

PATHS Update: Research and Practice

BluePrints Conference
2010

Mark T. Greenberg

Prevention Research Center
Penn State University

It is better if one can prepare ahead and some kinds of preventive systems. Once you have already experienced a trauma it is very difficult to correct it. So I always stress the importance of a proper education from the young child further. So, when they pass through the difficulties of life I think because of certain kinds of mental concepts or inner strength the external difficulties may not disturb much. This is something we can do - this is doable.

HIS HOLINESS THE DALAI LAMA (2000)
Mind & Life Dialogue, Dharamsala



PATHS[®]

Promoting Alternative THinking Strategies

VOLUME 3



Carol A. Kusché, Ph.D. • Mark T. Greenberg, Ph.D.

®

What I will discuss

- The importance of self-awareness for children and adults
- How new ideas on Social and Emotional Learning can lead to even greater Learning and Social Outcomes
- Why the Personal Development of Teachers is so Important for Children!!

Undesired Related Outcomes

Poor School Achievement
Poor Mental Health
Aggression/Violence
Early Substance Use

Underlying Shared Constraints

Impulsive Action
Emotion Dysregulation
Insecure Relations w/
Parent, Teachers, Peers
Dangerous Neighborhoods



Resilience Factors that create Well-Being for Children

- ❖ Self-Control/Emotion Regulation
- ❖ Cognitive Abilities - Problem Solving Skills
- ❖ Building Attention and Learning Capacity
- ❖ Healthy relations with peers and adults
- ❖ Safe, Welcoming, Caring Classrooms



Impulse and Reflection

The first effect of every mediation of an impulse is to check or arrest that impulse. Reflection means postponement; it is delayed action. Through this delay the impulse is brought into connection with other impulses, habits, and experiences. Now that a due balance is kept, the result is that the original impulse is harmonized with the self, and, when expressed, it realizes not only its partial nature but that of the whole self (p.244).

John Dewey, 1894

PATHS ABCD Model

(Affective-Behavioral-Cognitive-Developmental)

Stages of Developmental Integration

1. **Infancy:** (Birth to 18 months)

- * Emotion = Communication
- * Arousal & Desire = Behavior

2. **Toddlerhood:** (18 months to 36 months)

- * Language supplements Emotion = Communication
- * Very initial development of emotional labeling
- * Arousal and Desire = Behavior

3. **Preschool Years:** (3 to 6 years)

- * Language develops powerful role
- * Child can recognize/label basic emotions
- * Arousal & desire > symbolic mediation > behavior
- * Development of role-taking abilities
- * Beginning of reflective social planning & problem-solving

What is The PATHS Curriculum?

- School-based model of Social and Emotional Learning
- Taught by the teacher on a regular basis
- Versions developed for both preschool and elementary school-aged classrooms
- Developed in 1981
- Used in over 1000 schools throughout the world
- Translated into PATHS has been translated into French, Spanish, Dutch, German, etc.
- Identified by Multiple Federal Agencies as an Effective Program

The PATHS Curriculum

"Living" The Golden Rule

"Treat Others the Way you Want to Be Treated"

- Awareness of emotions states in oneself and others
- Putting feelings into words
- The ability to calm oneself down when feeling highly emotionally aroused
- Planning ahead and considering the effects of your behavior on others
- Developing greater empathy/compassion for others

