

# Impacts and Implications of the Child-Parent Center Preschool Program

Arthur J. Reynolds, Judy Temple, and  
Suh-Ruu Ou, University of Minnesota

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# Child-Parent Center Program

Four Decades of Sustained Intervention in  
Public Schools

Innovative Center-Based Approach to Early  
Childhood Development

High Economic Returns

# Two Major Program Foci

Basic skills: Language, Math, Communication

Structured Learning Activities

Field Trips: Zoos, Museums, Libraries

## Parent Involvement

Classroom volunteering

Parent room activities

Educational workshops and training

Home visits and activities

# CPC Staffing and Organization

- ◆ Head Teacher
- ◆ Parent Resource Teacher
- ◆ Dedicated Resource Room
- ◆ School-Community Representative
- ◆ Certified Teachers and aides
- ◆ School nurse, psychologist, social worker
- ◆ Preschool class size was 17 to 2
- ◆ Co-located kindergarten and early grades

# Johnson Child-Parent Center





# Parent Resource Room

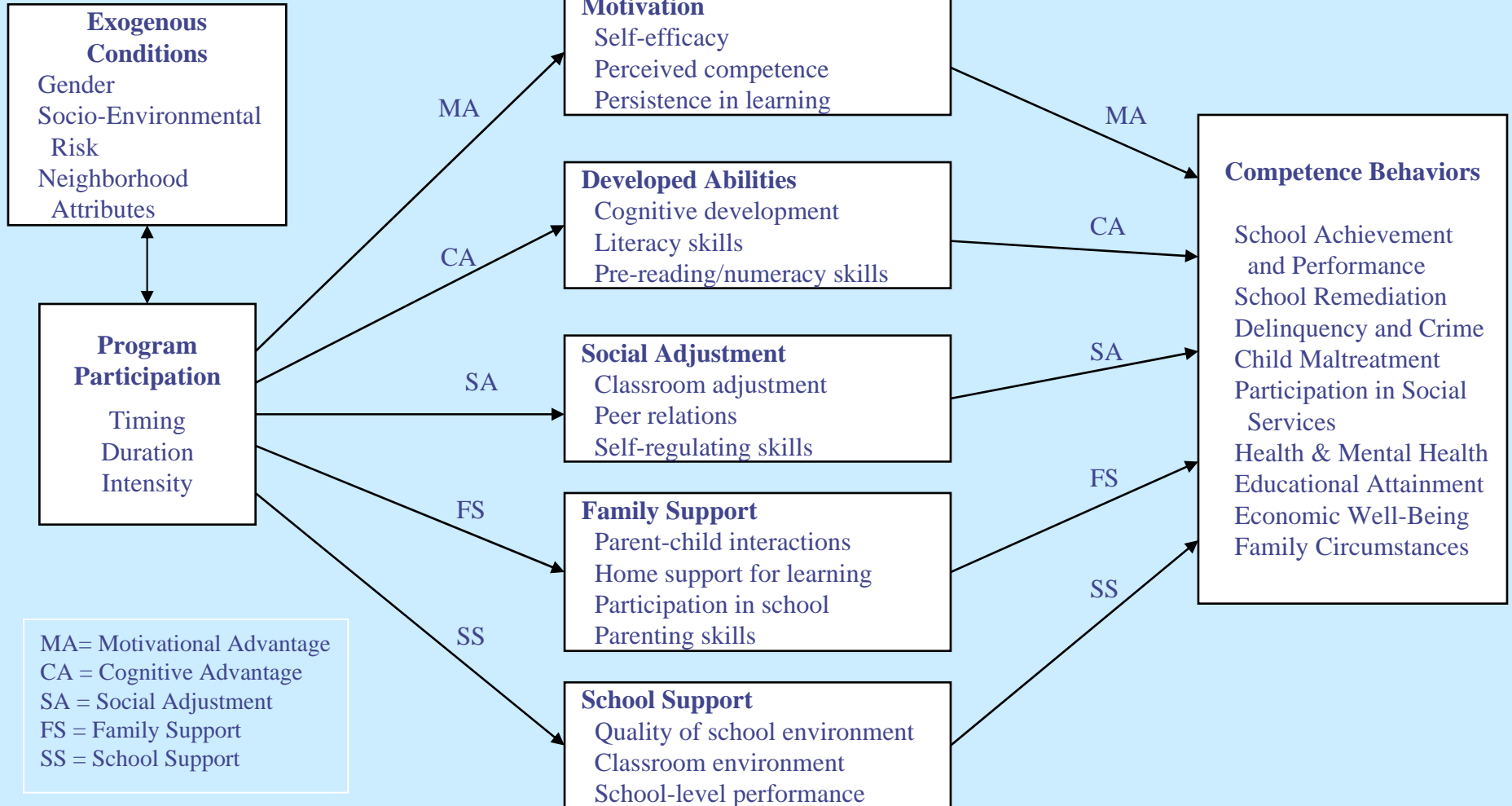


# Common Paths from Early Childhood to Adult Well-Being

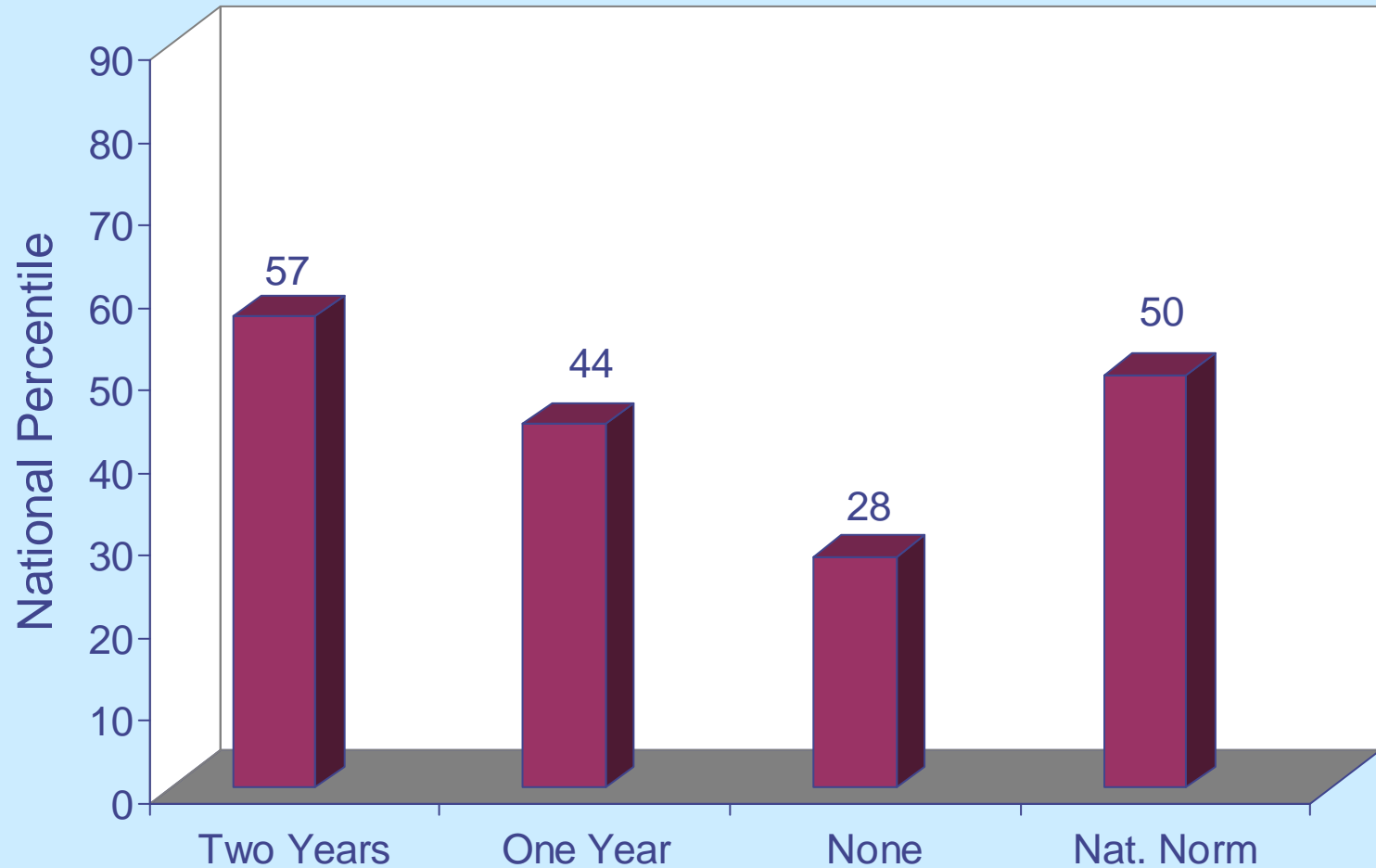
**Early Childhood**  
Ages 3-9

**Ages 5-12**

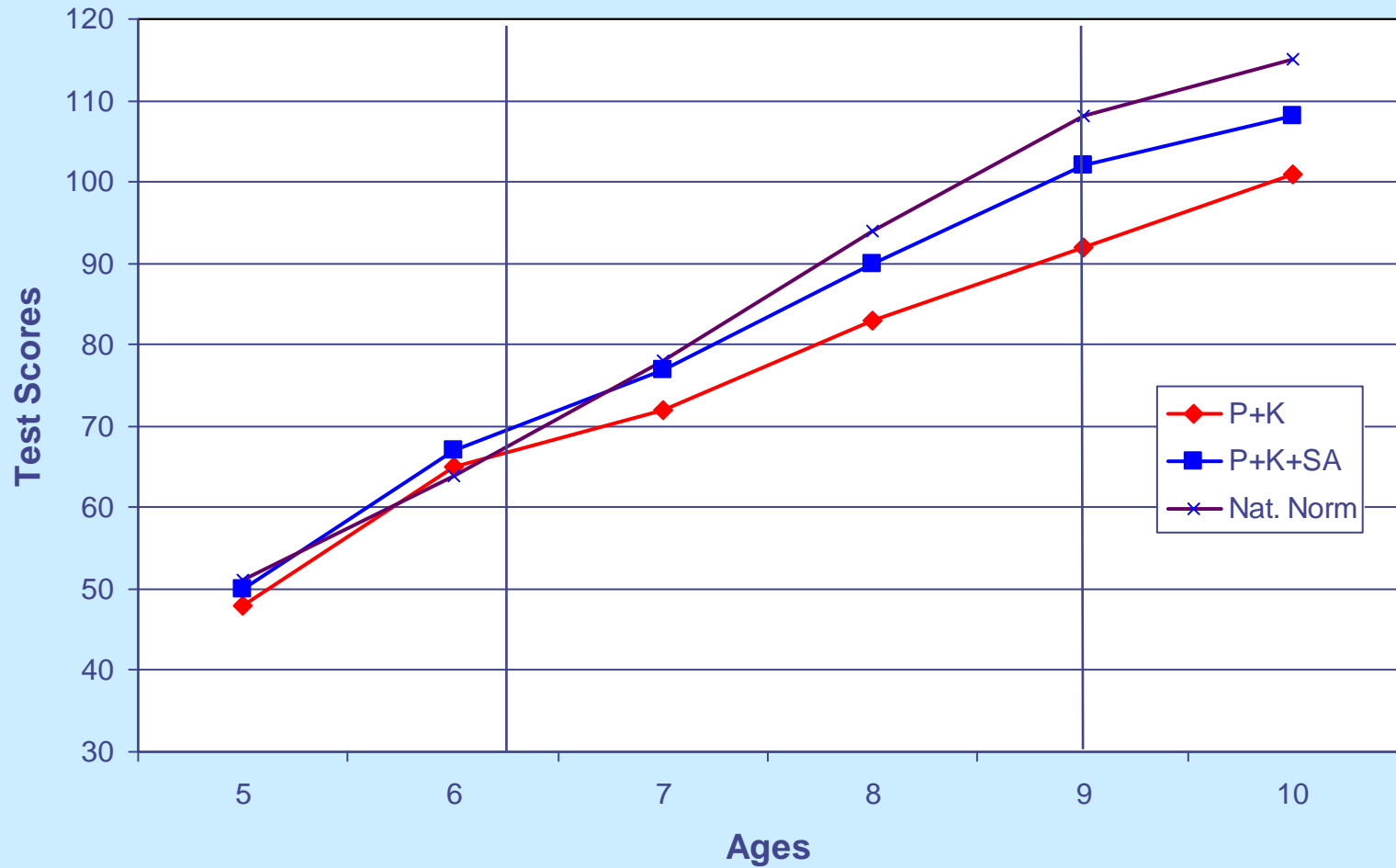
**Adolescence to Adulthood**



# CPC Preschool and Readiness



Reading Achievement over Time for Extended Program Groups



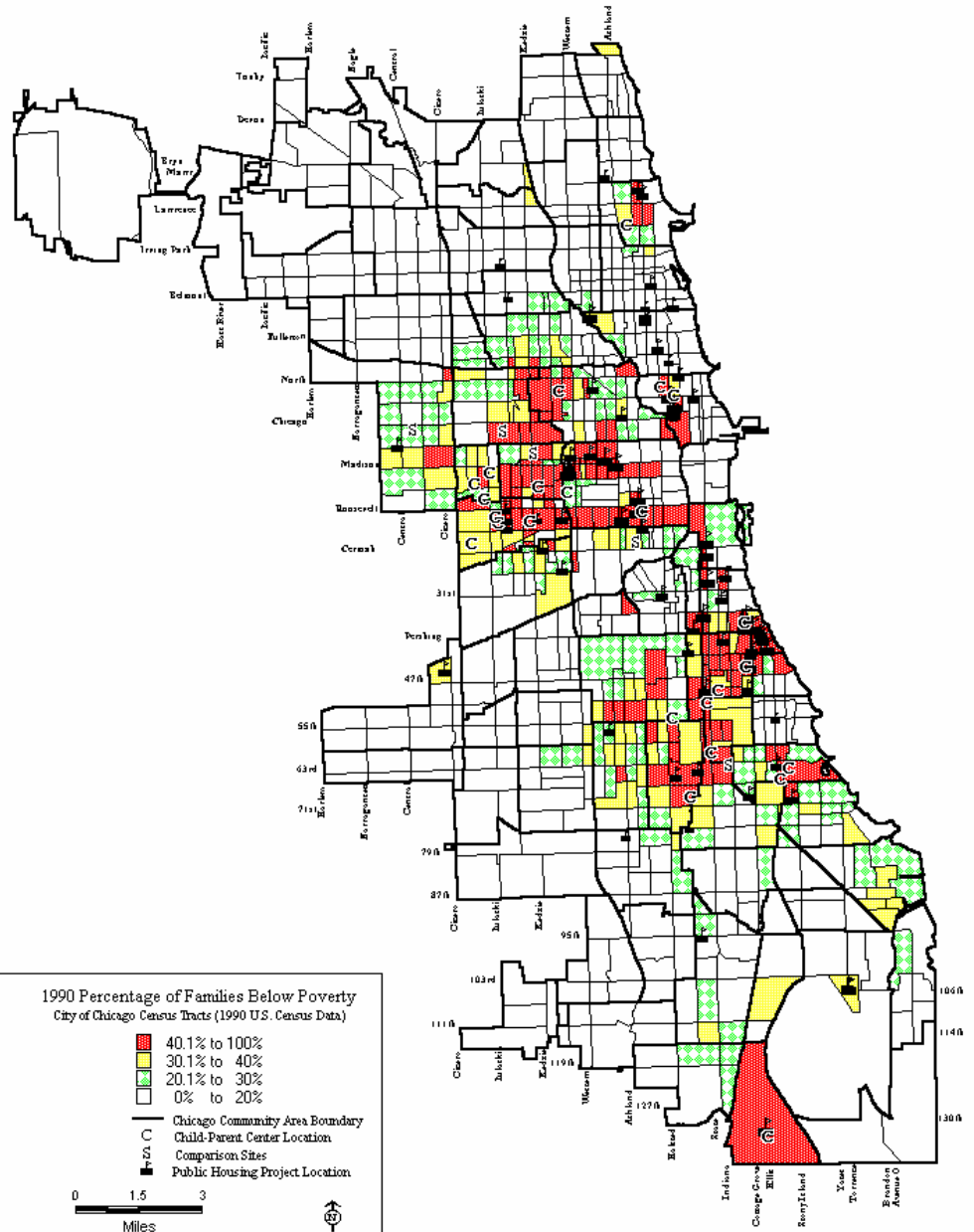
