

# 67<sup>th</sup> Oregon Public Health Association Annual Meeting and Conference

Impact of a Social-  
Emotional and  
Character  
Development  
Program:

Findings from the  
Chicago RCT of  
*Positive Action*



**October 10, 2011\*Concurrent Session #3C\*2:45 PM – 4:00 PM**

# Acknowledgements, Disclaimer Statement, Conflict of Interest Disclosure

- The Chicago Trial of *Positive Action* was funded by the Institute of Education Sciences (IES), U.S. Department of Education (ED), Grants # R215S020218 and R305A080253 to UIC (2003-05) and Grants # R305L030004 and R305A080253 to OSU (2005-12). The first of these grants was received as part of the Social and Character Development (SACD) Consortium that consisted of representatives from IES, the CDC, the national evaluation contractor, Mathematica Policy Research, Inc. (MPR), and each grantee site participating in the evaluation.
- The SACD research program included a national (multi-site) evaluation study conducted by MPR, and complementary (local) research studies conducted by each grantee up to grade 5. The findings reported here are based on both multi-site and local data from the Chicago site up to grade 8. These findings (which are based on preliminary analyses) may differ from the results reported (only up to grade 5) for the SACD national evaluation study. The content of this presentation does not necessarily reflect the views/policies of the SACD Consortium, nor does mention of trade names, commercial products, or organizations imply endorsement by the ED.
- The research described herein was conducted using the program and the training and technical support of *Positive Action, Inc.* in which Dr. Flay's spouse holds a significant financial interest.

# Authors



B. Flay; A. Acock; S. Vuchinich; K. Lewis; N. Bavarian; M. Schure; P. Malloy; A. Reed ; F. Snyder; K. Li;



D. DuBois; N. Silverthorn; J. Day; M. Fagen; N. Portillo

# Learning Objectives



Understand social-emotional and character development programs



Understand the *Positive Action* program



Learn methodology and findings from the Chicago RCT of *Positive Action*

# Outline

Background

*Positive Action (PA)*

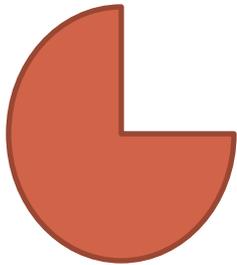
*PA – Chicago Randomized Controlled Trial (RCT)*