PATHS Teaches the Core SEL Competencies



Recognizing one's emotions and values as well as one's strengths and limitations

Making healthy choices about behavior

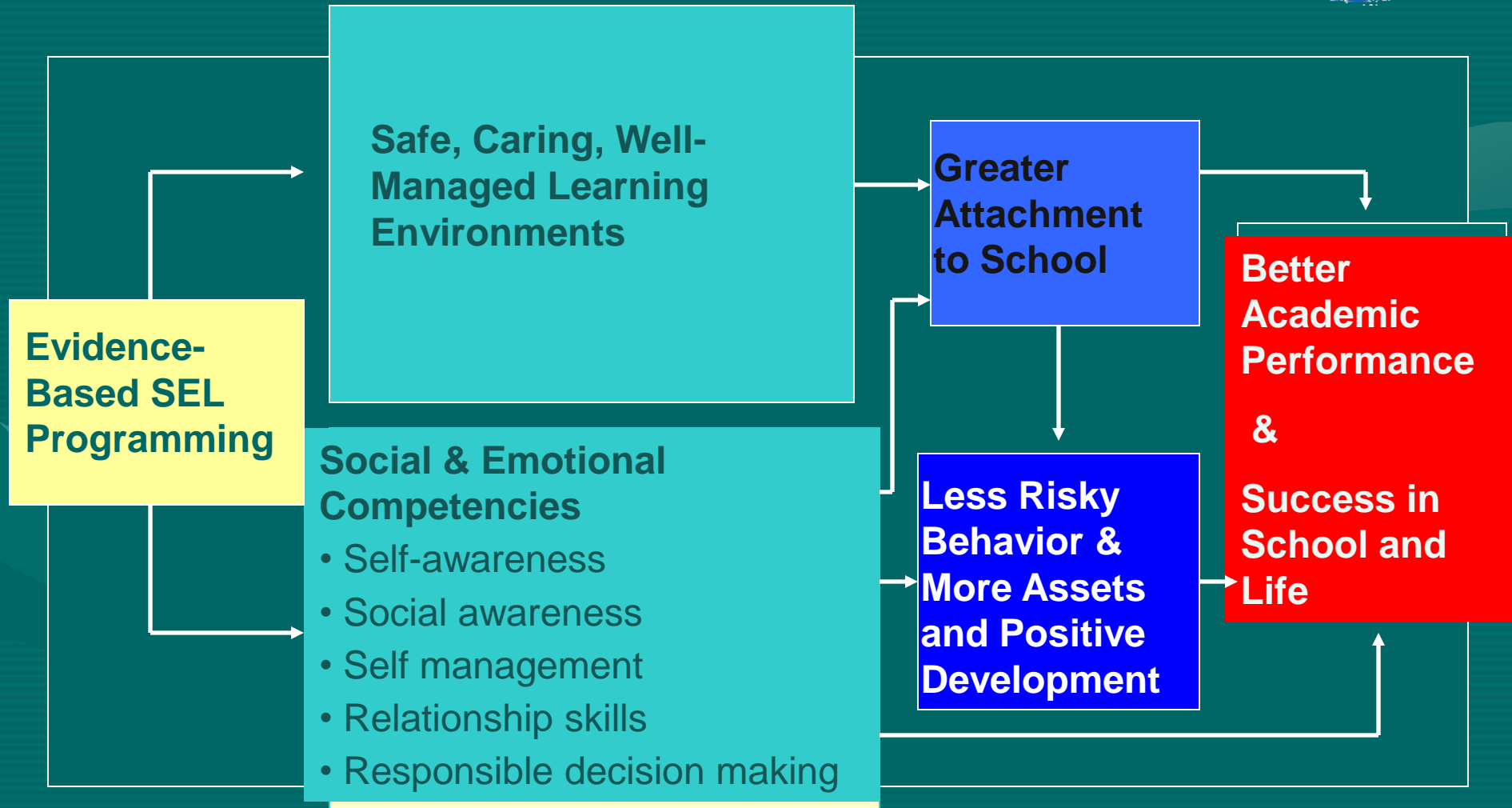


Managing emotions and behaviors to achieve one's goals

Showing understanding and empathy for others

Forming positive relationships, working in teams, dealing effectively with conflict

How Evidence-Based SEL Programs Work to Produce Greater Student Success in School and Life