# Brief CLS Sample Description

- ◆ 989 complete cohort of children graduating from Child-Parent Centers in kindergarten; they participated from 2 to 6 years. Centers are located in the highest poverty areas of Chicago.
- ◆ 550 children enrolled in an alternative early childhood program in kindergarten in five randomly selected schools serving low-income families. They matched on socioeconomic status.

# Characteristics of Study Groups

	<b>CPC Intervention</b>	<b>Comparison</b>
Sample	Complete cohort	Random sample of K sites
Recovery, by age 24	902 of 989 (91%)	487 of 550 (89%)
Key attributes	Reside in highest poverty areas Over 80% of children enroll Mean no. of risks = 4.5; 73% with 4 or more risks Parent ed > than in c-group	Reside in high poverty areas Had school-based enrichment Mean no. of risks = 4.5; 71% with 4 or more risks Area poverty < than in p-group
<b>Intervention levels</b>		
Preschool	100% 1 or 2 years	15% in Head Start
Kindergarten	60% full day	100% full day
School age	69% 1 year 56% 2-3 years	30% 1 year 0% 2-3 years

# Neighborhood Context in the Chicago Longitudinal Study



# Design Strengths

- ◆ Comparison group enrolled in full-day kindergarten, the usual program for at-risk young children at the time
- ◆ Most of comparison group from randomly selected schools with full-day kindergarten.
- ◆ CPCs were in most disadvantaged areas.
- ◆ High rates of CPC enrollment across communities given outreach, low availability of programs, and low-SES status of families.
- ◆ Robustness testing over a decade shows consistency of measured impacts.

