Raising Healthy Children: Recent Evidence from Developmental Science

A Congressional Briefing

September 22, 2011, 12:00 – 1:30 pm

B-340 Rayburn House Office Building

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The Problem
for U.S. Children and Families

Definitions of Bullying

- Bullying is defined as a distinctive type of proactive aggression characterized by a power imbalance between the perpetrator and victim. (Olweus, 1999; Solber & Olweus, 2003)

- Bullying behaviors can include: Pushing, shoving, or tripping someone, picking fights, saying mean things to someone or about someone, and spreading rumors.

Prevalence of Bullying Among School-Age Children

- As many as 60% of primary school children report having been a victim of bullying at some time. (Kochenderfer-Ladd & Wardrop, 2001)

- Around 10% of children report being persistently bullied in school. (Nansel et al., 2001; Pepler, Craig, Jiang, & Connolly, 2008)

- Studies suggest that many children bully others on an occasional basis, and that a smaller number are more regularly involved as bullies.

What Does the Research Tell Us?

- Childhood aggression has long been considered a significant problem with potentially serious consequences for victims and aggressors, including:

  - Poor academic performance
  - Higher absenteeism
  - Substance use and abuse
  - Sexual risk behaviors
  - Depression
  - Suicide risk

School-Based Interventions:
A Solution?

- Because children spend so much of their time interacting with peers at school, considerable efforts have been made toward the development of anti-bullying programs.

- Federal and state mandates now hold schools accountable to develop anti-bullying policies and programs. (U.S. Department of Education, 2008)

- Unfortunately, thus far, school-based anti-bullying programs have shown limited evidence of effects. (Bauer, Lozano, & Rivara, 2007; Jenson & Dieterich, 2007; Smith, Schneider, Smith, & Ananiadou, 2004)

Getting a Deeper Understanding

How Can New Research Inform Anti-Bullying Programs?

- The weak effects of existing school-based bullying prevention programs suggest a need for more research into the complex dynamics of bullying and victimization of children across the school years.

- Many previous studies that looked at individual and contextual factors that differentiate bullies and victims have been cross-sectional and not longitudinal. (Pepler et al., 2008)

- Many studies have focused on pre-adolescents, and there's limited research to date on bullying among older youth.

This Study

- Data collected as part of large-scale 3-year bullying prevention initiative across Colorado
- Quantitative and qualitative elements
  - Quantitative: Two-wave survey data collected from 2,678 students in Grades 5, 8 and 11
  - Qualitative: 14 focus groups conducted with 115 youth
- Included both male and female participants from diverse school settings (urban, suburban, rural) and ethnic/racial backgrounds

Survey Measures (Quantitative Data)

- **Bullying perpetration**
  - "I pushed, shoved, tripped, or picked fights with students I know are weaker than me"
  - "I teased or said mean things to certain students to their faces"
- **Victimization**
  - "A particular kid or group of kids pushed, shoved, or tripped me"
- **Normative beliefs about bullying**
  - Students were asked to indicate how "wrong" or "OK" specific bullying behaviors were on a 4-point scale ranging from "really wrong" to "perfectly OK"
- **School climate**
  - "This is a pretty close-knit school where everyone looks out for each other"

Focus Groups (Qualitative Data)

- Six Grade 5, four Grade 8, and four Grade 11 focus groups

- Participants were identified and invited to participate by school counselors or bullying prevention coordinators

- Semi-structured interviews intended to generate discussion
  - E.g. Participants were asked to identify "the typical bully" and "the typical victim"; "Why do you think bullies act this way, and are reasons different for boys and girls?"

New Evidence

Survey Findings

- The survey data indicated that student reports of increases in bullying and victimization were related to low self-esteem, normative endorsement of bullying, and negative school climate for both genders during the upper elementary, middle, and high school years.

  - Student reports of increases in both bullying and victimization over time were predicted by low self-esteem and negative school climate across age and gender groups.

  - Normative beliefs supporting bullying predicted increases in bullying, but not in victimization.

Survey Findings

- An increase in normative beliefs supporting bullying was the strongest predictor of an increase in bullying behavior.

- A decrease in self-esteem was the strongest predictor of an increase in victimization.

Focus Group Findings

- In more than half of the focus groups, across all ages, youth mentioned emotional problems (including low self-esteem/feeling bad about self, prior victimization) as an important cause of bullying.

- Younger participants often described bullying as part of a continuum that began with teasing and sometimes escalated into more serious bullying.

Focus Group Findings

- For older youth, bullying was perceived as being used as a form of entertainment.

- Bullying was linked to sexuality and popularity among middle and high school youth.

Implications for Policy and Practice

Build Stronger Bullying Prevention and Positive Youth Development Programs

This research suggests that such programs should work to:

- Create a positive school climate in which students feel a sense of fairness and trust

- Promote normative beliefs that sanction rather than endorse bullying

- Build healthy self-esteem by providing students with opportunities for success

Build Stronger Bullying Prevention and Positive Youth Development Programs

School-based programs can also:

- Connect bullying prevention to diversity training

- Support universal, non-gender specific approaches

- In adolescents, consider the role of both identity development and emergent sexuality and how they can become intertwined with bullying behaviors

Take-Away Messages

Take-Away Messages

Understanding bullying and victimization can help us strengthen bullying prevention programs.

Take-Away Messages

The evidence suggests that we need to aim our efforts at:

- changing normative beliefs about bullying

- supporting self-esteem in students, and

- creating a positive school climate

Management of Chronic Health Conditions in Children:
The Importance of Family Mealtimes

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The Problem
for U.S. Children and Families

Chronic Health Conditions in Childhood

- The percentage of U.S. children and adolescents with a chronic health condition has increased from 1.8% in the 1960's to more than 7% in 2004.

- 1 in every 5 young people aged 6-19 is considered obese. 1 in 7 low income preschool-aged children is obese.

- In a classroom of 30 children, about 3 are likely to have asthma.

Consequences of Chronic Health Conditions for Children

- **More school absences**
  - Over 10.5 million school days missed in 2008 due to asthma

- **Increased risk for psychosocial problems**
  - Children with asthma are at increased risk for sleep problems and anxiety
  - Children who are overweight or obese are at increased risk for being victims of bullying at a young age, stigmatized at an early age, and have difficulties making friends

- **Poor health as adults**
  - Obesity during childhood increases risk for coronary heart disease, Type 2 diabetes and cancer
  - Children with asthma are at increased risk for early death and obesity

- **The economic costs of treating chronic conditions are staggering**
  - Over $147 billion for obesity related diseases
  - Over $30 billion for the treatment of asthma

Prevention and Management of Chronic Health Conditions Starts at Home

- Families promote good health in their children through regular daily routines
  - Mealtime, bedtime, physical activity, medication monitoring
  - Helps to keep track of symptoms and model healthy behaviors
- Families that experience more stress have a hard time maintaining routines and their children often have multiple health problems
  - Overwhelmed by work stress
  - Poor families have to juggle expenses for medicine, healthy foods, and transportation costs that often creates more stress at home