Essential Components for PATHS

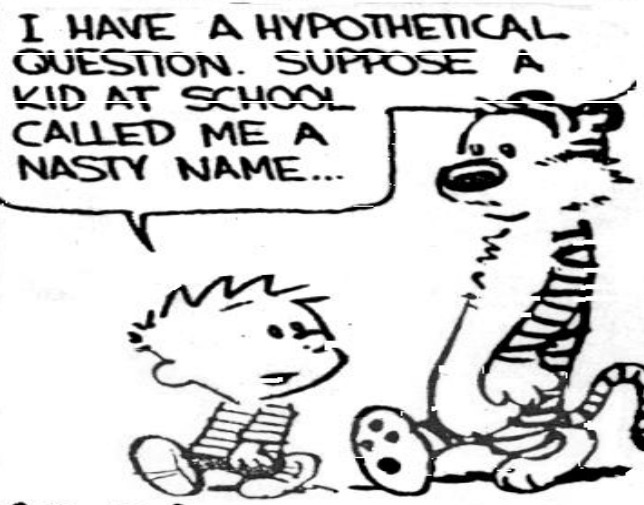
- Skill Building for Both Students and Teachers
- Close integration with Literacy and other Academic Subjects
- Generalization: Create opportunities to use these skills throughout the day
- Provide students feedback and recognition for performance
- Provide sufficient Technical Support to teachers
- Building Leadership to Support Teacher Implementation
- Involve Parents

Problem-Solving Outline

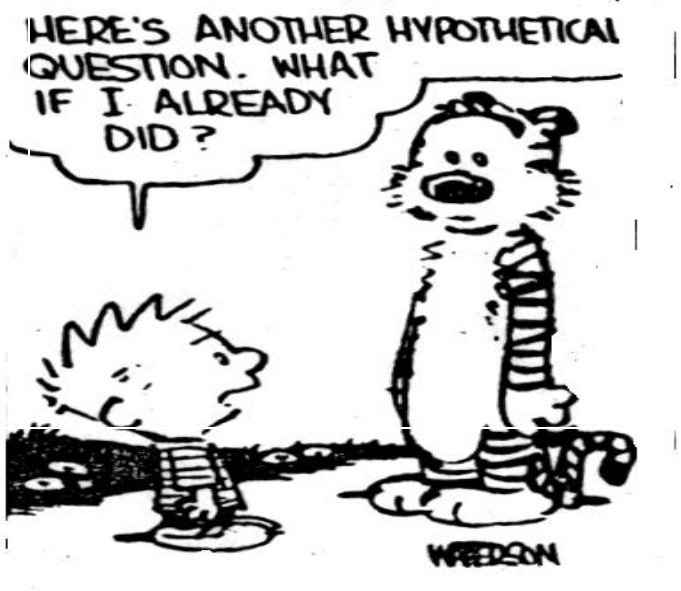
When you notice upset feelings:

1. STOP and think.
2. Identify the PROBLEM. (collect lots of information)
3. Identify the FEELINGS. (your own and other peoples')
4. Decide on a GOAL.
5. Think of lots of SOLUTIONS.
6. Think about what MIGHT happen next. (consider the consequences)
7. Choose the BEST solution. (evaluate all the alternatives)
8. Make a PLAN. (think about possible obstacles)
9. TRY your plan.
10. SEE what happens. (evaluate the outcome)
11. TRY another plan or solution if your first one doesn't work.

