

Social-Emotional and Character Development to Improve Behavior and Academic Achievement: Results from Two School-Based Randomized Trials

**Brian R. Flay, D.Phil., Professor
Health Promotion and Health Behavior
Oregon State University**
brian.flay@oregonstate.edu



Second International Conference
on The Future of Education
Florence Italy, June 8 2012



Contributing Authors

- Alan Acock, Ph.D.,
 - Professor, Human Development and Family Studies, Oregon State University (OSU)
- Sam Vuchinich, Ph.D.
 - Professor, Human Development and Family Studies, OSU
- Kendra Lewis, Ph.D.
 - Recent Graduate, Human Development and Family Studies, OSU
- Niloo Bavarian, Ph.D.
 - Recent Graduate, Public Health, Health Promotion Health Behavior, OSU
- Marc Schure, MPH
 - Graduate Student, Public Health, Health Promotion Health Behavior, OSU
- David DuBois, Ph.D.
 - Professor, School of Public Health, University of Illinois at Chicago (UIC)
- Naida Silverthorn, Ph.D.
 - Senior Research Specialist, School of Public Health, UIC
- Joseph Day, DrPH
 - Recent Graduate, Public Health, UIC
- Peter Ji, Ph.D.
 - Assistant Professor, Adler School of Professional Psychology, Chicago

Outline & Objectives

- Quickly summarize the literature on school-based Social-Emotional and Character Development (SECD) programs
- Describe a program designed to achieve the goals of SECD - the *Positive Action* program
- Present results from two Cluster-Randomized Controlled Trials of the *Positive Action* program
 - The Hawai'i and Chicago trials
- Demonstrate how changes in SECD mediate changes in substance use
- Conclusions

Why Social-Emotional and Character Development?

- Increasing behavioral problems in schools
- Seems to have worsened in the US with increased focus on reading and math
- Many students lack comprehensive skills or come from toxic environments that hinder their learning and development
- Link of classroom behavior to teacher time on task (teaching) and student time on task (learning)
- Comprehensive education needs to address Achievement, Behavior and Character (ABCs)

The *POSITIVE ACTION* Program

Components (It's comprehensive)

K–12 classroom curriculum

over 1,200 lessons - using *Teacher's Kits* (manuals and materials for each grade), classroom teachers present 15–20-minute lessons

Principal's Kits (Elementary and Secondary)

a school-climate program to promote the practice and reinforcement of positive actions in the whole school population (students and staff)

Counselor's Kit

used with selected individual students, small groups and families

Family Kit

contains prepared weekly home lessons paralleling the school program along with school parent-involvement activities

Community Kit

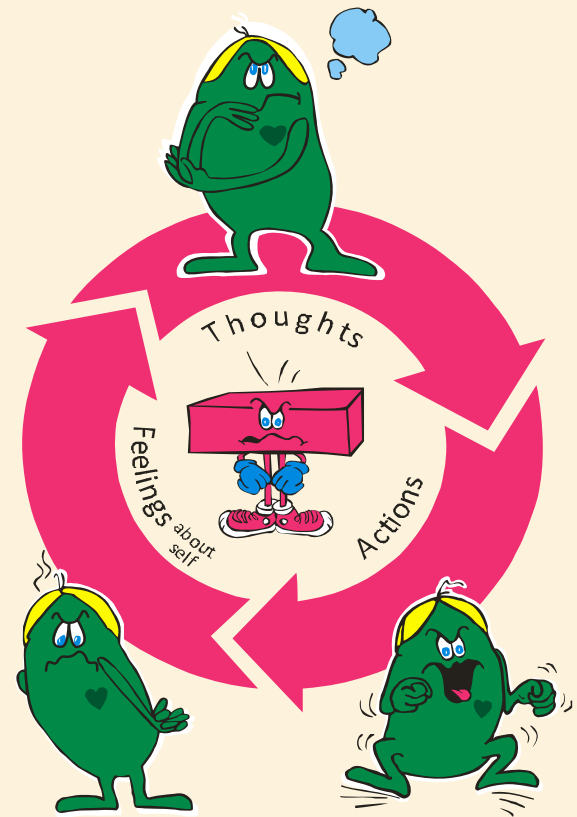
manuals and materials that align and encourage collaboration of all the environments (schools, families and community) involved in the program

Basic Philosophy (Theory of Action) Of the *Positive Action Program*



You feel good about yourself
when you do positive actions.

C.f., Cognitive Behavior Therapy
and Positive Psychology



You feel bad about yourself
when you do negative actions.

C.f. Depression

In the classroom curriculum and in all other materials, the *Positive Action* content is taught school-wide through six units:

- Unit 1. Self-Concept: What It Is, How It's Formed, and Why It's Important (the Thoughts-Actions-Feelings Circle).
- Unit 2. Physical and Intellectual Positive Actions for Body & Mind
- Unit 3. Social/Emotional Positive Actions for Managing Yourself Responsibly (Self-regulation/control)
- Unit 4. Social/Emotional Positive Actions for Getting Along with Others by Treating Them the Way You Like to be Treated (Pro-social behavior, Social-Emotional and Character Development)
- Unit 5. Social/Emotional Positive Actions for Being Honest with Yourself and Others (Mental Health)
- Unit 6. Social/Emotional Positive Actions for Improving Yourself Continually (Goal setting and actions to meet them)

Elementary Curriculum Kits

Grades K–6

- 140 15-minute lessons
 - Role-playing, Plays, Stories, Questions, Poetry, Games
- Student activity booklets/sheets and materials for 30 students
- Hands-on activities
 - Puppets, flannel board characters, role-playing, stories, questions, plays
- Posters, music, and stickers



Grade 1 Instructor's Kit

Other Program Components

- Climate Development Kits
 - Provide site-wide change and reinforcement
- Counseling Program
 - Counselor Kit, Lessons for individual students or small groups
- Family Program
 - Classes, Home Kit
- Community Program
 - Community messages and activities, civic engagement, and media messages
- Focused Topic Kits
 - Drug education, conflict resolution



Secondary Climate Development Kit



Community Kit

Logic/Theoretic Model of the Expected Effects of the *Positive Action* Program

Program Components

Climate Development,
Family Kit,
Teacher/Staff Training,
K-12 Instruction
Curriculum,
Drug Education
Supplements,
Community Kit,
Counseling Kit

Immediate Outcomes

- * Improved relationships among school administrators, teachers, parents & community.
- * Improved classroom management.
- * Increased involvement of school with parents & community.

Improved
Learning
Environment

PA Unit

1. Improved character/self-concept
2. Learning/Study skills
3. Self-Management
4. Interpersonal/social skills
5. Self-honesty, responsibility
6. Goal setting, future orientation