Getting a Deeper Understanding

Family Mealtime FAQ's

- Most family mealtimes last between 18-20 minutes

- 63% of family members eat together "frequently" or "always"

- Families with children under 18 eat dinner together "frequently" or "always" 77% of the time

- 86% of parents agreed that dinnertime was the best time for family members to get together and talk

What Was Missing

- Linking mealtime practices to children's health outcomes

- Directly observing mealtime practices to identify "what works" in keeping mealtimes calm and manageable

- Consider how mealtime practices may differ for families from different socio-economic backgrounds and different family structures (single parents)

Our Approach

- Summarize existing published data on sharing family meals together and children's health outcomes

- Directly observe meals in family homes for 200 families who had a child with asthma (1/3 of the children were overweight or obese)

- Directly apply our findings to program and policy

New Evidence

Eating Family Meals Together 3 or More Times Per Week

Summarized 17 studies

182, 836 children

Children between 2.8-17.3 years

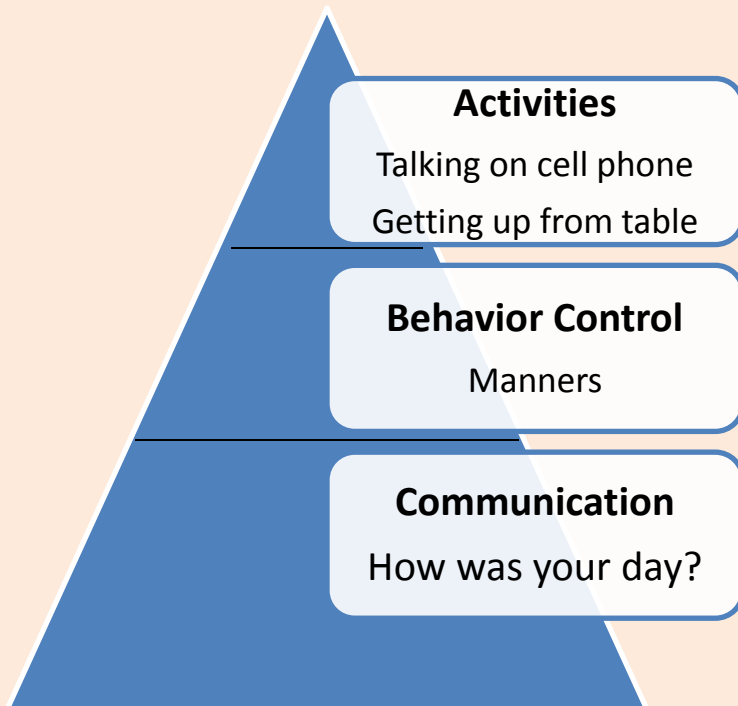Focused on sharing family meals 3 or more times per week and

- Obesity
- Eating Disorders
- Unhealthy Eating Habits (fried food, sweets candy)
- Healthy Eating Habits (fruits and vegetables)

Hammons & Fiese (2011) *Pediatrics*, 127, 6, E1565-E1574

- Reduces the odds for overweight by 12%

- Reduces the odds for eating unhealthy foods by 20%

- Reduces the odds for eating disorders by 35%

- Increases the odds for eating healthy foods by 24%

Observational Studies

ABC's of Healthy Mealtimes

Activities

Talking on cell phone

Getting up from table

Behavior Control

Manners

Communication
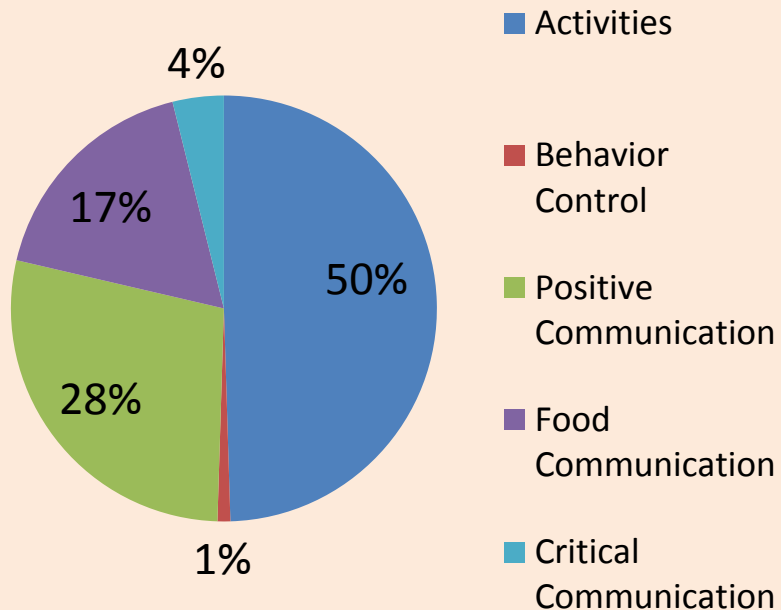
How was your day?

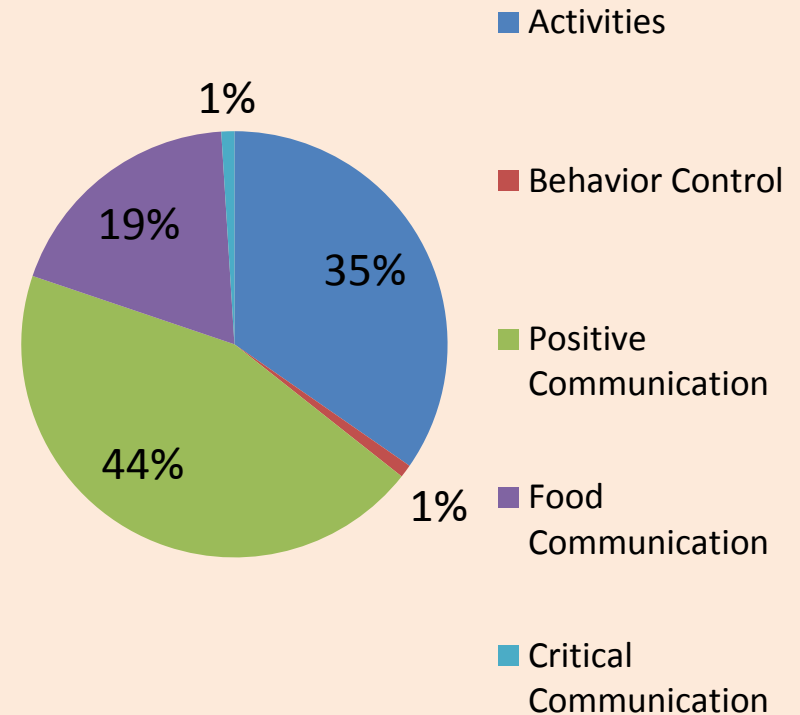## Child Health and Parent Management

- Child Quality of Life negatively related to amount of Activities during meal

- More harsh forms of Behavior Control related to more severe asthma symptoms

- Positive Communication related to better lung functioning, better medical adherence (taking medication), fewer asthma symptoms, and better Quality of Life

Fiese et al., (2011) *Child Development,* 82, 133-145.