Conclusions

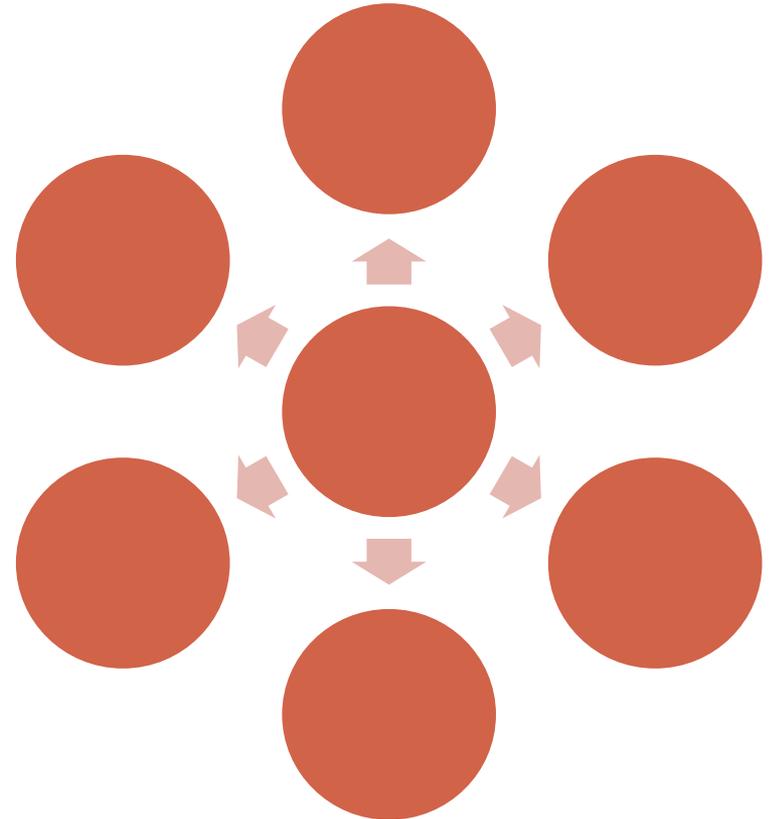
Future Directions

# Background

**Partial**



**Comprehensive**



# THE THEORY OF TRIADIC INFLUENCE

**Levels of Causation**

**Ultimate Underlying Causes**

**Social/Personal Nexus**

**Distal Predisposing Influences**

**Expectancies & Evaluations**

**Affect and Cognitions**

**Proximal Immediate Predictors**

Decisions

Experiences

Intrapersonal Stream

Social/Normative Stream

Cultural/Attitudinal Stream

**Biological/Nature**

**Nurture/Cultural**

**BIOLOGY/  
PERSONALITY**

**SOCIAL  
SITUATION**

**CULTURAL  
ENVIRONMENT**

Sense of Self/Control  
Social Competence

Interpersonal Bonding  
Others' Beh & Atts

Interactions w/ Social Instit's  
Information/ Opportunities

Self Determination  
Skills: Social+General

Motivation to Comply  
Perceived Norms

Values/ Evaluations  
Knowledge/ Expectancies

**SELF-EFFICACY  
BEHAVIORAL  
CONTROL**

**SOCIAL  
NORMATIVE  
BELIEFS**

**ATTITUDES  
TOWARD THE  
BEHAVIOR**

DECISIONS/INTENTIONS

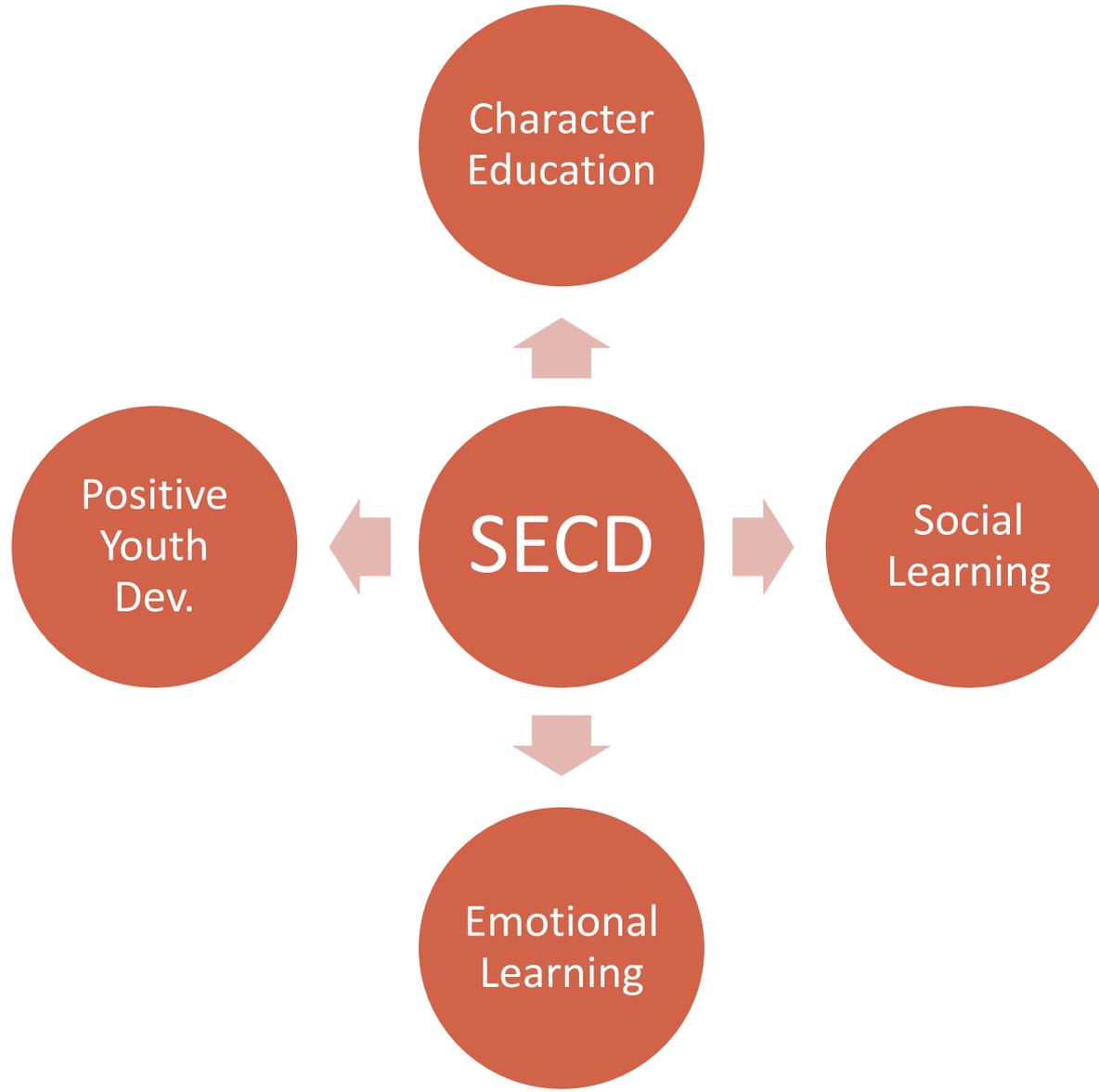
Trial Behavior

**EXPERIENCES: Expectancies -- Social Reinforcements -- Psychological/Physiological**

**BEHAVIOR**

**Related Behaviors**

# Background



# *Positive Action*

•PA is a comprehensive, universal, school-based SECD program designed to:

- Change school climate to promote/support positive behavior
- Promote student character and positive behavior
- Prevent an array of student problem behaviors
- Improve student academic achievement



Age-Appropriate Curricular for Every Grade

# *Positive Action*

## Three Core Elements

- *Positive Action* Philosophy
- Thoughts-Actions-Feelings About Self Circle
- Content
  - **Unit 1:** Self-Concept
  - **Unit 2:** Physical and Intellectual Positive Actions for a Healthy Body and Mind
  - **Unit 3:** Social/Emotional Positive Actions for Managing Yourself Responsibly
  - **Unit 4:** Positive Actions for Getting Along with Others by Treating Them the Way You Like to Be Treated