Expected Effects

Attitudes
Toward
Behaviors,
Social
Normative
Beliefs,
Self-
Efficacy

Improved
Social
and
Character
Development

Expected Impact

Fewer Disciplinary
Problems; Reduced
Substance Use;
Less Violence

Improved School
Attendance, Grades
and Test Scores

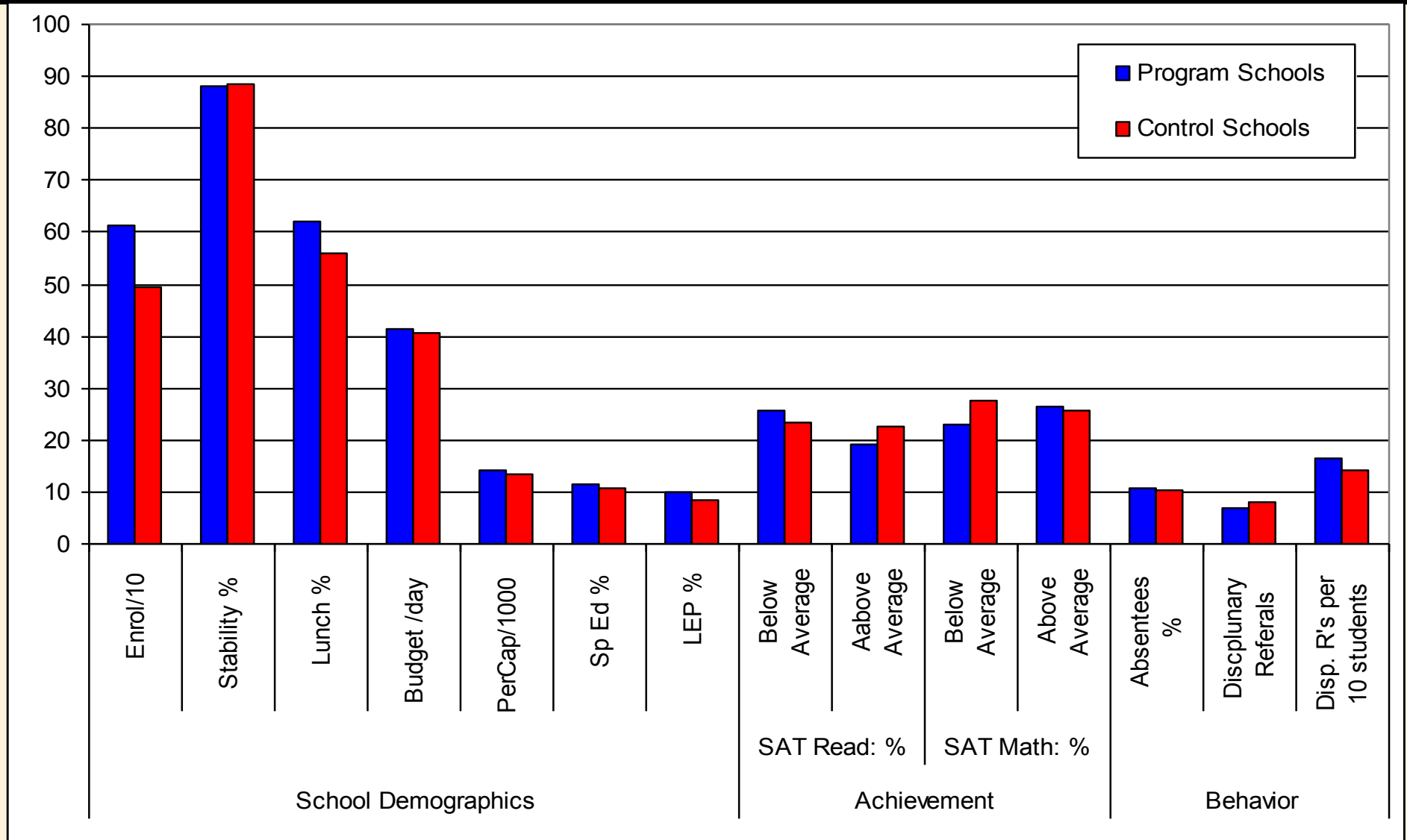
Hawai`i and Chicago School-based Trials: METHODS

- Schools randomly assigned to conditions from matched pairs
 - 10 schools per condition in Hawai`i
 - 7 schools per condition in Chicago
- Matched on Archival Data
 - Enrollment, stability, % free/reduced lunch, per capita family income, % special education, % low English proficiency, standardized achievement scores, absenteeism, disciplinary actions, ethnic distribution
 - A 3rd trial in a rural Southeastern district involved only 4 schools per condition

Data Collection

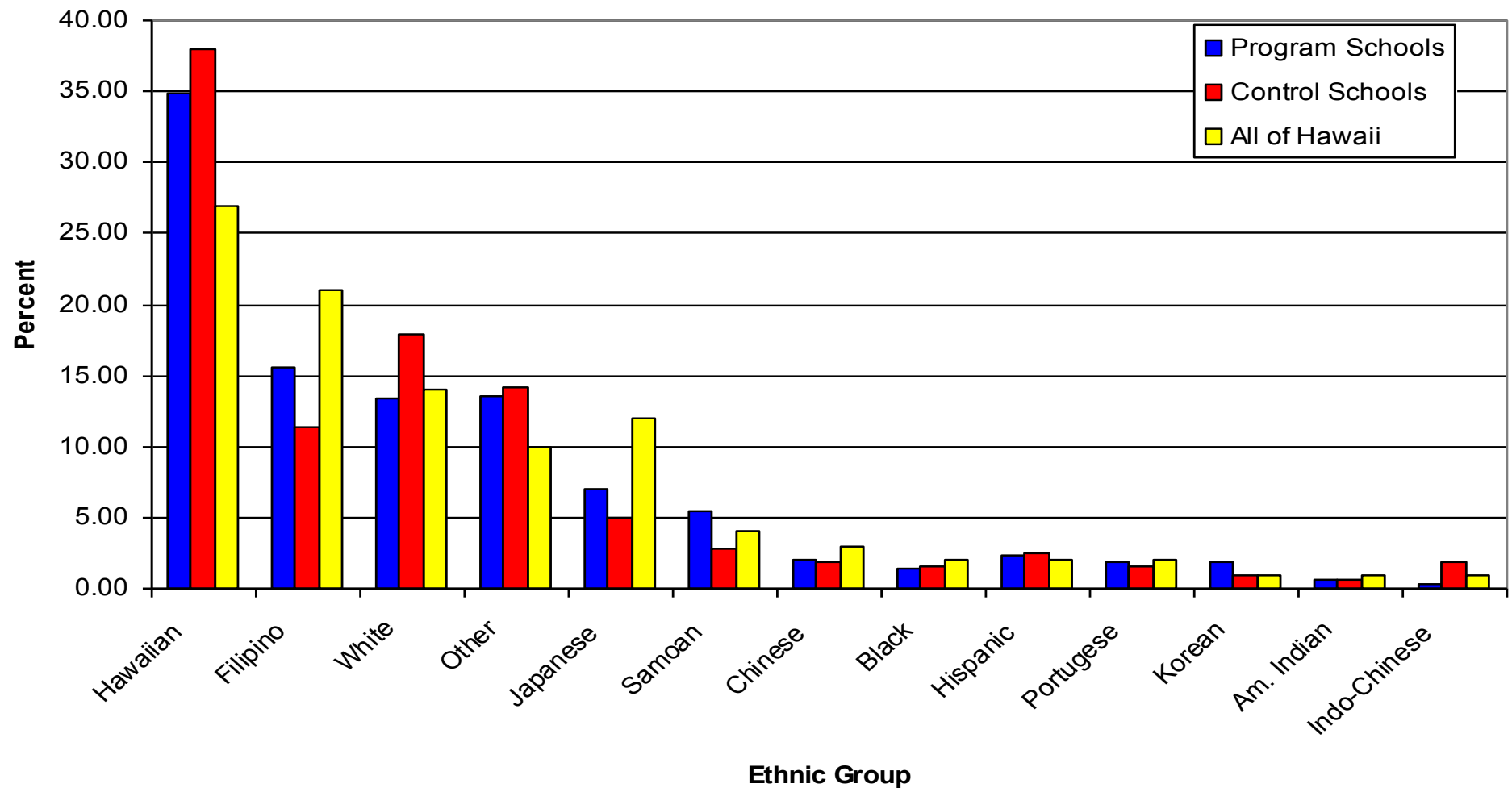
- Data were collected from one or two cohorts of students
 - Grades 1 & 2 through grades 5 & 6 in Hawai'i
 - Grade 3 through grade 8 in Chicago
- Data also collected from multiple informants:
 - Surveys of students, parents and teachers/staff
 - Teacher and parent ratings of student behaviors
 - School-level archival records
 - Absenteeism, behavior and achievement