Sociodemographic Variations

High School Education Or Less

- Activities — 50%
- Behavior Control — 1%
- Positive Communication — 28%
- Food Communication — 17%
- Critical Communication — 4%

Greater Than High School Education

- Activities — 35%
- Behavior Control — 1%
- Positive Communication — 44%
- Food Communication — 19%
- Critical Communication — 1%

Obesity Risk

In comparison to families with a child of healthy weight, for families with a child who was overweight or obese

- Meals were shorter

- Meals were more difficult to plan

- Mealtime was considered less important

- There was less positive communication observed during mealtime

Fiese, Hammons, & Grigsby-Toussaint (in press), *Economics and Human Biology*
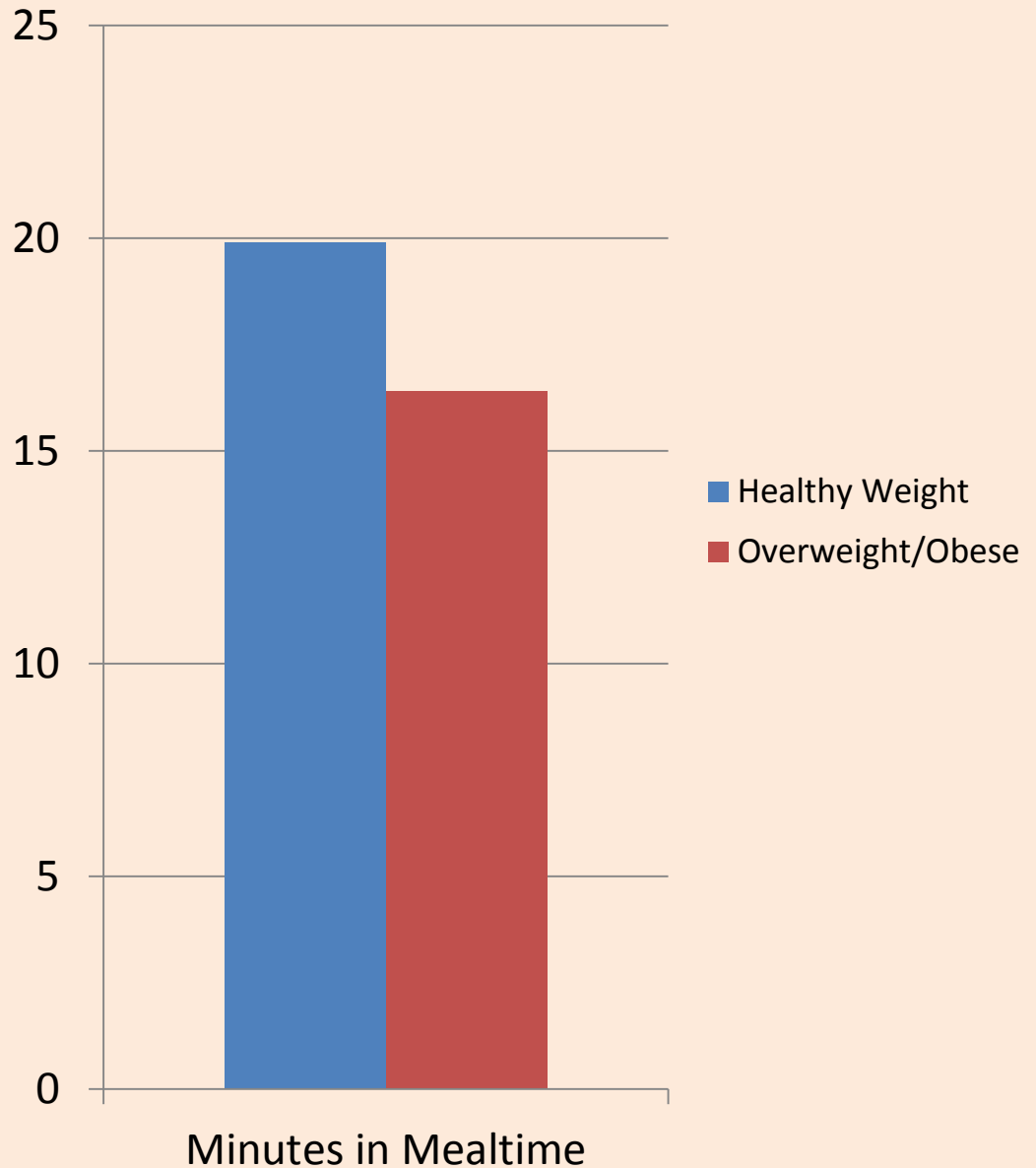
Implications for Policy and Practice

Applications to Practice

Abriendo Caminos

- Addresses need to focus on whole family and reduce obesity risk in Latino families

- Nutrition education built upon traditional recipes

- ABC's of shared family mealtimes

- Physical activity routines in the home

# Public Media Campaigns to Promote Shared Family Mealtimes

Parents report common barriers to not sharing meals together

- Planning
- Scrambling for meal prep
- Not enough time
- Picky eaters
- Healthy meal ideas
- Conflict
- Partner away

http://familyresiliency.illinois.edu/Sibling Conflict.htm

Parent Time

- Meal Time Prep
- Shared Family Mealtime
- Sleep
- Parent Screen Time
- Work
- Physical Activity
- Transportation
- Leisure
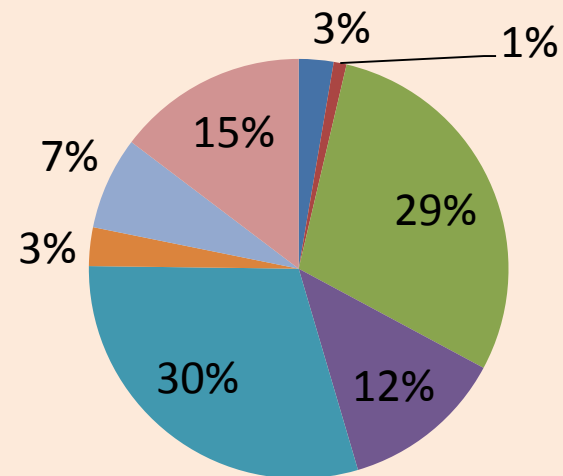
Policy Implications

Local Communities

- Employer support for flex time
- Educational opportunities through child care providers, farmer's markets, schools, pediatricians

Administrative Level

- Food subsidy programs such as SNAP, CACFP and WIC could be educational outlets to promote health benefits of shared mealtimes

Federal Level

- Targeted program announcements at NIH & USDA to better understand health mechanisms of family mealtimes

Take-Away Messages

Take-Away Messages

- Although only lasting 18-20 minutes, family mealtimes are powerful events.

- They have the potential to promote healthy outcomes for a variety of chronic conditions in childhood including asthma, disordered eating, and the prevention of childhood obesity.

- Most families with school-age children in the U.S. eat together at least 3 times a week. Thus, meals are a prime opportunity to promote healthy behaviors.

Challenges

- The key ingredients to healthy mealtimes are being able to plan ahead, manage behavior effectively, and communicate in positive ways.