# Remaining Focus

◆ Cost Effectiveness

◆ Adult Well-Being

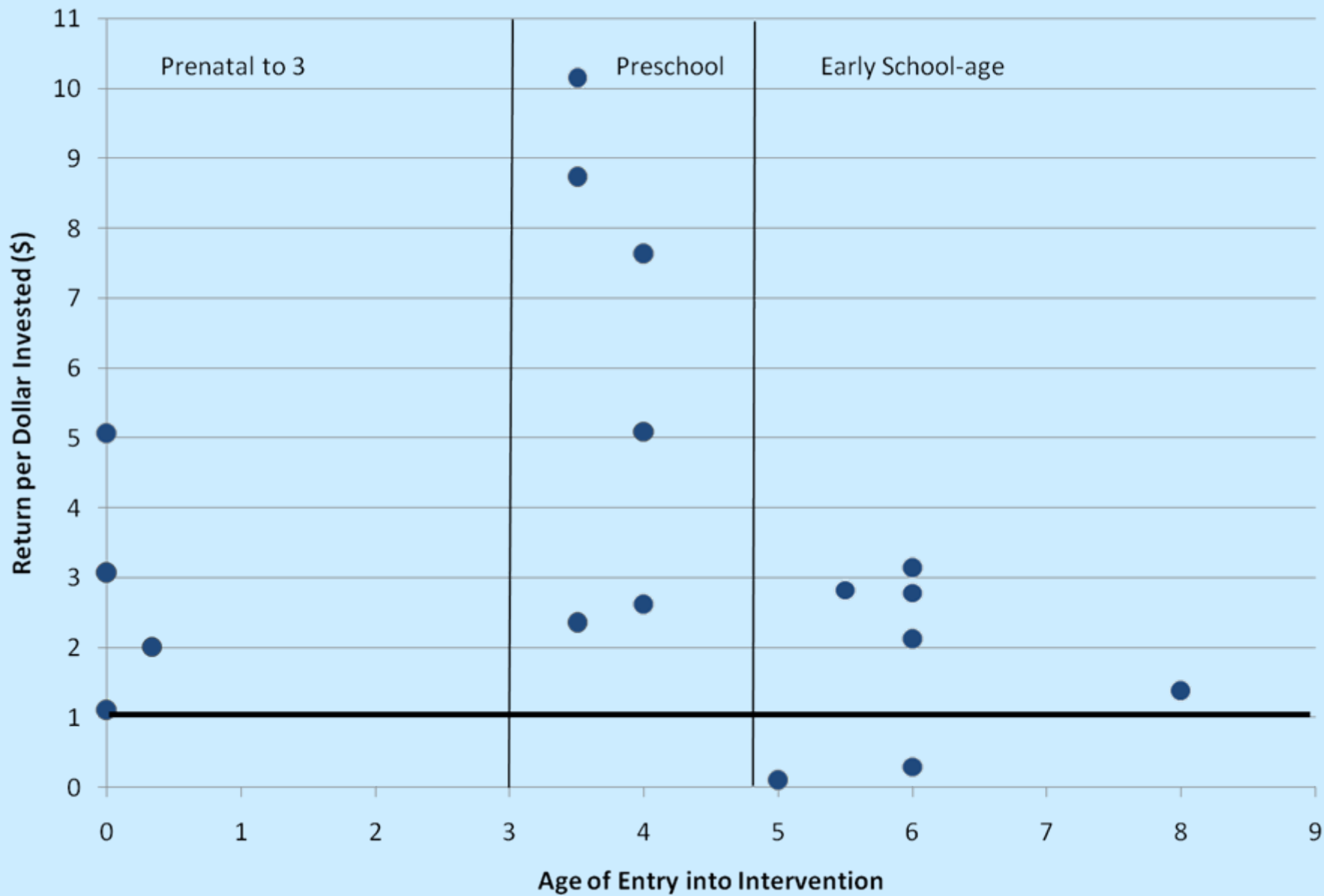
◆ Mediation of Adult Effects

◆ Key Principles

# CPC Economic Returns: Preschool

	<b>Benefits</b>	<b>Costs</b>	<b>Ratio</b>
Society	84,032	8,277	10.15
Public/Crime Victims	56,837	--	6.87
Participants	27,195	--	3.28

# Return per Dollar Invested by Age of Entry into Intervention



# Benefit-Cost Ratios for Child Programs



# Common Elements of Programs Showing High Economic Returns

1. More than 1 Year of Participation.
2. Well-trained and Compensated Staff.
3. Low Ratios of Children to Staff.
4. Services and Instruction that are intensive.
5. Comprehensive Family Services.
6. Average Cost per Child > \$5,000.

# Summary of Main Effects

# Major Outcome Measures

## Educational Attainment (by age 24)

High school completion, Years of education, college attendance

## Economic Well Being (22-24)

Occupational prestige, socioeconomic status

## Criminal Behavior (18-24)

Arrests, Convictions, Incarceration

## Health Status & Behavior (up to 24)

Health insurance, tobacco and substance use

## Mental health (22-24)

Depressive symptoms

# Basic Impact Model

## **CPC participation**

Preschool (1-2 yrs. vs all others)

School-age (1-3 yrs. vs all others)

## **Covariates (age 0 to 3)**

A. Sex of child, race/ethnicity, 8 risk indicators, child welfare services

B. Tests for attrition bias

# Confirmatory Approach

- ◆ Identify Key Outcomes for which Effects are Expected, based on Program Theory
- ◆ Assess Main Effects of Participation
- ◆ Identify Mediators that account for Main Effects
- ◆ Assess if Hypothesized Mediators or Mechanisms account for Main Effects
- ◆ Test Causal Mechanisms (Chain of effects) to Determine Comparative Model Fit

# Educational Attainment

	Prog	Comp	Diff
HS completion	79.4%	70.7%	8.7%*
Years of ed	11.97	11.65	0.32*
Attend 4-year college	13.6%	10.4%	3.1%

# Socioeconomic Status

	Prog	Comp	Diff
Occu. prestige (4+ on scale)	28.2%	21.5%	6.7%*
Occu. prestige (1-8 scale)	2.79	2.55	0.24*