Hawai'i Baseline Equivalence: 2000-01



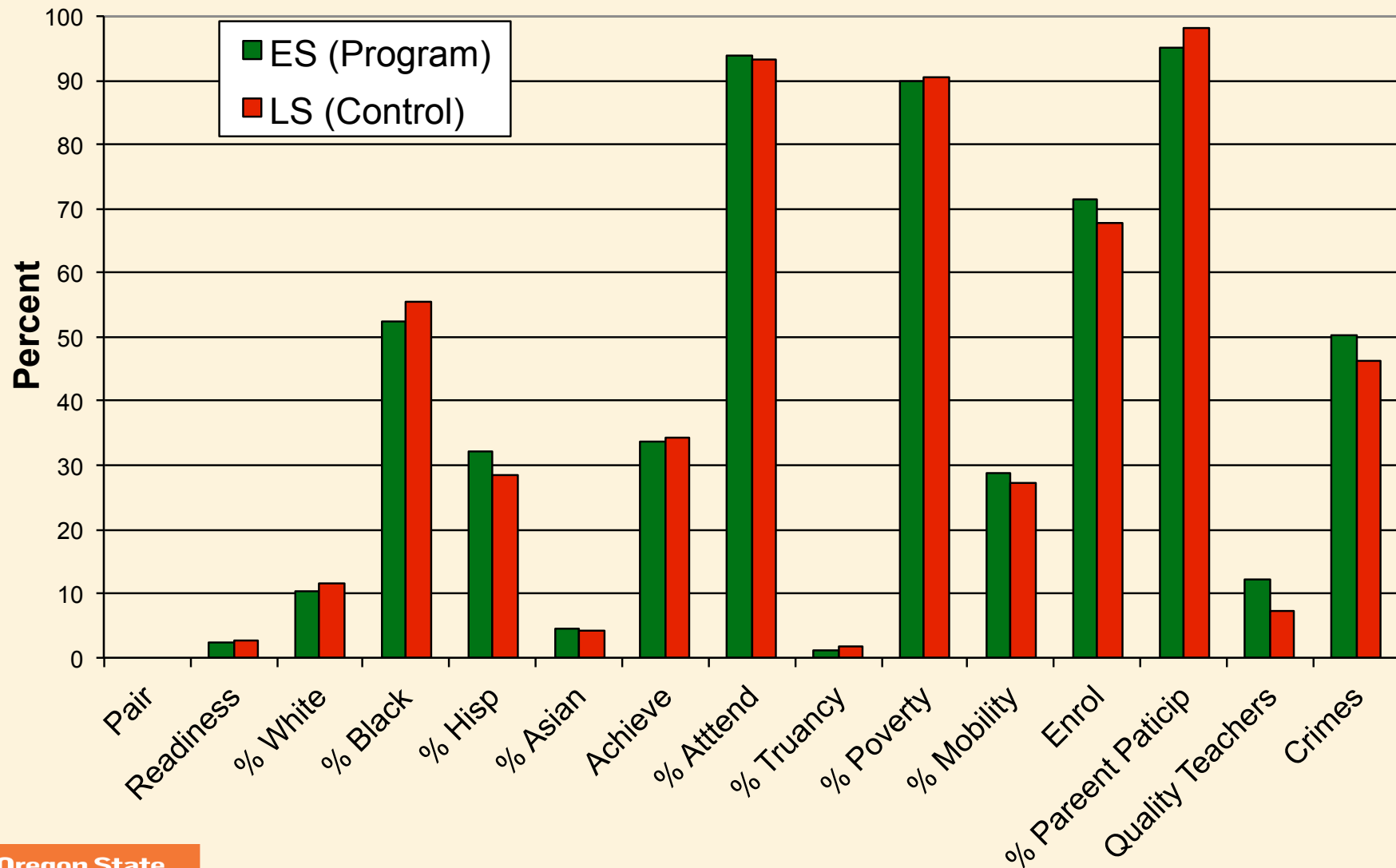
No differences were close to being statistically significant

Baseline Equivalence on Ethnic Distribution

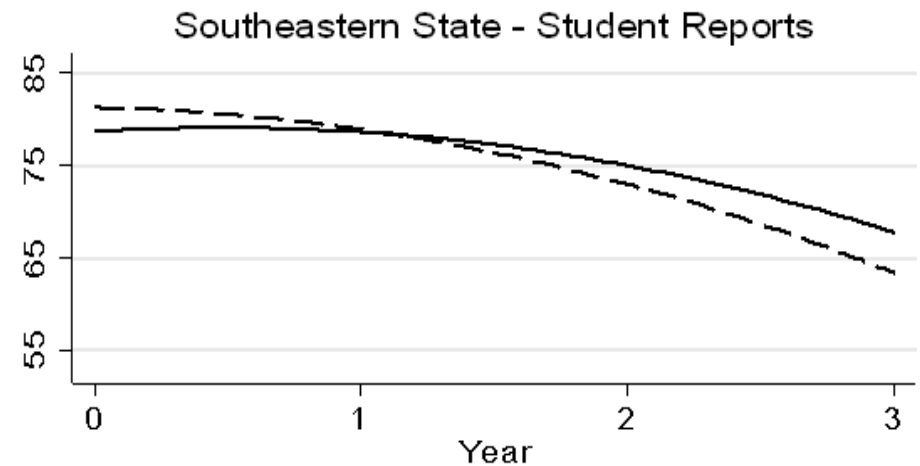
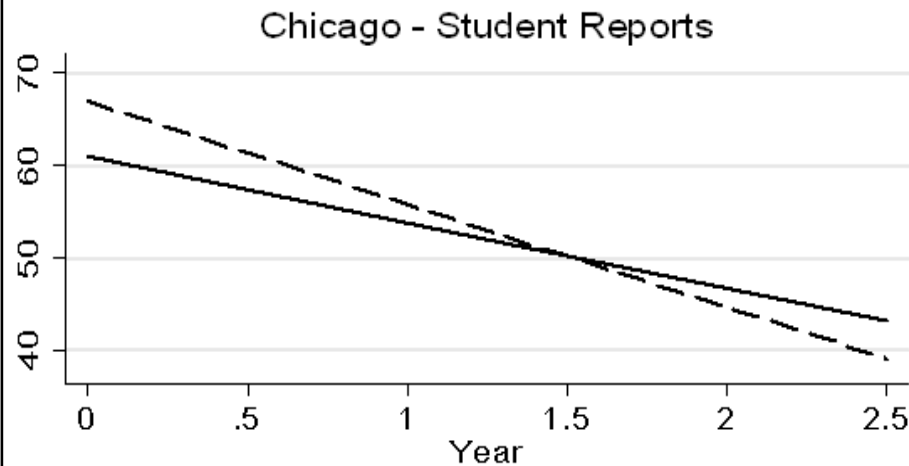
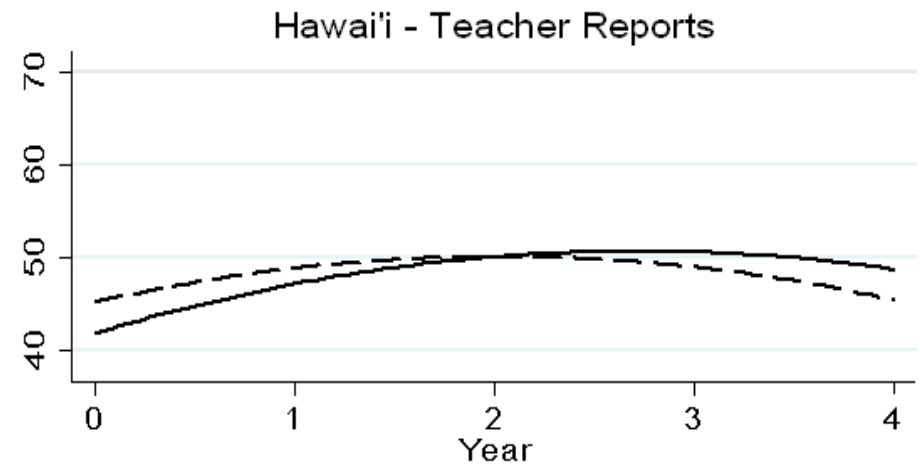
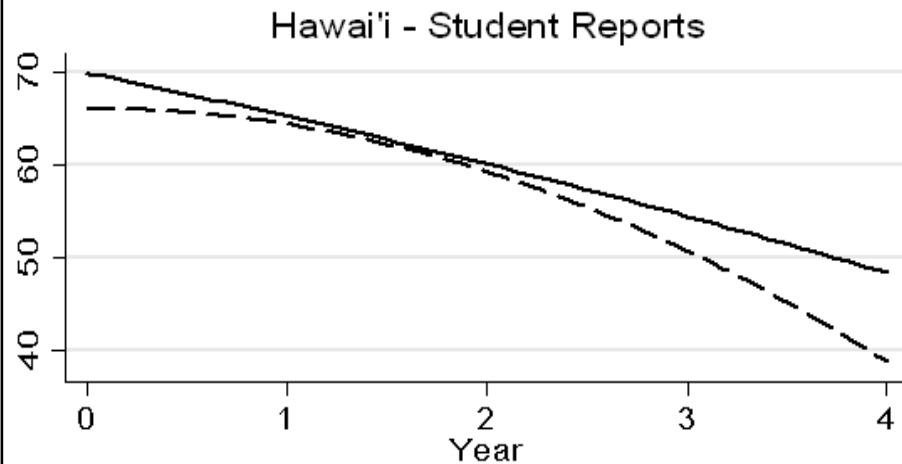