- Some families find it difficult to create a calm mealtime environment due to economic strains, inadequate cooking skills, and lack of knowledge about how to manage child behavior.

Solutions

- Families can benefit from educational programs to promote healthy mealtimes.

- Local, state, and federal programs can send simple messages about the health benefits of shared mealtimes along with tips about how to effectively communicate during meals and manage mealtime behaviors.

- A mealtime initiative at the federal level would aid in understanding the precise mechanisms that link this 20 minute practice with raising healthy children.

Development of Positive Employment Attitudes and Behaviors Among Low-Income Youth

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The Problem for
U.S. Children and Families

Poverty Among American Families and Children

According to the 2010 Census Bureau statistics

- Family poverty increased from 9.2% in 2009 to 11.7% in 2010
- Poverty for children under 18 years increased from 20.7% to 22%
- The poverty rate was particularly high for female-headed households (31.6%), African Americans (27.4%), and Hispanics (27.4%)

Children in poverty face *higher risk* in multiple areas of development

- In early childhood, these include various indicators of health, school readiness, and behavior problems
- In later development, youth in poverty are at risk for low achievement, dropping out of school, and risky behavior

For poor youth, important areas of concern are *less positive future orientation and low rates of participation in the labor force*

Future Orientation
Among Low-Income Adolescents

Future orientation includes

- Setting goals and aspirations

- Forming expectations for the future

- Educational and occupational aspirations and expectations

Among low income adolescents, **positive future orientation** is associated with

- Better school adjustment

- Greater feelings of efficacy and responsibility for one's life and decisions

- Lower rates of problematic behaviors (e.g. substance abuse, delinquency, adolescent pregnancy)

- Upward social mobility in adulthood

Future Orientation Among Low-Income Adolescents

- Adolescents from lower socioeconomic backgrounds are less optimistic about their futures than economically advantaged adolescents

- These attitudes and perceptions appear to be rooted in the experiences of parents and significant others

- ***They are cause for concern because they can encourage disengagement from school and work***

Labor Market Attachment of Low-Income Adolescents

- Looking across *all* adolescents, being employed has effects that vary widely, depending on such factors as type of job and number of hours worked. There is evidence that working more than part time may not be beneficial.

- However, higher levels of employment among low-income youth and ethnic minority adolescents are consistently associated with
  - ***higher school achievement and school engagement***
  - ***fewer behavior problems***

- Adolescent employment may have more positive effects among low-income youth than among higher income youth because it
  - helps meet family economic needs
  - builds practical skills
  - builds positive social networks

- These may forecast more favorable post-high school employment outcomes

Interrupting the Intergenerational Transfer of Poverty

- Lower expectations for the future and lower engagement in the labor force among youth may be one important way that poverty is sustained across generations

- Our study explored the potential to alter adolescents' future orientation and initial work experiences as one possible approach for breaking the cycle of poverty and facilitating mobility through employment

Getting a Deeper Understanding:

Can an Anti-poverty Work-Support Program for *Low-Income Parents* Foster Youth Development?

YES

The New Hope Project

- We looked at these issues as part of the New Hope Project and Evaluation

- Implemented in two inner-city neighborhoods in Milwaukee's poorest areas

- Operated by a community-based nonprofit and funded by the state of Wisconsin

- Eligibility criteria
  - living in one of the two neighborhoods
  - 18 years or older
  - willing and able to work 30+ hours/week
  - having earnings of less than 150% of the federal poverty threshold

The New Hope Project

Participants in New Hope were eligible for

- **Job search assistance** and assistance locating community service jobs when employment in private sector was not found

- **Earnings supplements** aimed at bringing household income above federal poverty level for those who worked at least 30 hrs/week

- **Health insurance** when not covered by employer or Medicaid

- **Child care assistance** for children through age 13 in state licensed or county certified care

- **Staff support** that emphasized respect and helpfulness

New Hope participants had access to these services for 3 years

The New Hope Evaluation

- The New Hope Evaluation is an experimental evaluation with *random assignment* to New Hope services (experimental group) or a control group

- Families in the evaluation with children ages 1 to 11 at random assignment participated in a sub-study of children and families, asking whether there were program impacts on children

- Previous reports on the evaluation focus on children 2 and 5 years after random assignment. The present study looks at whether there are effects on youth 8 years after random assignment when children were 9-19 years

- This study involves an unusually long follow-up, 8 years after random assignment, *which was 5 years after program services ended*

Key Findings from 2 and 5 year Follow-Up Studies

- Effects on families with children

  - Parents in the New Hope program worked more and earned more
  - New Hope reduced the number of families in poverty
  - New Hope families made more use of licensed child care and structured out-of-school activities, especially for boys

- Effects on children—children in New Hope families, compared to children in control group families

  - Earned higher scores on several measures of academic achievement
  - Had higher educational expectations
  - Showed better social behavior

- All of these effects were more pronounced for boys than for girls

How Does the 8 Year Follow-Up Study Build on Earlier Findings?

- This study looks at the children when they are adolescents

- We focus especially on future orientation and early labor force engagement

    - Does parents' assignment to an anti-poverty work- support program put youth on a different path in terms of their own expectations for the future and early work behaviors?

New Evidence:

New Hope Impacts
8 years Post Random Assignment

Overall Findings

In the 8 year follow-up, youth in New Hope families, compared to youth in control group families

- held less cynical attitudes about work
- were more involved in employment and career preparation
- worked for longer periods during the school year (though not for more hours per week)

Findings Related to Gender

- Compared to boys in control group families, boys in New Hope families

  - were less pessimistic about employment prospects
  - were less cynical about work
  - were more involved in employment and career preparation
  - worked more hours per week during the school year

- This pattern of positive effects was pronounced among ***African American boys***

- By contrast, New Hope had no impact on girls' future orientation or employment experiences

Implications for Policy and Practice

Implications

Our findings suggest the following:

- A parent-focused work-based antipoverty program that increases parental employment and family income can produce **more positive future orientations and stronger attachment to the labor market during adolescence.**

- The extent to which youth benefit varies by demographic characteristics, with a pattern of positive outcomes among **boys, especially African American boys.** This subgroup is at very high risk for several negative outcomes.