# Adult Crime

	Prog	Comp	Diff
Incarceration or jail	20.6%	25.6%	-5.0%*
Conviction	15.3%	19.7%	-4.4%*
Felony arrest	16.5%	21.1%	-4.6%*
Attrition adj	16.3%	21.2%	-4.9%*

# Health Status/Behavior

	Prog	Comp	Diff
Substance use/misuse	8.8%	12.2%	-3.4%
Daily tobacco	17.9%	22.1%	-4.2%
Depressive symptoms	12.8%	17.4%	-4.6%*

# Health Insurance Coverage

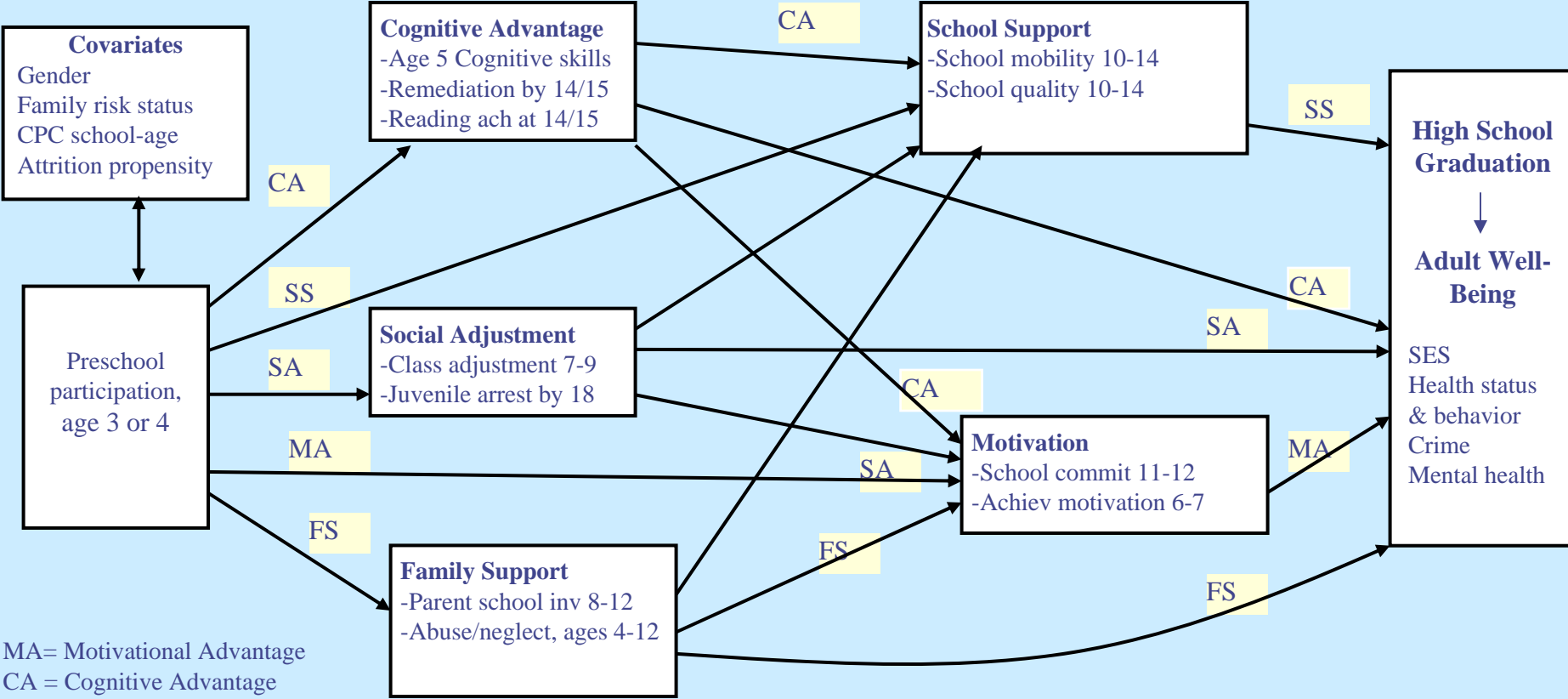
	Prog	Comp	Diff
Any health ins.	71.9%	61.0%	10.9%*
Public insurance	27.3%	21.9%	5.3%
Private insurance	40.3%	33.9%	6.4%*

# Preschool Effects by Gender

	Male		Female	
	P	C	P	C
HS completion, %	64	48	78	79
4-year college, %	10	6.5	18	12
Incarceration, %	37	47	4.1	3.7
Health insurance, %	57	44	80	76
Depressive symp, %	10	23	13	12

# Mediation Findings

# Hypothesized Model of Pathways



MA= Motivational Advantage  
 CA = Cognitive Advantage  
 SA = Social Adjustment  
 FS = Family Support  
 SS = School Support

# Cognitive Advantage

1. ITBS cognitive composite (age 5);  
118 items; standard score
2. Grade retention/special education  
(ages 6 to 14); school records
3. ITBS reading achievement (age 14);  
58 items, standard score
4. High school graduation (ages 17-20);  
school records or self report

# Motivation

1. Achievement Motivation (ages 6-7);  
Teacher ratings, 23 items; "Tries hard, Is eager to learn"
2. School Commitment (ages 11-12);  
Student ratings, 6 or 7 items; "School is important").