Comparability of Matched Sets of Schools: Chicago Study

(No significant differences)



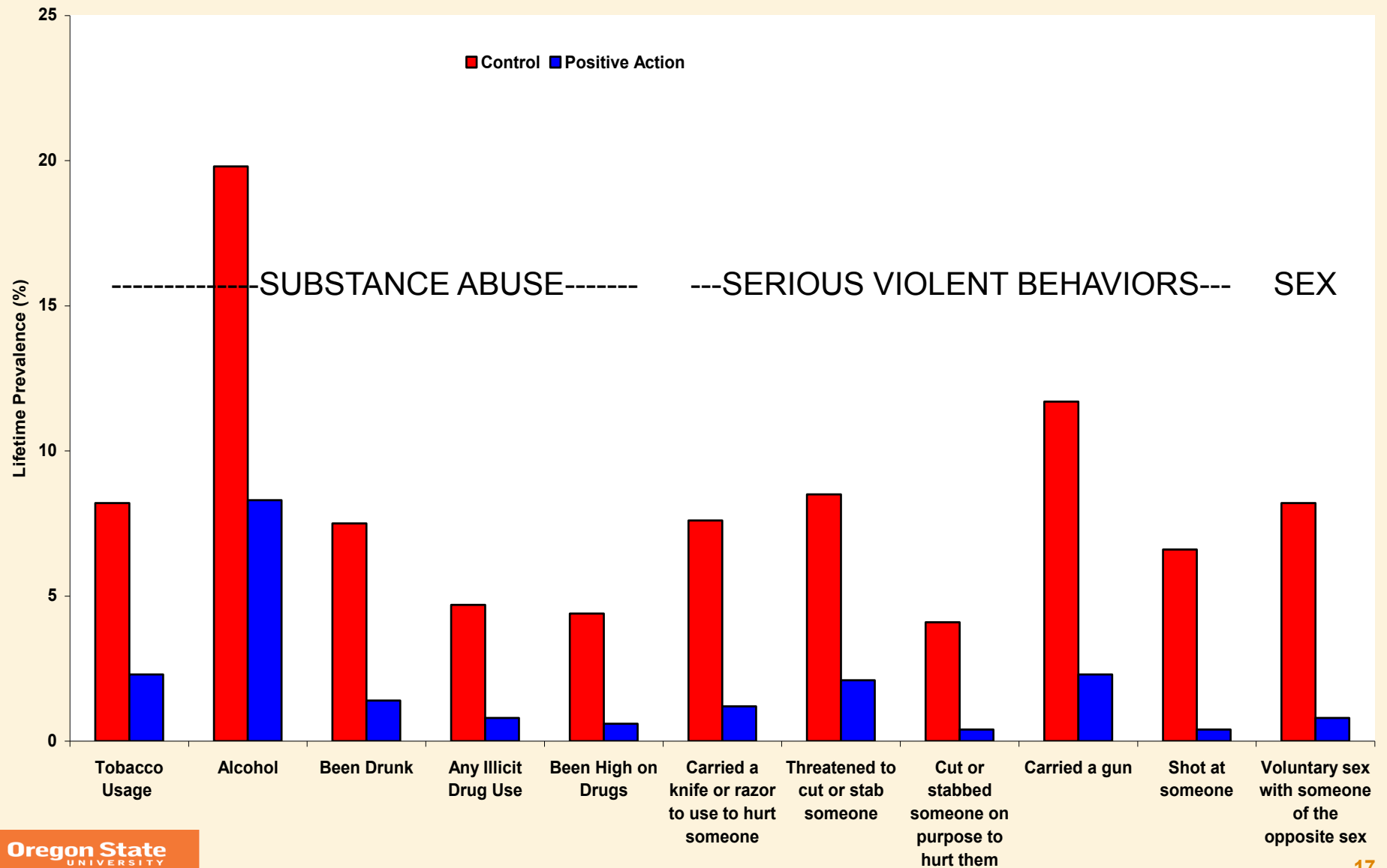
Effects on Positive Behaviors: Results from 3 RCTs (Washburn et al.)