Implications

The advantages for New Hope youth may ease the ***transition to adulthood***

- Findings suggest a more planful approach to the future among children in New Hope families

- New Hope youth's lower level of cynicism about work and tendency to attach more intrinsic value to work may forecast stronger and more stable labor market attachment

- These positive attitudes may also discourage youth "idleness"— a behavior linked to later struggles in the labor market during adulthood

- Positive effects on attitudes and behaviors take on added significance for youth living in high-poverty neighborhoods plagued by high rates of unemployment

Implications

Previous research suggests possible concern about youth working more than 20 hours per week

- New Hope increased duration of employment, but **_not_** intensity of employment
- Adolescents in New Hope families worked well below 20 hours per week

Little evidence that New Hope adolescents' involvement in work dampened their school engagement or truncated educational aspirations or expectations

Implications

- Positive effects may have come about through *parental work roles*
  - Youth observing parents' more stable employment and higher income
  - Youth benefiting from greater economic wellbeing in family
  - Youth benefiting from parents' broader social contacts
- Positive effects may also have come about through higher levels of participation in *supervised extracurricular activities*. Such activities may have exposed youth to adults who
  - Encouraged positive attitudes about work and future employment
  - Provided job-seeking assistance and advice about future career paths

Take-Away Messages

Two Generations

Strengthening the work supports for low income families can benefit *two* generations

- New Hope increased parents' employment and income and reduced poverty

- It also put male youth on a more positive course in terms of their own expectations for future employment and initial employment experiences

Two Generations

- We need to consider the impacts of work support programs on **both parents and children** when calculating the costs and benefits

- Positive employment expectations and trajectories for youth may be an **important way to interrupt the intergenerational transmission of poverty**

Acknowledgements

Preventing Conduct Disorder in Children at High Risk

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The Problem
for U.S. Children and Families

Serious Antisocial Behavior:
The Problem of "Early Starters"

"Early Starters" are a group of children whose conduct problems begin early in life and grow into serious violence that persists across the life span.

Why such an early start?

At home:

- Evidence suggests that some toddlers have biologically based difficulties with impulse control and behavioral regulation.

- Parents are more likely to have difficulties with behavior management of a child with these characteristics. This is especially so if the parents are stressed by limited resources and time.

- The difficult temperament of the child may grow into conduct problems at home, which keep the child from learning necessary social-emotional and cognitive skills.

Serious Antisocial Behavior: Cascading Problems for "Early Starters"

Why such an early start?

In school:

- An early-starting child is more likely to experience social rejection from peers, failure with academic tasks, and conflict with frustrated teachers
- These failure experiences result in the child adopting a defensive style of processing information about the social world
- They also result in disengagement from mainstream groups, including classroom peers, school activities, and parents
- Parents may withdraw from interaction to relieve conflict and tension
- As a result, as the child grows into adolescence, there is a lack of monitoring and supervision
- The child may gravitate toward deviant peer groups and accelerate antisocial behavior into serious violent crime

Lack of Interventions Targeting Early Starters

- No previous interventions have targeted the highest risk group of early starters, who are at greatest risk for serious violence.

  - This is a group for whom prevention is most daunting
  - However, it is also the group for whom it is potentially most beneficial
  - This is especially the case given the costs of violence to society

Costs of Chronic Violence to Society

- Total burden of crime exceeds $ 1 trillion annually (Anderson, 1999)

- About 7% of youth account for over half of all crime (Wolfgang, 1973; Howell et al., 1995)

- "The cost of losing a high-risk youth to a life of crime is $ 1.25 to 2 million" (Cohen, 2005)

- Taxpayers are willing to pay a great deal to reduce crime, *if* the plan is effective (Cohen et al., 2004)

Getting a Deeper Understanding

Addressing the Problem of Early Starters

- Research suggests that preventive interventions for early starters:
  - Should start as soon as high-risk children can be identified in school
  - Should involve the multiple social contexts in which the child participates, because risks can arise from family, peer, school, and community factors
  - Should be sustained across development, because although early risks elicit later risks, it is also the case that new risk factors can emerge over time
- The Conduct Problems Prevention Research Group developed the Fast Track Intervention based on these principles

Fast Track Prevention Program

The Fast Track Program identified early starters between 1991-3:

- Screened 9,341 kindergarteners at 4 sites
  (Durham, NC, Nashville, TN, Seattle, WA, and central PA)
- Identified 891 early starters across 3 cohorts

Implemented a ten-year intervention, from 1st through 10th grade, in 55 schools.

Program components targeted major risk factors for antisocial behavior:

Parenting **(weekly groups, biweekly home visits)**
   * Behavior management, warmth, monitoring

Interpersonal Competence **(universal, friendship groups)**
   * Behavioral and social skills, prosocial groups

Intrapersonal Competence **(skills training)**
   * Emotion recognition, attributions, solve problems

Academics **(tutoring, after-school groups)**
   * Reading and organization skills

Fast Track Program Timeline
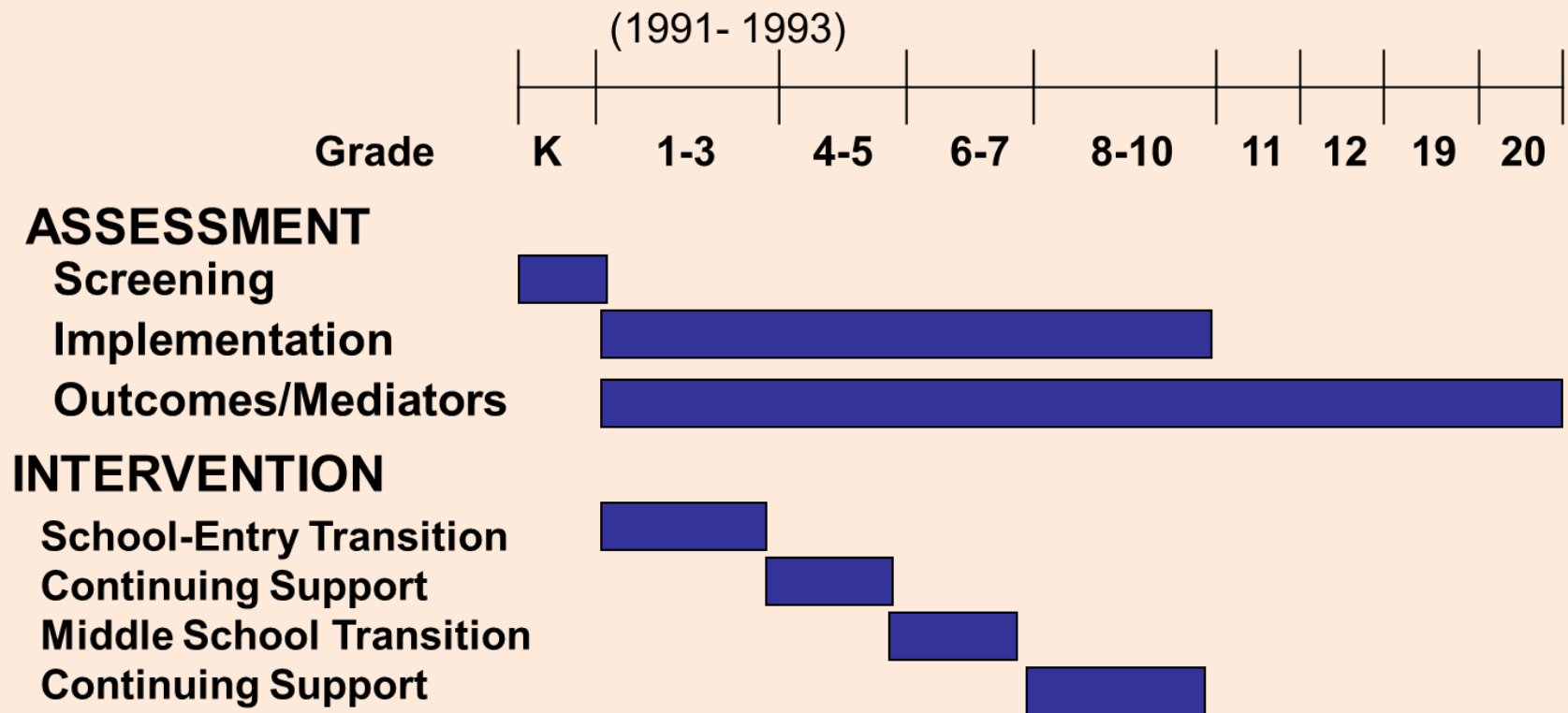
75% of families participated in > 75% of sessions.