CALVIN AND HOBBS / Bill Watterson



9-19 © 1986 Universal Press Syndicate

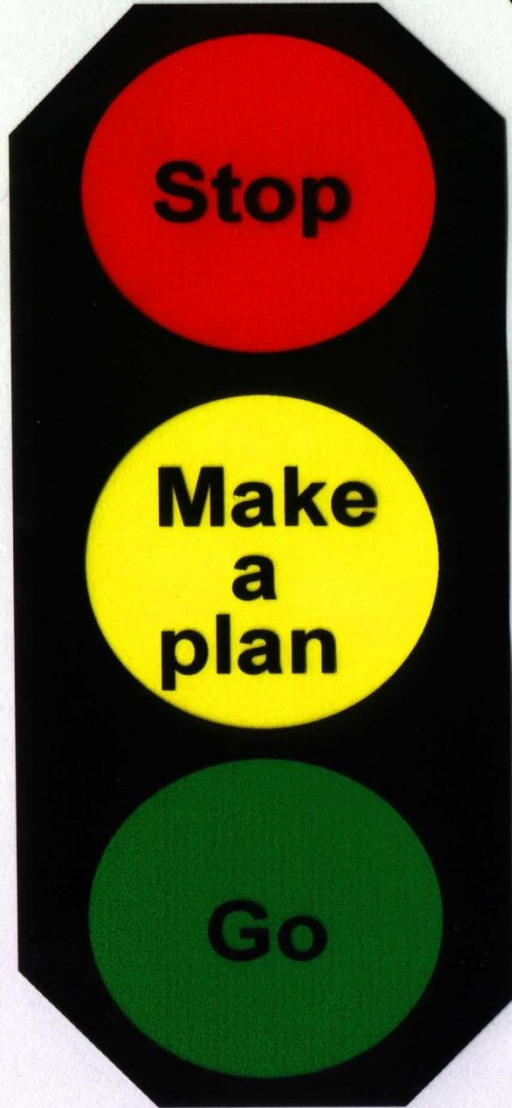


Learning to Calm Down

The Turtle Story and the 3 Steps for Calming Down



Control Signals

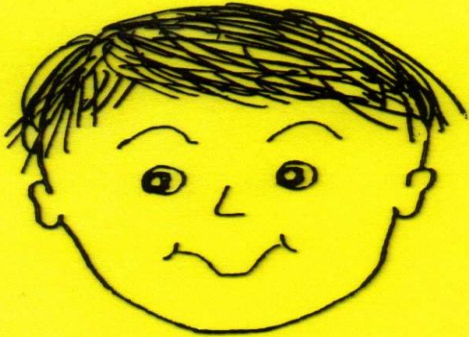


**Take a long, deep breath.
Say the problem and
how you feel.**

**What could I do?
Would it work?**

**Try your best idea.
How did it work?**

EXAMPLE FEELING FACES



**curious or
interested**



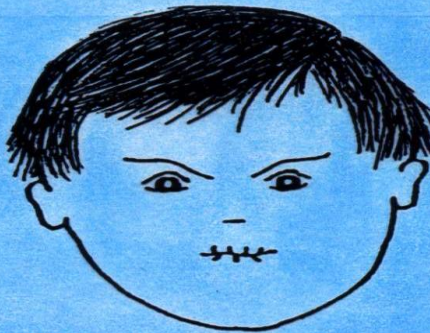
kind



excited



ashamed



frustrated



**mad
or angry**

In rigorous clinical studies, the PATHS program has been shown

to:

- reduce teachers' reports of students exhibiting aggressive behavior by 32%
- increase teachers' reports of students exhibiting self-control by 36%
- increase students' vocabulary for emotions by 68%
- increase students' scores on cognitive skills tests by 20%.