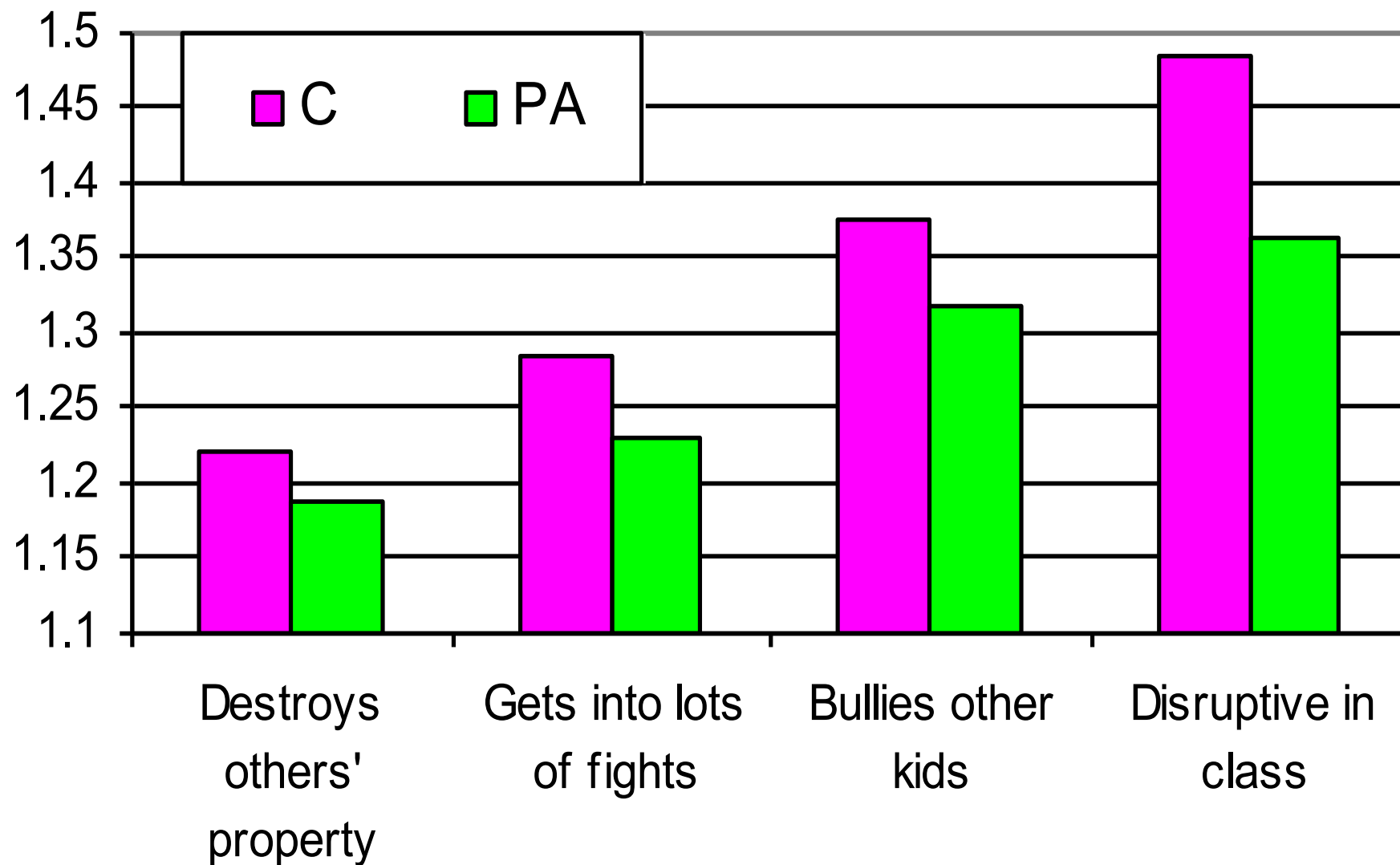
— PA Group - - - - Control Group

Hawaii: Lifetime Prevalence of Substance Abuse, Violent Behaviors, & Sexual Activity: 5th grade

All significant, no significant interactions (Beets et al., AJPH, 2009)

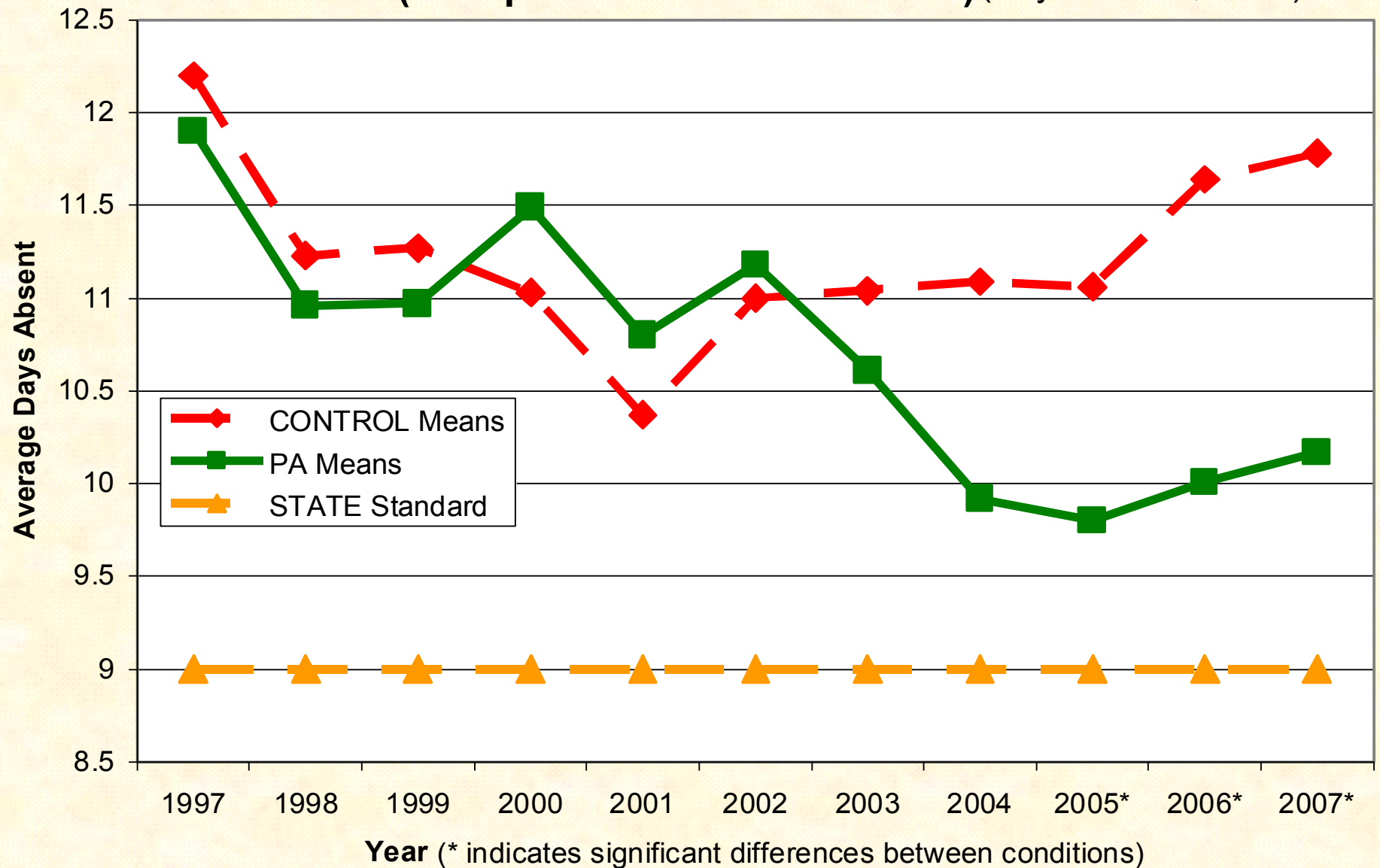


Hawaii Trial: Teacher ratings of student disruptive behaviors at Wave 4 by condition