Fast Track Program Evaluation

- The evaluation of the Fast Track Intervention was conducted through a randomized controlled trial with assignment to intervention or control groups at the level of the school.

- Findings reported here are from multiple waves of the evaluation.

- A particularly important question: Do effects continue 2 years after the intervention has concluded, when the children are in 12th grade?

New Evidence

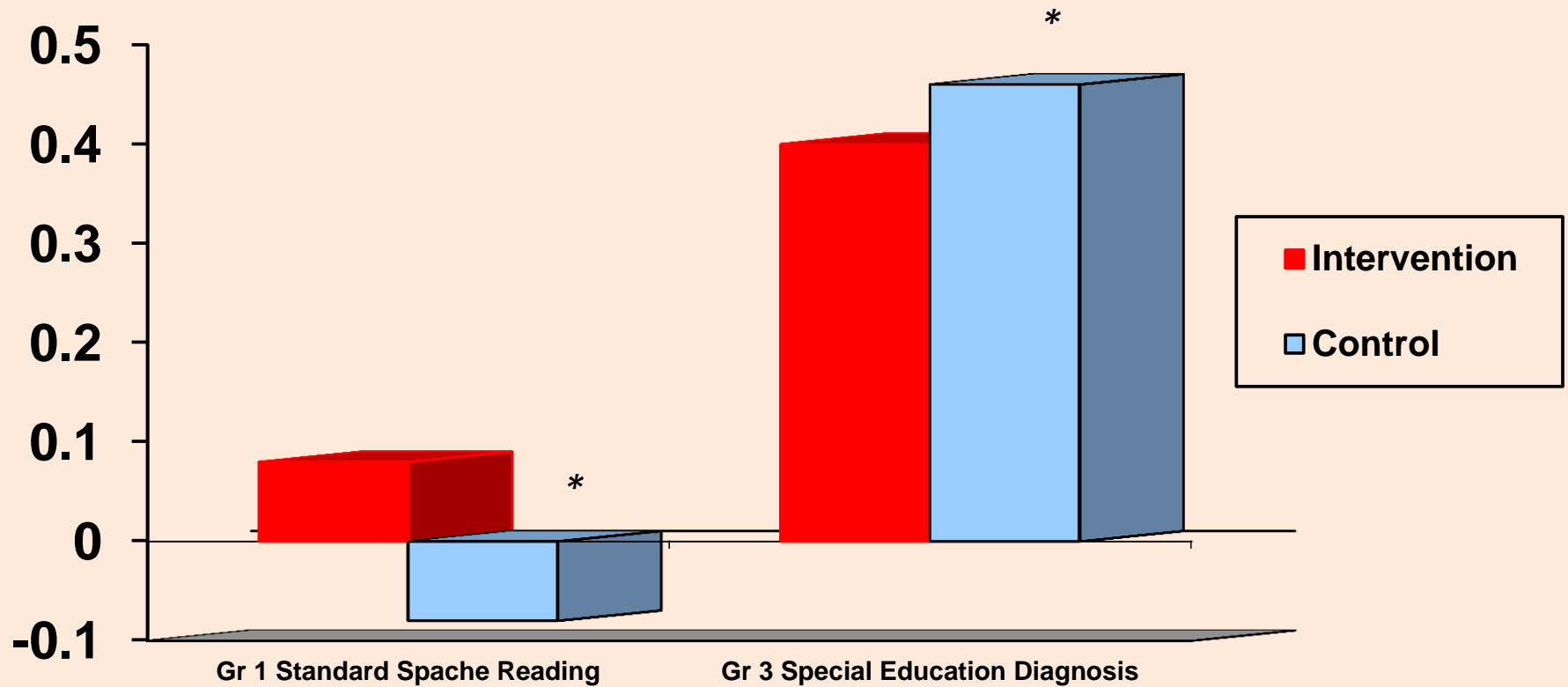# Intervention Effects in Social and Emotional Literacy

(grades 1-3) *(CPPRG, 1999, JCCP; 2002, JACP; 2002, D&P)*

Z Score
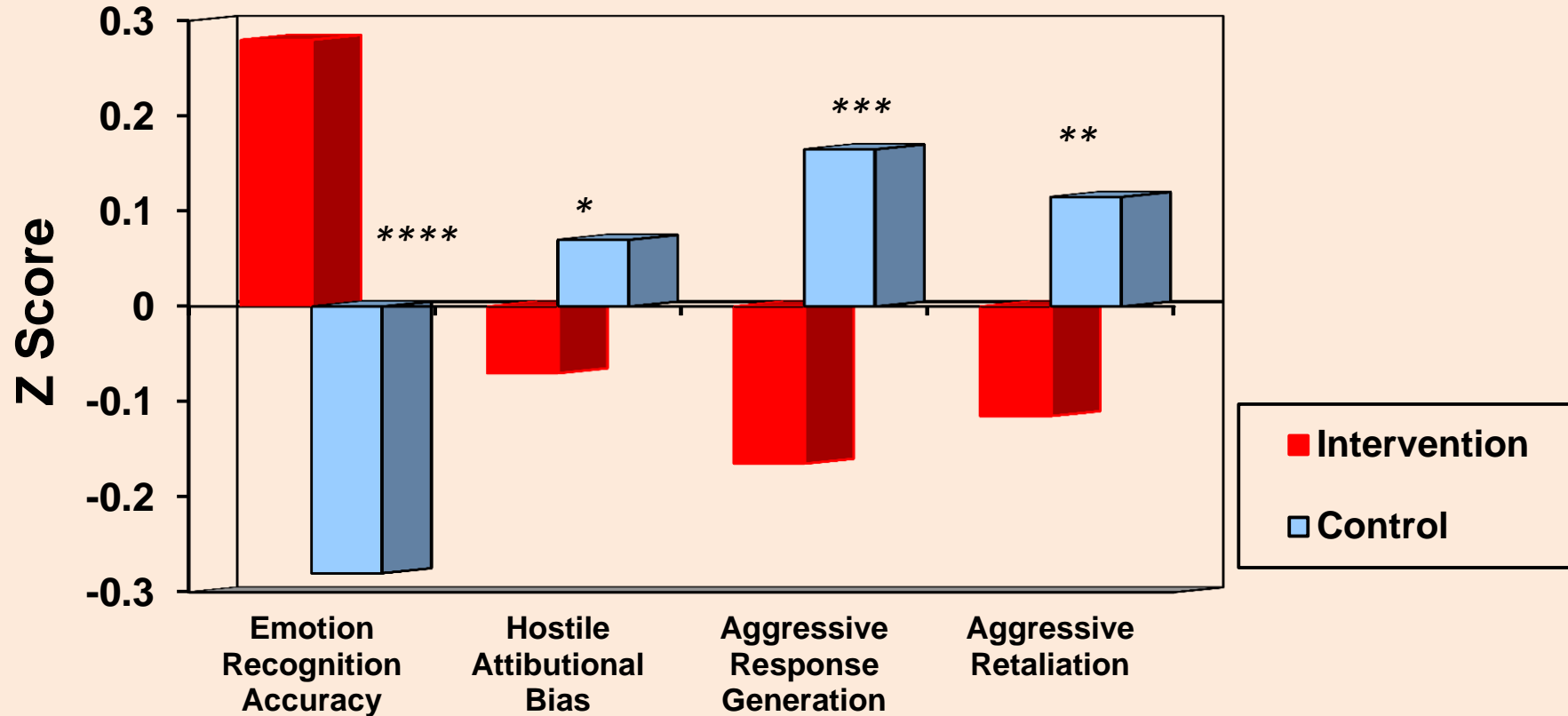
**** p < .001; *** p < .01; ** p < .05; * p < .06