*at one- or two-year follow-up, compared to matched-comparison children

The Fast Track Project Conduct Problems Prevention Research Group

Robert J. McMahon

University of Washington

Kenneth A. Dodge

John D. Coie

Duke University

Karen L. Bierman

Mark T. Greenberg

Pennsylvania State University

Ellen E. Pinderhughes

Tufts University

John E. Lochman

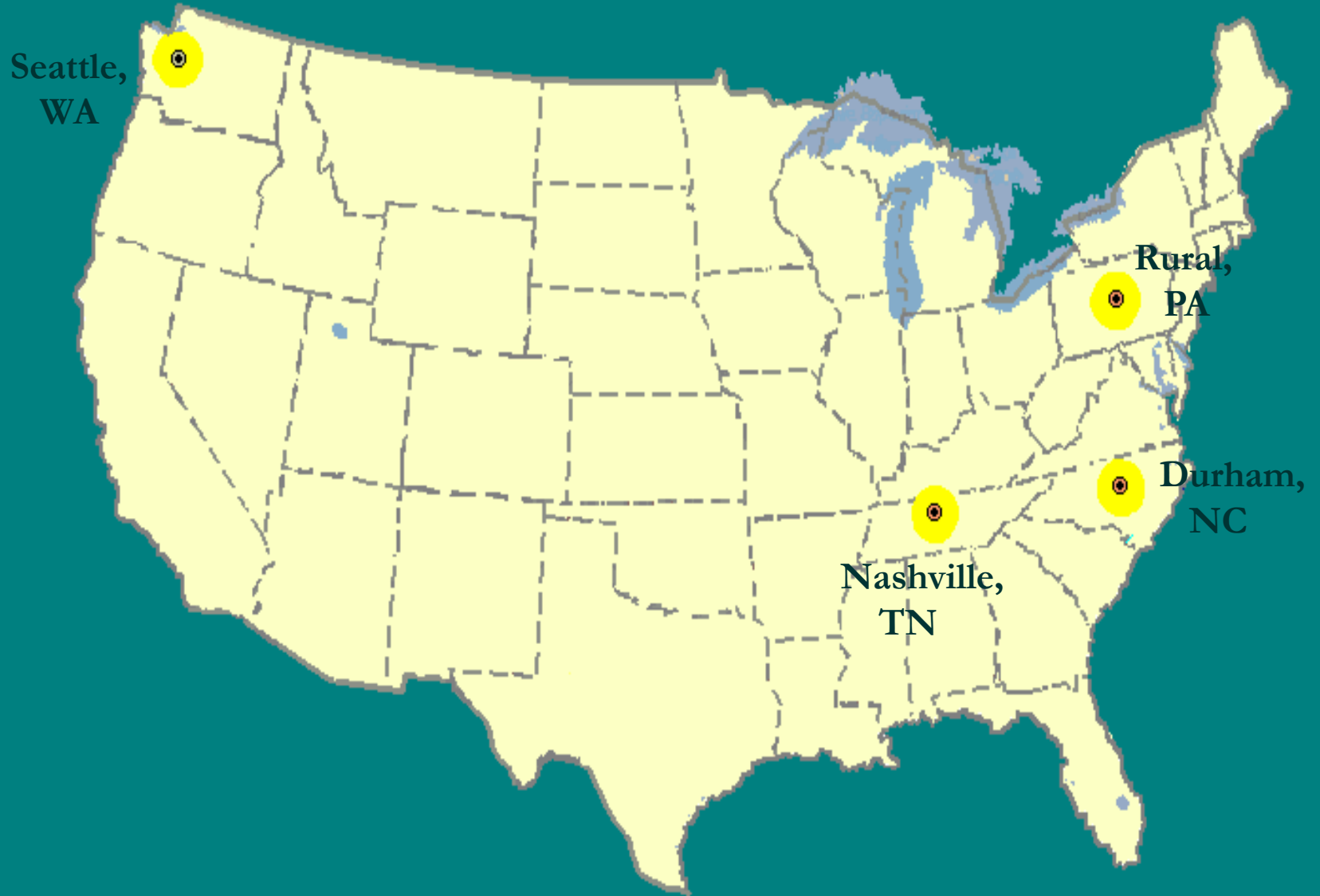
University of Alabama

Fast Track

- Multi-Site Study
- Over 6,000 students in 48 Schools
- Four American Locations
- High Crime and Delinquency Neighborhoods
- Schools Randomized to Intervention or Control

- Teachers received 3 days of PATHS Training
- PATHS Consultants visited weekly or bi-weekly

FAST TRACK SITES



Unique Features of PATHS in the Fast Track Model

- ⊕ Integrates Universal and Targeted Prevention
- ⊕ Multi-year Universal Model in 3 sites for Grades 1-5
- ⊕ Randomization Occurs at the Level of the School and Clustered Analysis examines effects at the levels of School and Classroom
- ⊕ High-risk Interventions and Controls are excluded from analysis to isolate effects of the Universal Model

