 2004; Sedlacek, 1996, 2004; Torres & Solberg, 2001; Zimmerman, Bandura, & Martinez-Pons, 1992).

### 2. Initiative

Students are driven and persist in sustained effort toward accomplishing short- and long-term academic and life goals and mastering new skills and knowledge (Ajzen, 1985; Bartram, 2005; Campbell, Kuncel, & Oswald, 1998; Cherniss & Goleman, 2001; Conley, 2005, 2007, 2010, 2012; Csikszentmihalyi, 1990; Duckworth, 2005, 2007; Fishbein & Aizen, 1975; Friede et al., 2000; Dean, 2000; Partnersh Abraham, & Bond, 2011; Schmitt, et al., 2011; Zi

### 3. Integrity

Students work in a system that complies with academic and personal standards (Conley, 2005, 2007, 2010; Cherniss & Goleman, 1990; Hogan & Holland, 2000; Richardson, Abr

### 4. Intellectual Curiosity

Students are intellectually curious and content to explore and learn (Conley, 2005, 2007, 2010; Hogan & Holland, 2000; Bond, 2012; Schmitt, 2

### 5. Adaptability

Students respond and adapt to changing priorities and thinking (Conley, 2005, 2007, 2010; Hogan & Holland, 2000; Bond, 2012; Schmitt, 2

as they enter  
monstrated this

## CHAPTER 1

# Personality Psychology and Economics<sup>1</sup>

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FINALLY (POLICY CONSIDERATIONS)



# POLICY

- Other practical considerations:
  - Research can shed light on the potential value of early skills
  - ....and considerations for possible investments to improve them are two things...
  - The policy landscape (nationally and regionally) is another key factor for what will occur
- Many effective programs have been demonstrated, yet widespread dissemination of efforts to improve social-emotional skills is still limited
- Where it occurs, variation in implementation is considerable



# OBSTACLES TO MOVING FORWARD

Former New York Assemblyman Richard Brodsky:

“Very little is done to insert these [reports] into the member-driven parts of the legislative process. I can count on one hand the times when a report was followed up with a request for discussion or response. There is an enormous disconnect between the excellent work produced by foundations, public interest and private interest groups, academia, and experts and the daily lives of state legislators.”

Source: “States’ use of cost-benefit analysis”, Pew-MacArthur Foundation, July 2013

# MODELS OF INFLUENCE IN POLICY

- ▶ Washington State Institute for Public Policy
  - ▶ [wsipp.wa.gov](http://wsipp.wa.gov)
  - ▶ Created through the state legislature to provide the government with information on the return on investment of publicly funded programs
  - ▶ Provides reports with specific estimates that enable comparison between programs (in terms of economic assessment)
  - ▶ Apples to apples comparisons
  - ▶ Methodology allows for determination of a 'portfolio' of programs that would collectively serve the state population most efficiently
- ▶ Have gradually incorporated softer skills in their analyses
  - ▶ Mental health outcomes as classified by DSM (2011 report): ADHD, Depression, Anxiety, Disruptive behavior
  - ▶ These indicators were linked to future outcomes including employment, earnings, High school graduation, achievement, crime
  - ▶ Reports provide breakdown of costs linked to these specific variables
  - ▶ Now are evaluating certain SEL outcomes to recognize potential for valuing SEL: emotional development and self-regulation



# MODELS OF INFLUENCE IN POLICY

- ▶ Pew-MacArthur's Results First Initiative
  - ▶ <http://www.pewstates.org/projects/pew-macarthur-results-first-initiative-328069>
  - ▶ In general, provides assessment of the current range of economic assessment on a national basis (and based on the WSIPP model)
  - ▶ For member states, provides:
    - ▶ Training and assistance
    - ▶ Information sharing
    - ▶ Standardized approach
    - ▶ Quality oversight