Intervention Effects in Academic Skills
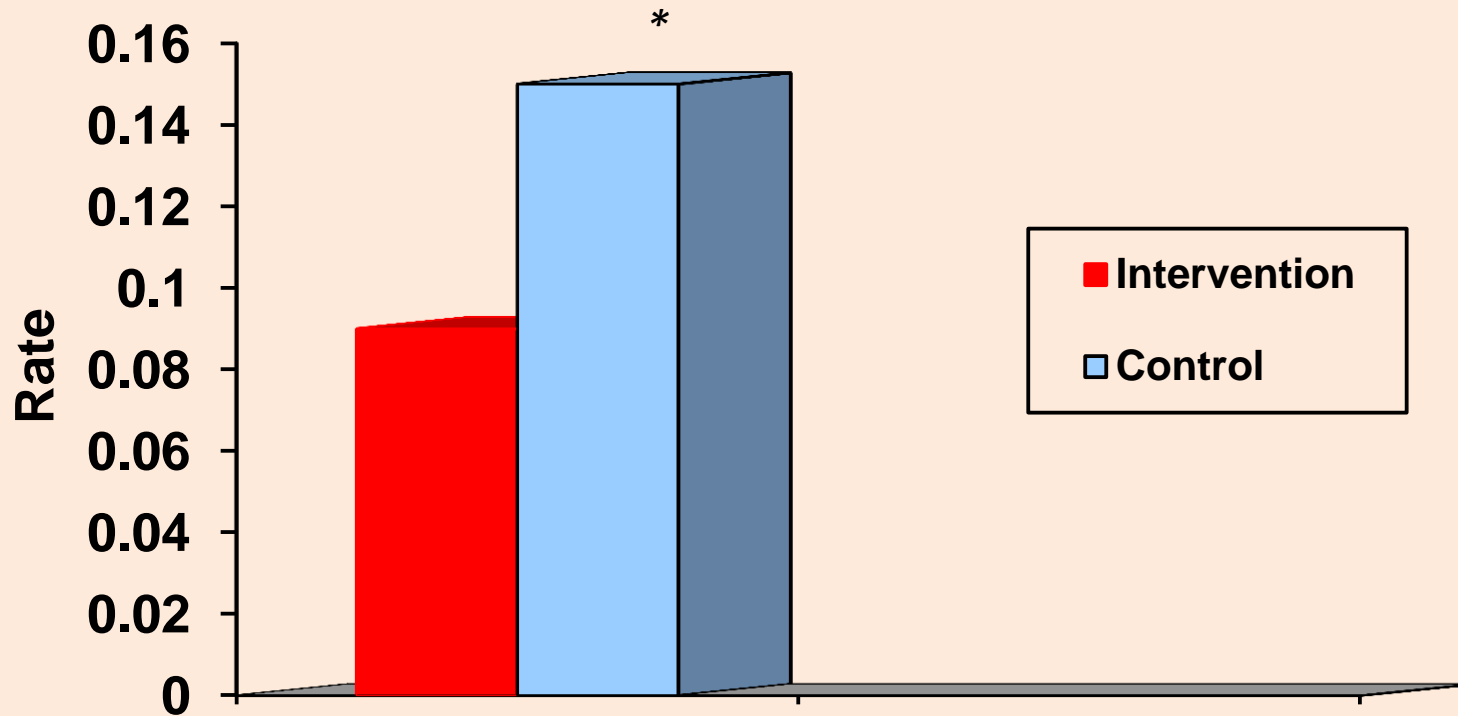
(CPPRG, 1999, JCCP, 2002, JACP, 2002, D&P)

p < .05

Intervention Effect on Violent Arrest Rate
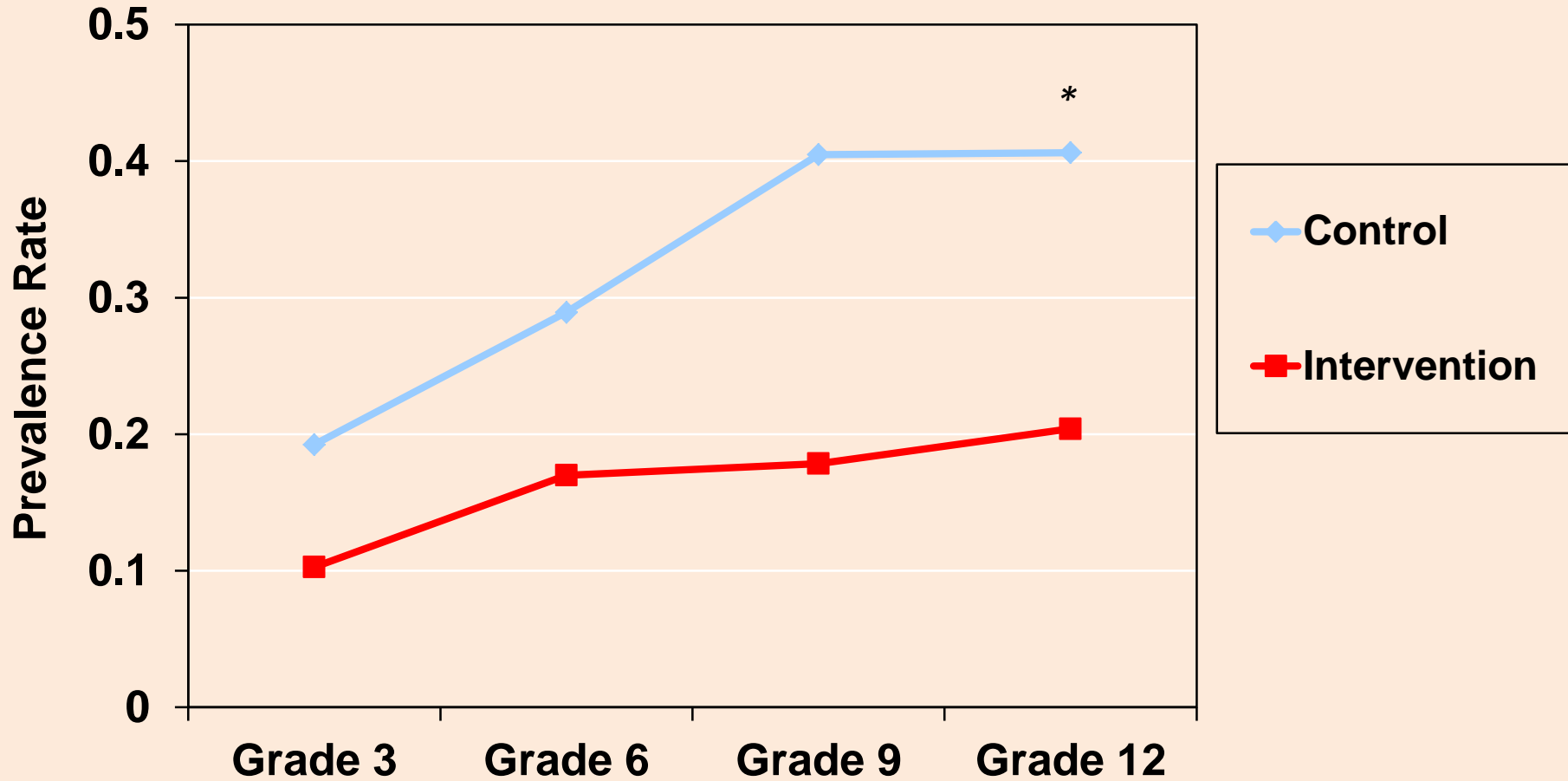
(Murder, Rape, Kidnapping, Arson, Assault w/ Weapon)