  - **Unit 5:** Positive Actions for Being Honest with Yourself and Others
  - **Unit 6:** Positive Actions for Improving Yourself Continually



# *Positive Action*

## Prior Research

### Quasi-Experimental

- Higher academic achievement
- Fewer disciplinary referrals and suspensions
- Less absenteeism
- Less violent behavior

See: Flay & Allred, 2010; Flay , Allred, & Ordway, 2001

### Experimental

- Higher academic achievement
- Fewer disciplinary referrals and suspensions
- Less absenteeism
- Less violent behavior
- Reduced substance use
- Less sexual activity
- Improved school quality

• See: Snyder et al., in press; Snyder et al., 2011; Snyder et al., 2010; Beets et al., 2009

# PA – Chicago Randomized Controlled Trial (RCT)

## The Need for SECD Programs in Large, Low-Income, Urban Environments

- Children living in large urban areas face:
  - Poverty
  - Social inequalities
  - Health disparities
  - Risk of poverty in adulthood
- High-poverty neighborhoods face:
  - Substance use
  - Crime
  - Violence
  - Depression
  - Obesity
  - Heart disease



# PA – Chicago RCT

- **School Selection**
  - High-risk schools
- **Sample**
  - 68 eligible Chicago Public Schools
  - K-6 and K-8 schools
  - 7 matched pairs
- **Random assignment** within matched pairs to *PA* or *C*
- **Training and Technical Assistance**
  - Provided to *PA* schools by developer and UIC staff

Data Collection Period	Student Grade
Fall 2004	3 <sup>rd</sup>
Spring 2005	3 <sup>rd</sup>
Fall 2005	4 <sup>th</sup>
Spring 2006	4 <sup>th</sup>
Spring 2007	5 <sup>th</sup>
Fall 2008	7 <sup>th</sup>
Spring 2009	7 <sup>th</sup>
Spring 2010	8 <sup>th</sup>

# PA – Chicago RCT

## Outcome Assessments

- Student, teacher & parent reports
- Archival school records
- Height and weight measurement (Wave 8 )

Poor	<input type="checkbox"/>
Satisfactory	<input type="checkbox"/>
Good	<input type="checkbox"/>
Excellent	<input checked="" type="checkbox"/>