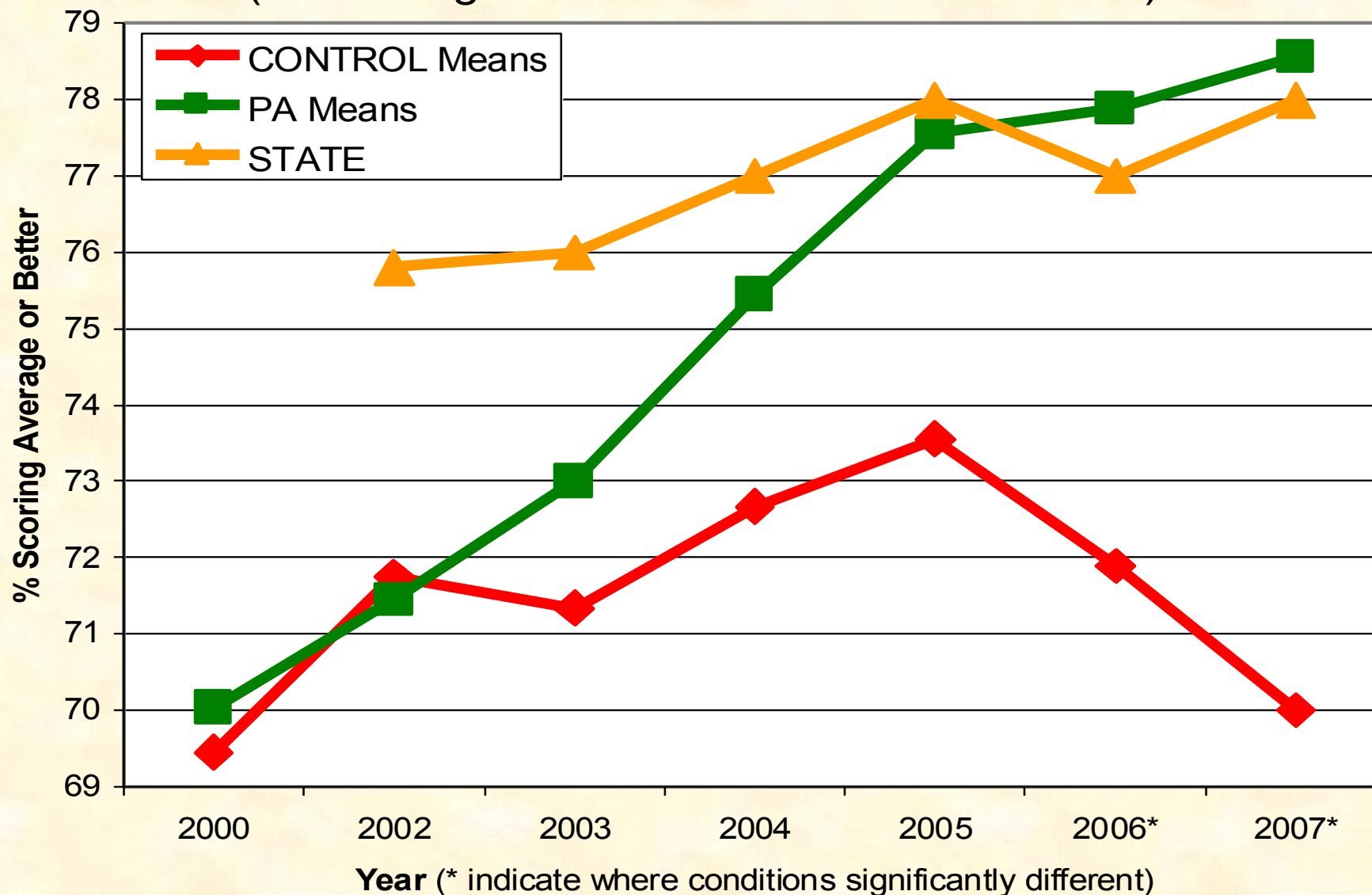


Effects of PA on Student Absenteeism Hawaii Randomized Trial (4 yrs of PA)

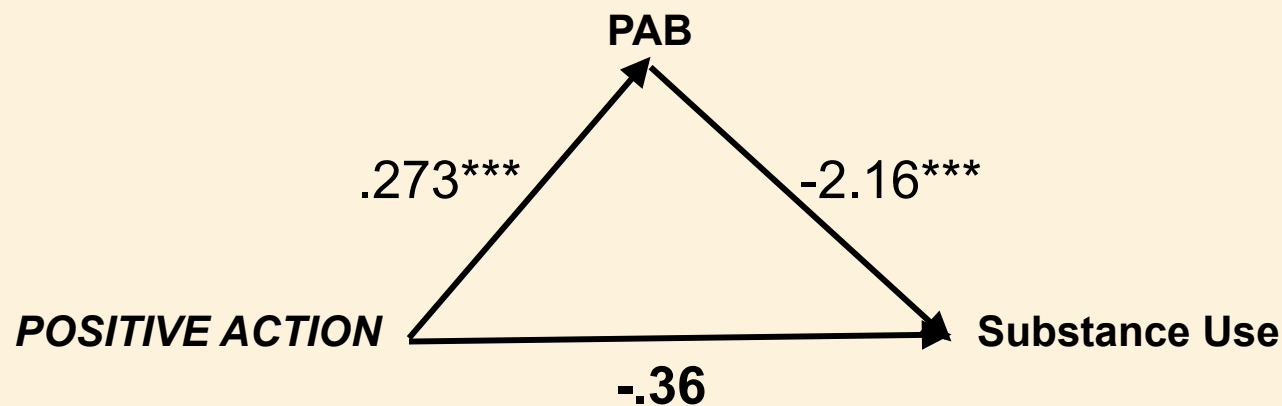
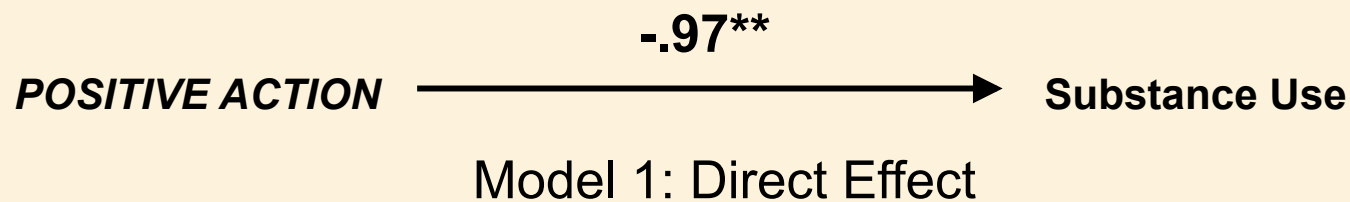
(Multiple baseline - 1997-2001)(Snyder et al., 2010)



Effect of PA on SAT (Stanford 9) Reading Scores Hawaii Randomized Trial 2000-2006 (4 yrs of PA) (No testing in 2001 due to a teacher strike)