# Social Adjustment

1. Classroom Social Adjustment (ages 7-9);  
Teacher ratings, 6 items; "follows directions"
2. Trouble Making Behavior (ages 9-12);  
Student reports, 9 items; "I get in trouble at school", "I get in trouble at home"
3. Juvenile Arrest Petitions (ages 10-18);  
(court records)

# Family Support

1. Parent involvement in school (ages 8-12)  
(Teacher/parent ratings)
2. Child Maltreatment (ages 4-12)  
(Indicated/substantiated report)

# School Support

1. Attend a High Quality School (ages 10-14)  
Records of attendance in magnet school or school with 40% or more at/above national norms in reading
2. School mobility (ages 10-14)  
School records of number of moves

# Mediation Procedure

1. Estimate Main Effect of Preschool.
2. Add Mediators of Each Hypothesis Alone (Model 1).
3. Control for Cognitive Advantage Mediator (Model 2).
4. Enter Cognitive, Social, and Motivation Mediators together (Model 3)
5. Enter All Five Hypotheses Together (Model 4, Full Model).

# Percent Reduction Mediation Metric

Main Effect on High School Completion (no mediation)

8.7 percentage points

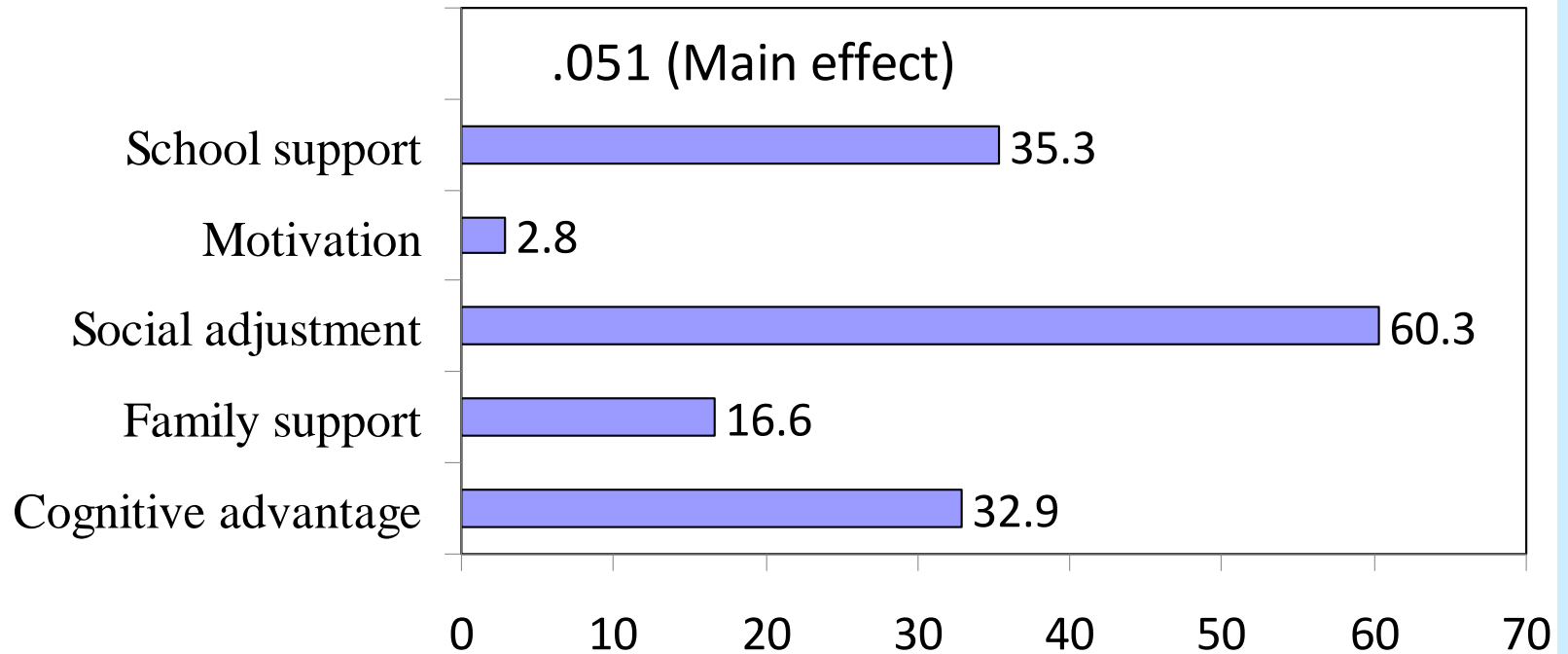
Main Effect + Cognitive mediators

5.7 percentage points

% of main effect associated with cognitive mediators

$$8.7 - 5.7 / 8.7 = 35\%$$

# Incarceration/Jail



Cognitive: ssready, grade retention/special edu, ssread8. and high school graduation