# PA – Chicago RCT

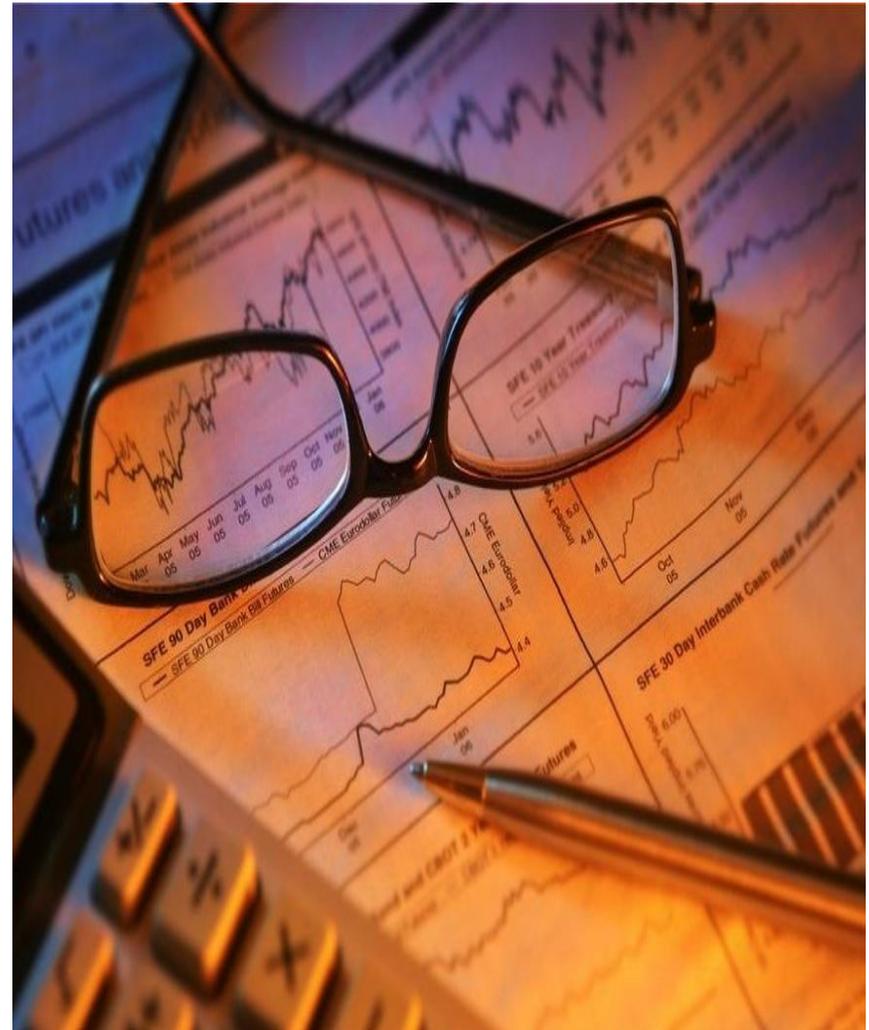
## Selected Outcomes

- Today's presentation of results will focus on:
  - Preliminary Analysis on:
    - Health Behaviors/Outcomes
  - Extensive Analyses On:
    - Social-Emotional Outcomes
    - Problem Behaviors
    - Academics