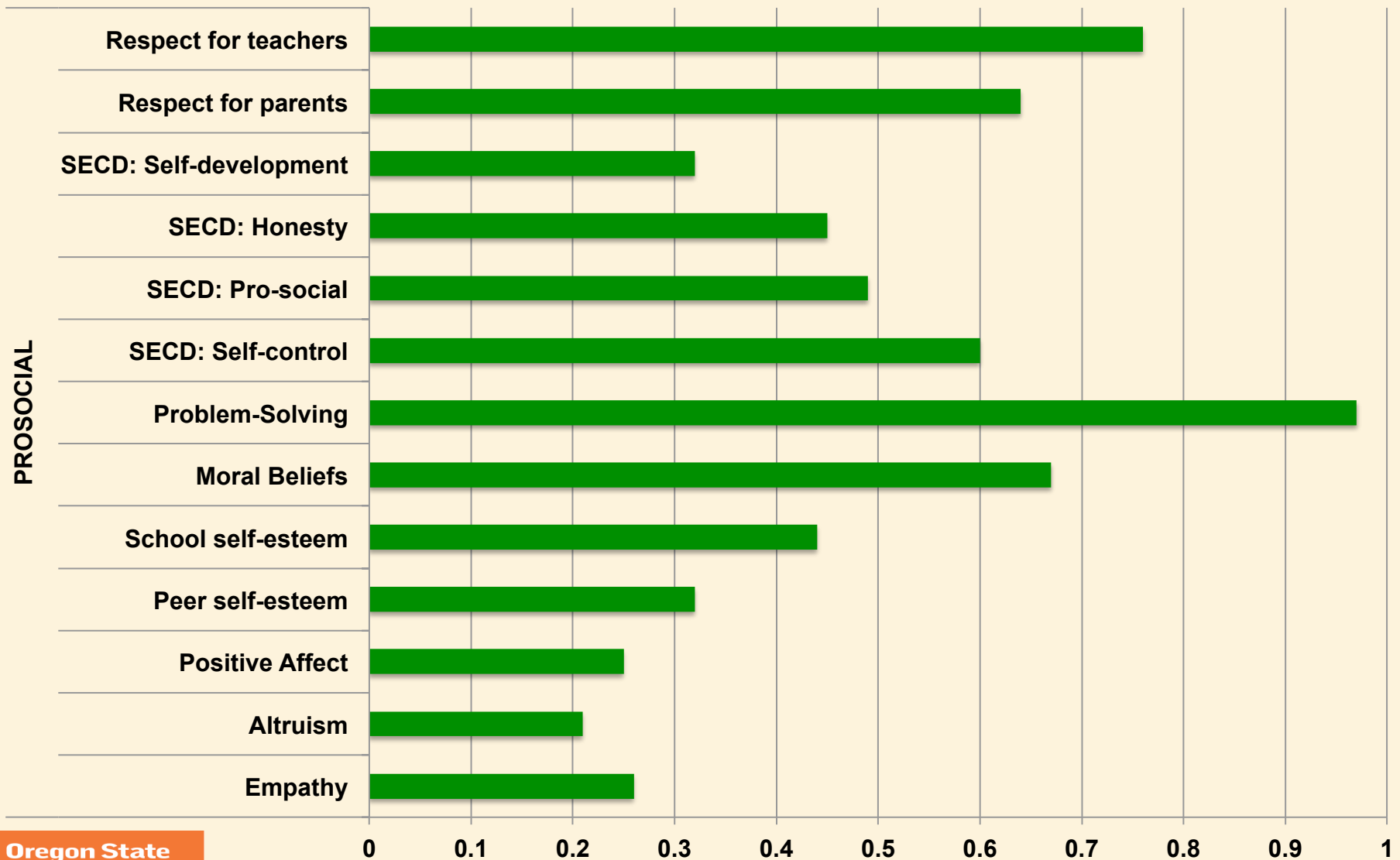


Improved Positive Academic Behavior Mediates Substance Use Prevention

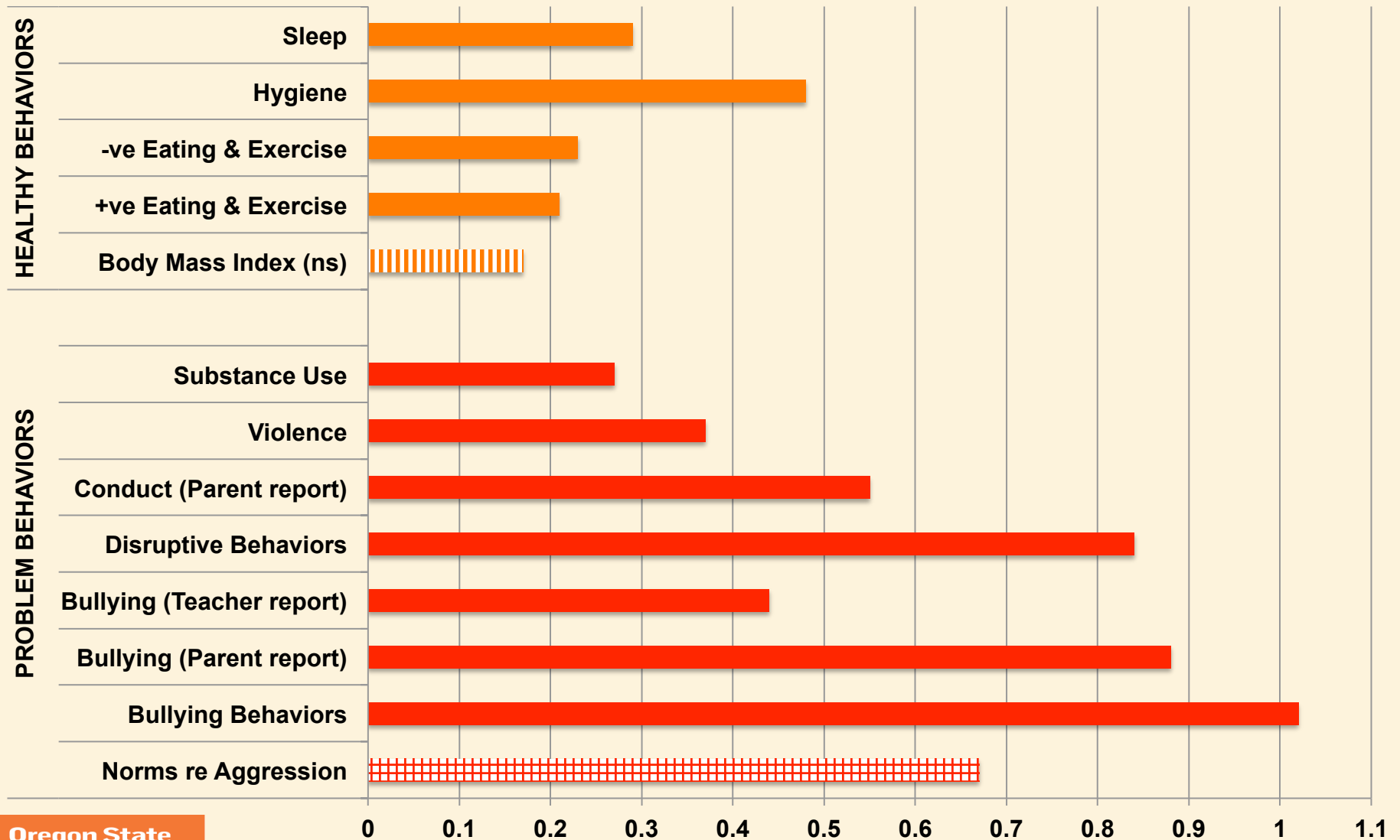


Results were similar for mediation of violence and sexual behavior

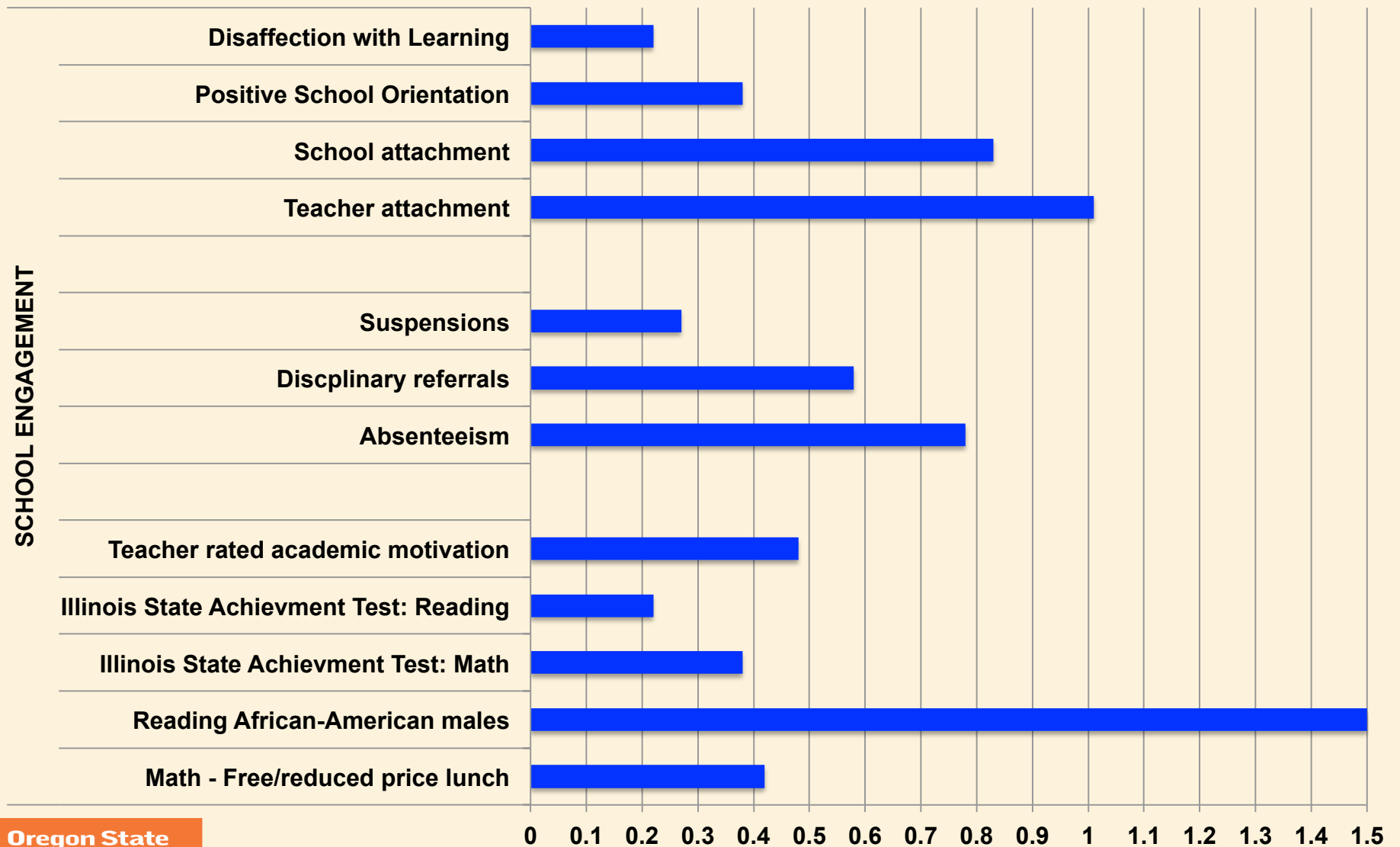
Chicago: Effect Sizes for Significant Prosocial Outcomes