Family: maltreatment and parent involvement

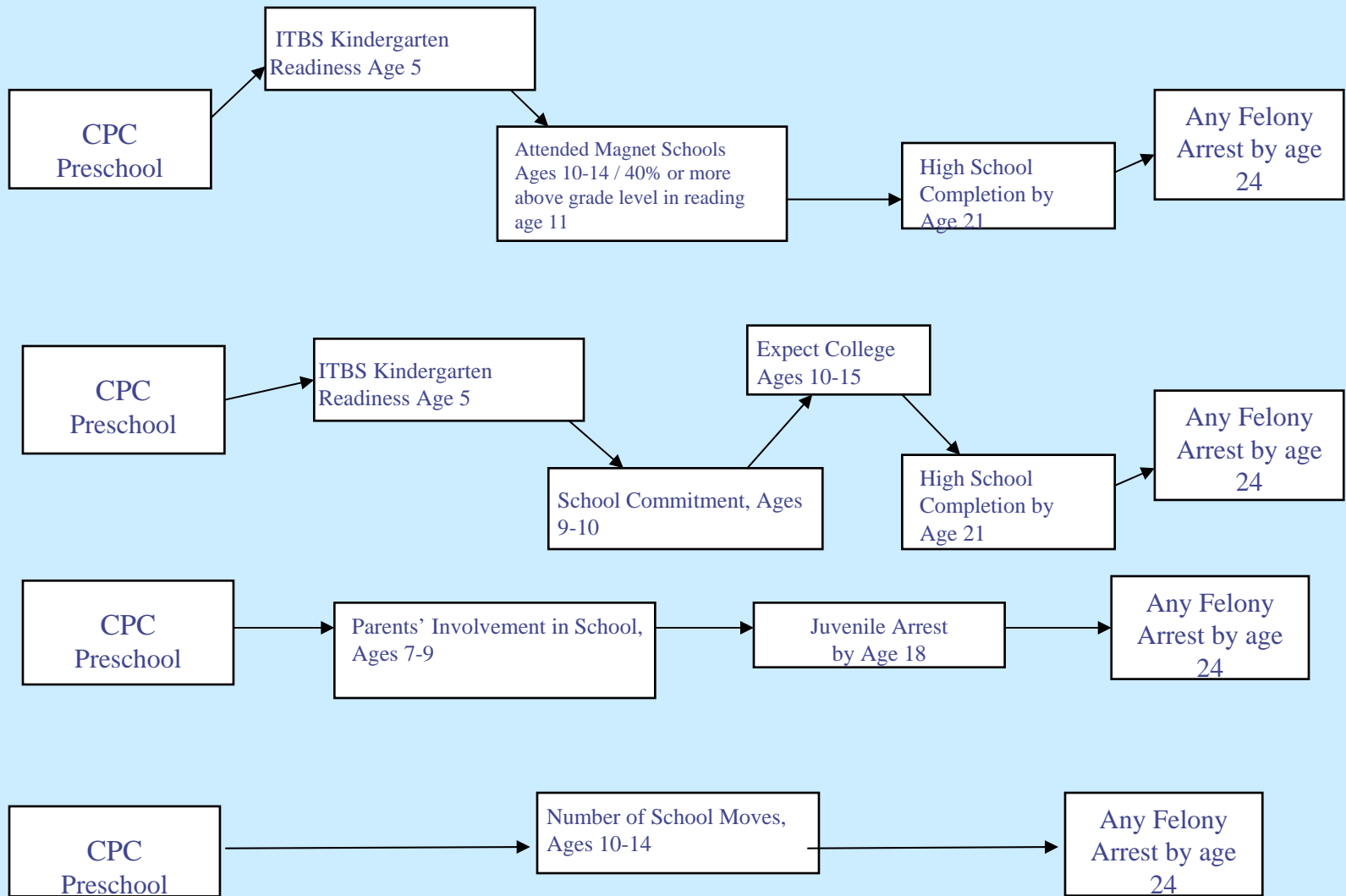
Social adjustment: classroom adjustment, troublemaking behavior, and juvenile delinquency

Motivation: motivation and school commitment

School Support: School mobility and school quality

# Percentage of Main Effects Explained by All 5 Hypotheses

	Main effect	Percent explain.
Years of Education	.32 yrs	48
Occupational Prestige	6.7 pt	70
Health Insurance	10.9 pt	47
Depressive symptoms	-4.6 pt	100
Incarceration	-5.0 pt	48
Felony Arrest	-4.6 pt	84



Selected Paths for any felony arrest by age 24

# Key Elements of CPC Impacts

- ◆ System of Services Timing-Earlier is generally better
- ◆ Timing and Length
- ◆ Well-trained and compensated teachers

# Key Elements of CPC Impacts

- ◆ Comprehensive services to families
- ◆ School readiness, literacy focus
- ◆ Commitment to R & D