# PA – Chicago RCT

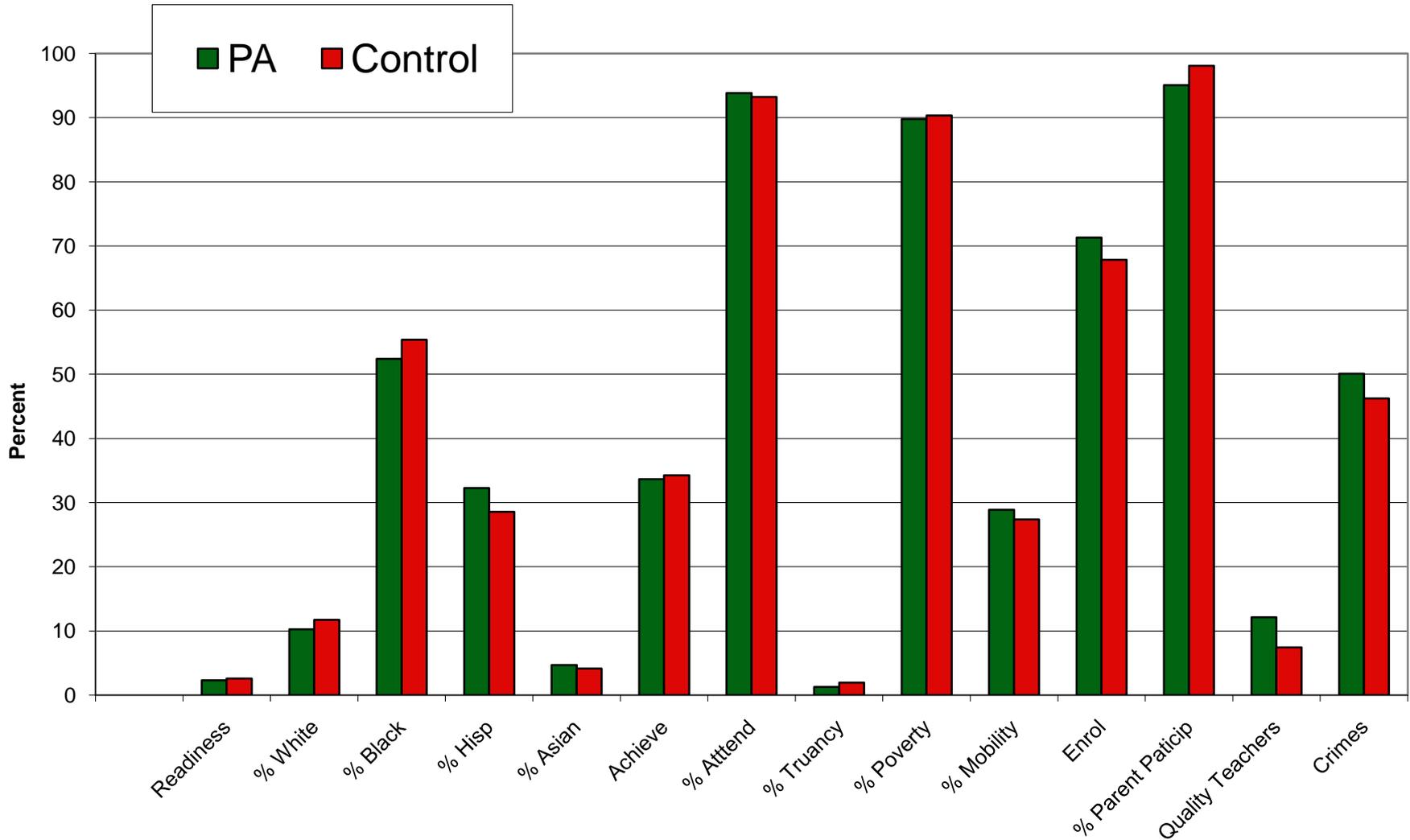
## Analytic Approach

- Baseline Equivalency using t-tests
- Effect Size calculation using raw means
  - Effect sizes for binary outcomes calculated using method discussed in Chinn (2000) and multiplied by duration of study to determine cumulative effect size
- Multilevel random intercept growth curve analyses
  - Distribution of outcome used to determine appropriate analytical approach
    - Data analyzed using Stata



# PA – Chicago RCT – Results

## Baseline Equivalency



# PA – Chicago RCT – Results

## Preliminary Findings On Health Behaviors/Outcomes

Health Behavior/Outcome	Effect Size	Growth Curve/ Endpoint Results
Food and Exercise	ES = 0.03	Time by Condition Interaction [B (SE)] [0.02 (0.01)]**
Hygiene	ES = 0.20	Time by Condition Interaction [B (SE)] [0.04 (0.02)]*
BMI Category [ Healthy; Overweight; Obese]	ES = -0.09	Endpoint Analysis Condition Effect [B (SE)] [-0.08 (0.11)]