Effect Sizes for Significant Behavioral Outcomes



Effect Sizes for Significant School Engagement Outcomes

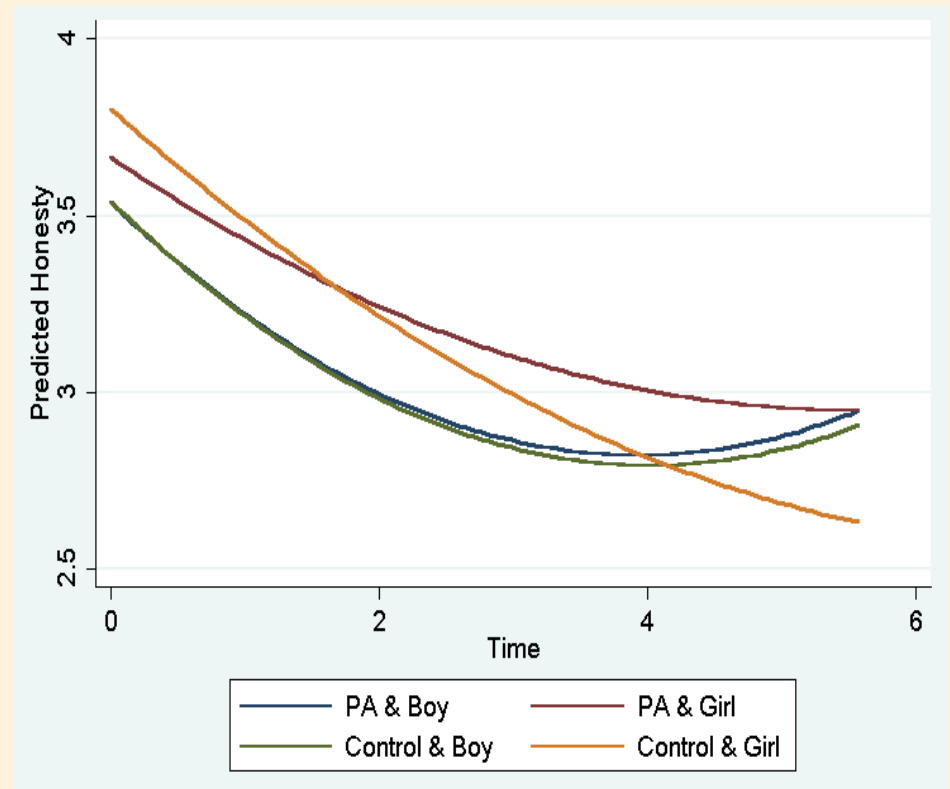


Tests of Moderating Influences

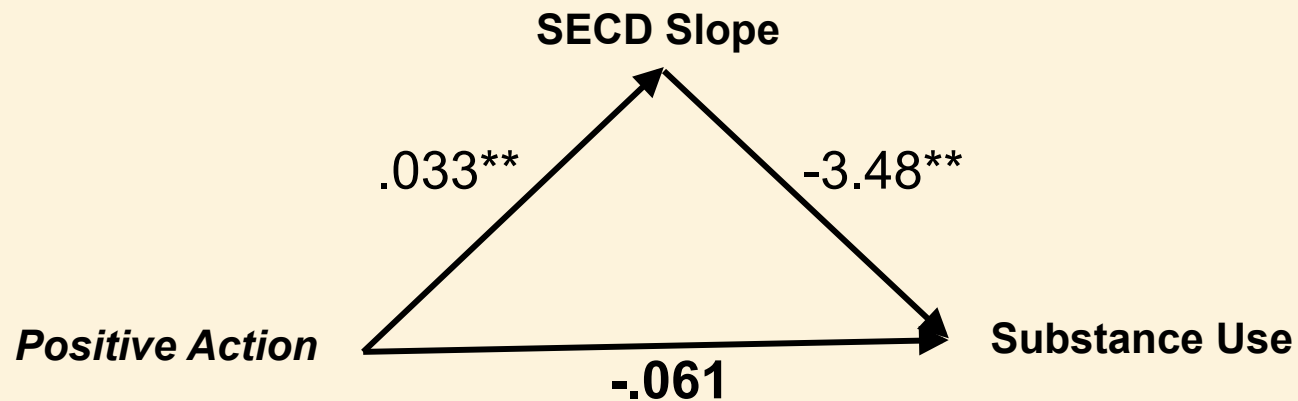
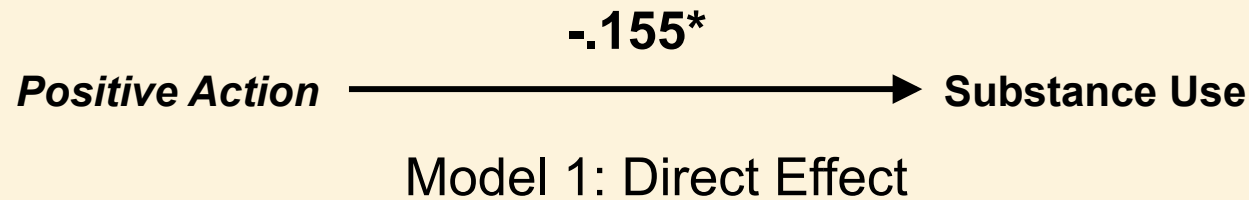
- Years of Implementation
 - Effects emerged over time, suggesting that more years of PA in a school led to larger effects in that school
- Student Mobility
 - Despite very high student mobility, there were no significant moderating effects by mobility group.
 - That is, the program was equally effective for students who stayed for all years, those who left study schools, and those who joined the study in later years
- Ethnicity
 - For academic outcomes, the program was more effective for African American boys – helping reduce disparities

Some Moderation by Gender

- The program was also equally effective for boys and girls for most outcomes
- However, significant gender moderation was found for
 - Honesty, self-control and respect for teachers
 - For only these outcomes, there were significant effects for girls but not for boys



Improvements in SECD Mediate Substance Use Prevention



Lewis et al., 2012

Similar mediation effects for violence and other disruptive behaviors

Summary of Effects of PA in Chicago Trial after 3 and 6 years

- End of grade 5 (after 3 years of PA)
 - Emerging effects: 8 of 56 measures significant
- End of grade 8 (after 6 years of PA)
 - 35 of 56 measures showed significant improvements
 - No significant effects in the wrong direction
 - Average effect size of significant differences $> .5$
- The number and pattern of results argues strongly against findings being by chance.
- It is clear that more years of PA in schools leads to more and larger effects
 - However, for individual students, more years does not appear to be necessary (peer contagion might explain)

Conclusions

- Implementing school-based randomized trials is feasible, though not without its challenges
- Multiple program effects were obtained after 3 to 6 years of programming
- School-level effects on reduced absenteeism misconducts and suspensions and on improved achievement strengthen the findings
- School-wide social and character development education can be effective at:
 - increasing multiple positive behaviors
 - decreasing multiple negative behaviors and
 - Improving academic outcomes

Conclusions (cont.)

- Programs that target distal influences can change the trajectories of multiple behaviors, including substance use, violence and sexual behaviors
- Programs probably need to start early in a child's life and be sustained, especially through critical developmental-life transitions – e.g., into middle school and high school
- School-wide, family and community involvement can make an important difference (Flay, 2000)
- Such programs appear to have their strongest effects for those who most need them

Future Research

- Investigate potential differential impacts of programs based on student gender, grade level, risk level, etc.
- Investigate whether schools with different quality of implementation yield different effectiveness
- Examine impact of PA as students progress into higher grades, especially high school
- Evaluate of components of complex programs
- Compare the relative effectiveness of different programs

Acknowledgements, Disclaimer Statement, Conflict of Interest Disclosure

- The Chicago Trial of *PA* was funded by the Institute of Education Sciences (IES), U.S. Department of Education (ED), Grants # 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.
- *Conflict of Interest Disclosure*: 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, Dr. Carol G. Allred, holds a significant financial interest.
- Publications available at www.tinyurl.com/flaypubs