(Highest-Risk Group, through age 19) (CPPRG, J Experimental Criminology, 2010)

* p < .05

Intervention Effect on Life Prevalence of DISC Conduct Disorder Diagnoses

(Highest-Risk Group) *(CPPRG, 2011, Child Development)*

*p < .05

Economic Analysis of Fast Track

- Each chronic criminal costs $1.25 million.

- Fast Track costs about $58,000/child across 10yrs.

- If Fast Track reduces prevalence of chronic criminals by > 5% points, benefit-cost ratio is +.

- Assignment to intervention reduces lifetime prevalence of conduct disorder by 21% points.

Cost Savings Due to Intervention, Per Child
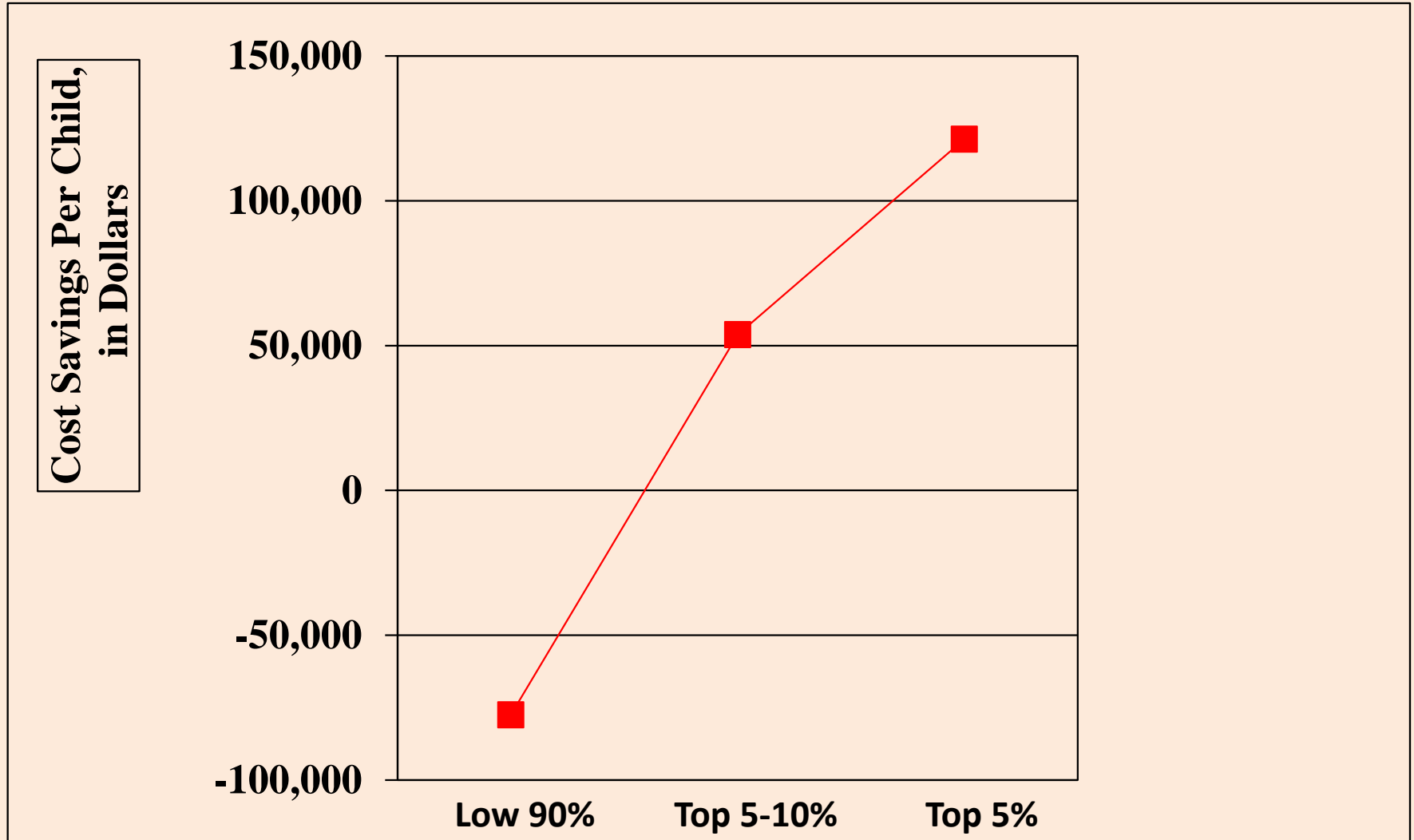
Implications for Policy and Practice

Implications

- We now have the assessment technology to identify a group of children in kindergarten who seem headed for costly conduct disorder in later childhood.

- We also have the intervention technology to interrupt the development of conduct disorder.

Implications

Judicial policies over the past two decades have stiffened sentences for juvenile offenders based on the presumption that this group cannot benefit from intervention.

- The current study refutes that presumption.

Education policies have emphasized segregation of this group through suspensions, expulsions, and alternative schools.

- The current study demonstrates an effective means of keeping these children in mainstream classrooms.
- Further, intervention with the highest-risk group stands to benefit the rest of the school population through reduction in deviant peer influences and improvements in classroom behavior.

Take-Away Messages

Take-Away Messages

- "Early starting" children are not destined to a life of crime.

- We know how to deflect their developmental course.

- The costs of sustained intervention are high, but the evidence suggests that the benefits to society are substantially greater than the costs per child.

General Discussion

We welcome your
questions and comments.