\*  $p < 0.05$ ; \*\*  $p < 0.01$

# PA – Chicago RCT – Results

## Social-Emotional Outcomes

Variable	Time by Condition Interaction [Test Statistic (95% CI or SE)]	Effect Size
<b><u>STUDENT</u></b>		
Empathy	[B = 0.02 (0.01)]*	0.20
Altruism	[B = 0.03 (0.01)]*	0.12
Belief in Moral Center – Negative	[B = -0.06 (0.02)]**	-0.40
Social-Emotional and Character Dev.	[B = 0.05 (0.01)]**	0.49
Problem Solving – Aggressive	[OR = 0.75 (0.67-0.86)]**	-0.88
<b><u>TEACHER</u></b>		
Social Competency	Time by Cond. → [B = 0.16(0.04)]** Time <sup>2</sup> by Cond. → [B = -0.03 (0.01)]**	0.01
Responsibility	[B = 0.03(0.02)]*	0.04
<b><u>PARENT</u></b>		
Altruism	Time by Cond. → [B = 0.12(0.05)]* Time <sup>2</sup> by Cond. → [B = -0.02(0.01)]*	0.07

\*  $p < 0.05$ ; \*\*  $p < 0.01$

# PA – Chicago RCT – Results

## Problem Behaviors

Variable	Time by Condition Interaction [Test Statistic (95% CI OR SE)]	Effect Size
<b><u>STUDENT</u></b>		
Normative Beliefs Towards Aggression	[OR = 0.83 (0.75, 0.93)]**	-0.57
Bullying Behaviors	[OR = 0.75 (0.65, 0.87)]**	-0.89
Frequency of Disruptive Behaviors	[OR = 0.79(0.70, 0.89)]**	-0.73
Violent Behaviors – Introduced at Wave 5	Condition IRR → 0.50 (0.29, 0.85)* Time by Cond. IRR → 0.57 (0.37, 0.90)* Time <sup>2</sup> by Cond. IRR → 0.83 (0.69, 0.99)*	-0.25
Substance Use – Wave 8 Endpoint	[B= -0.17 (SE = 0.07)]*	-0.27
<b><u>PARENT</u></b>		
Bullying Behaviors	[OR = 0.82 (0.70, 0.95)]*	-0.61
Conduct Problems	[OR = 0.81(0.67, 0.99)]*	-0.65
<b><u>ARCHIVAL DATA</u></b>		
Disciplinary Referrals	[IRR = 0.96 (0.94, 0.98)]**	-1.7
Suspensions	[IRR = 0.97 (0.95, 0.99)]*	-1.44

\*  $p < 0.05$ ; \*\*  $p < 0.01$

# PA – Chicago RCT – Results

## Academics

Variable	Time by Condition Interaction [B (SE)]	Effect Size
<b><u>STUDENT</u></b>		
Disaffection with Learning	Time by Cond. → [-0.16 (0.04)]** Time <sup>2</sup> by Cond. → [0.02 (0.01)]**	-0.12
<b><u>TEACHER</u></b>		
Student's Academic Ability	[0.04 (0.02)]**	0.09
Student's Academic Motivation	Time by Cond. → [-0.12(0.06)]* Time <sup>2</sup> by Cond. → [0.04 (0.01)]**	0.18
<b><u>ARCHIVAL</u></b>		
Absenteeism	[-0.21 (0.07)]**	-1.09
ISAT Reading – ALL Students	[0.01(0.01)]	0.22
ISAT Reading - African American Males	[0.3 (0.01)]*	1.01
ISAT Math – ALL Students	[0.01(0.01)] <sup>+</sup>	0.42
ISAT Math – Students on FRL	[0.01 (0.01)] <sup>+</sup>	0.50
ISAT Science – ALL Students	[-0.01 (0.01)]	-0.13

+ $p < 0.15$ ; \*  $p < 0.05$ ; \*\* $p < 0.01$

# Conclusions

- The second RCT of *PA*:
  - Replicated findings from the Hawai'i RCT
  - Extended findings to high-poverty, inner-city schools
- Meaningful effects may require several years to emerge due to:
  - Implementation challenges (in schools)
  - Competing contextual adversities and risks (outside of schools)

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"I didn't just jump to conclusions. I hopped and skipped first."

# Future Directions

- Latent Class Analysis to examine effect of dosage/exposure to *PA* intervention on outcomes
- Examine long-term effects of program exposure on health outcomes and key mediators of adult health such as educational attainment and employment



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- For information about the *Positive Action* program, go to: <http://www.positiveaction.net/>

# Contact Information

- Principal Investigator
  - Brian Flay
  - [Brian.Flax@oregonstate.edu](mailto:Brian.Flax@oregonstate.edu)
- Presenter
  - Niloofar Bavarian
  - [Bavarian@onid.orst.edu](mailto:Bavarian@onid.orst.edu)