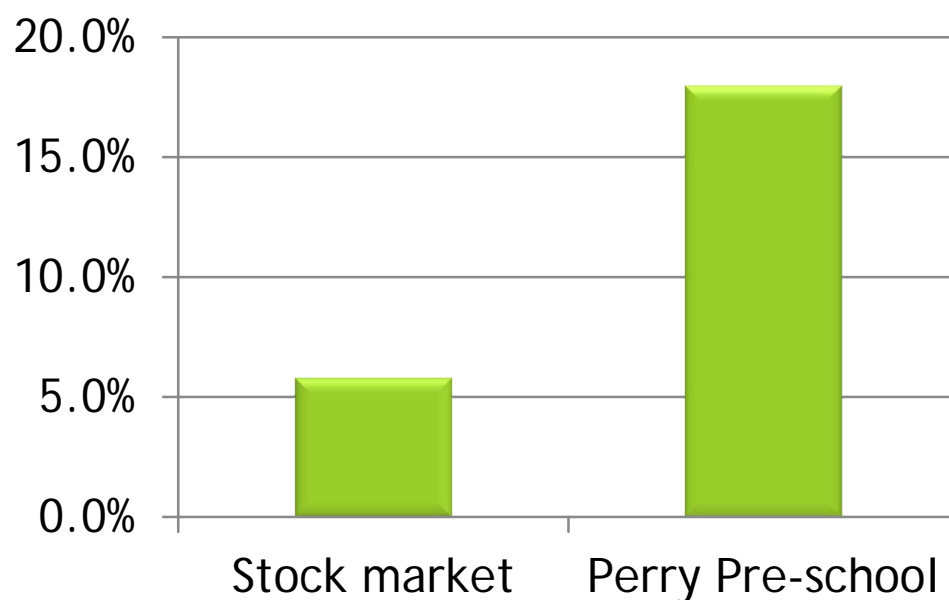


# OTHER NEW TRENDS

- New movements to implement effective programs through private funding are a mixed bag
- These arrangements involve private investors putting forth funds to establish an intervention in a region with expectation of monetized return
- Called “Social Impact Bonds” or “Pay for Success”
- Investors are paid back by the government only if agreed-upon program outcomes are achieved
- This is promising given public funds for good programs are so scarce
- Also recognizes that such programs can indeed provide a return on investment

# RETURN ON INVESTMENT (comparing annual returns)

- Favorable numbers compared to other standards:<sup>1</sup>



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2-Usgovernmentspending.com

# "PAY FOR SUCCESS"

[www.nationaljournal.com](http://www.nationaljournal.com)

## How Goldman Sachs Made Money Investing in Preschool in Utah

The Wall Street firm issued a first-ever social impact bond as a test case and the results are in.

October 28, 2015

## **Bank of America Merrill Lynch Introduces Innovative Pay-for-Success Program in Partnership With New York State and Social Finance Inc.**

**Release Date:**

Monday, December 30, 2013

NEW YORK

New Social Impact Partnership Gives Qualified Private and Institutional Investors the Opportunity to Fund Social Change



# OTHER NEW TRENDS

- Priorities toward Social Impact Bonds can tilt policy toward programs that require an immediate result (within a few years)
- Programs for younger children may not realize benefits for many years
- Yet these benefits may be larger in the long-run, given the importance of reaching children at an early age
- If arrangements do not work, can confound the science of good investments in general (sometimes it takes time!)
- Regardless, more attention is being directed toward the idea that improvements in growing individuals can pay off

# WHY THINK ABOUT “VALUE”?

- Take home messages:
  - What do character skills have to do with dollars?
    - 1) Plenty.....in addition to other non-monetized benefits
    - 2) That's okay..... it is another reflection of what influences well-being
  - Can we represent/consider the potential value of early skills in children in what we plan to do to address them?
    - 1) Yes.....and it provides an important way to examine the effectiveness of programs and educational efforts
    - 2) It provides important information in multiple ways....for educators, parents and decision makers
    - 3) But we must acknowledge many complicating factors (including terminology, complicated associations, contextual, and policy related)



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Collaborators: Max Crowley, Mark Greenberg



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# State policymaking at the intersection of education and health

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