Training and Support for Implementation

- ✓ Initial Training - 2 day workshop
- ✓ PATHS Consultant (PC) visits each class weekly to bi-weekly for observation in the first year
- ✓ PC meets with teachers individually or in group for 30 minutes/week
- ✓ PC receives ongoing technical assistance from PATHS Trainer
- ✓ Teachers use PATHS 2X/week for 20-30 minutes

The background is a solid teal color. In the center, there is a faint, semi-transparent graphic of two hands shaking, rendered in a lighter shade of teal. The text "Grade 1 Findings" is centered over this graphic.

Grade 1 Findings

PATHS Outcome Measures Grade 1

- Peer Sociometric Ratings on Aggression and Disruption and Social Competence
- Observations - Classroom Atmosphere - (Solomon And Battistich/CDP Observational Measure)
- Teacher Ratings on the TOCA-R

DATA ANALYTIC STRATEGY

"Intent To Intervene" Model

- ❖ Two-level model (SAS PROC MIXED)

- ❖ Level 1 (Individual)

 - Pre-intervention covariate

 - Child gender

- ❖ Level 2 (Classroom/School)

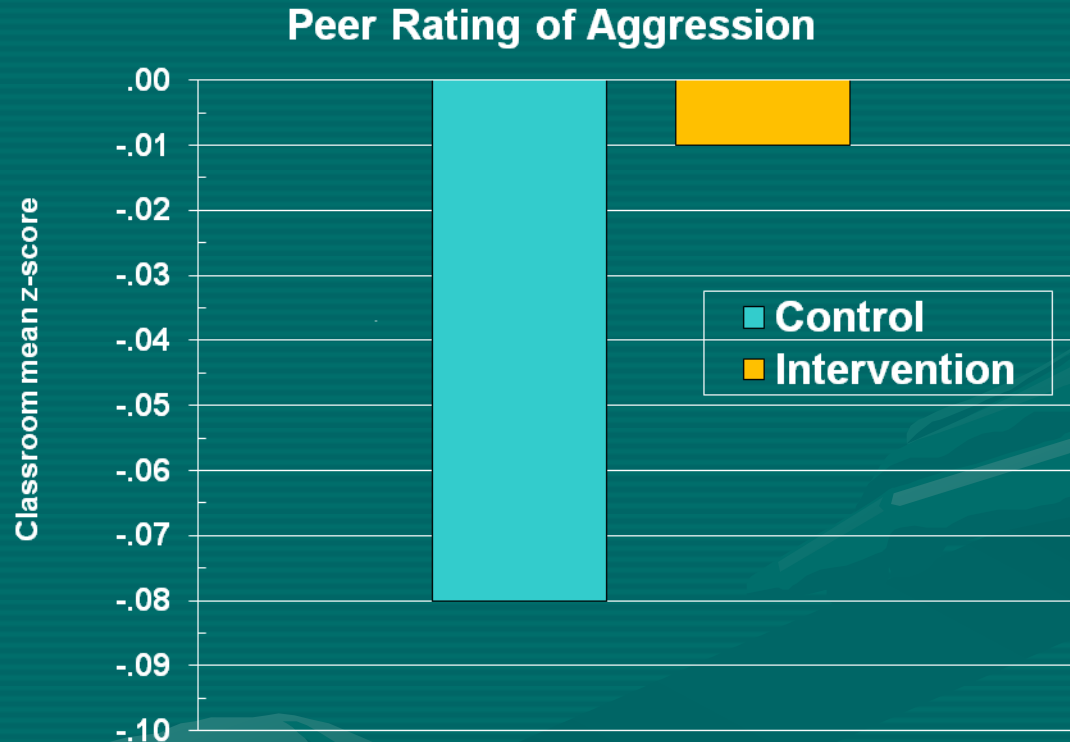
 - Cohort

 - Site

 - Intervention

PATHS Universal Intervention

End of First Grade (1 Year of Intervention)

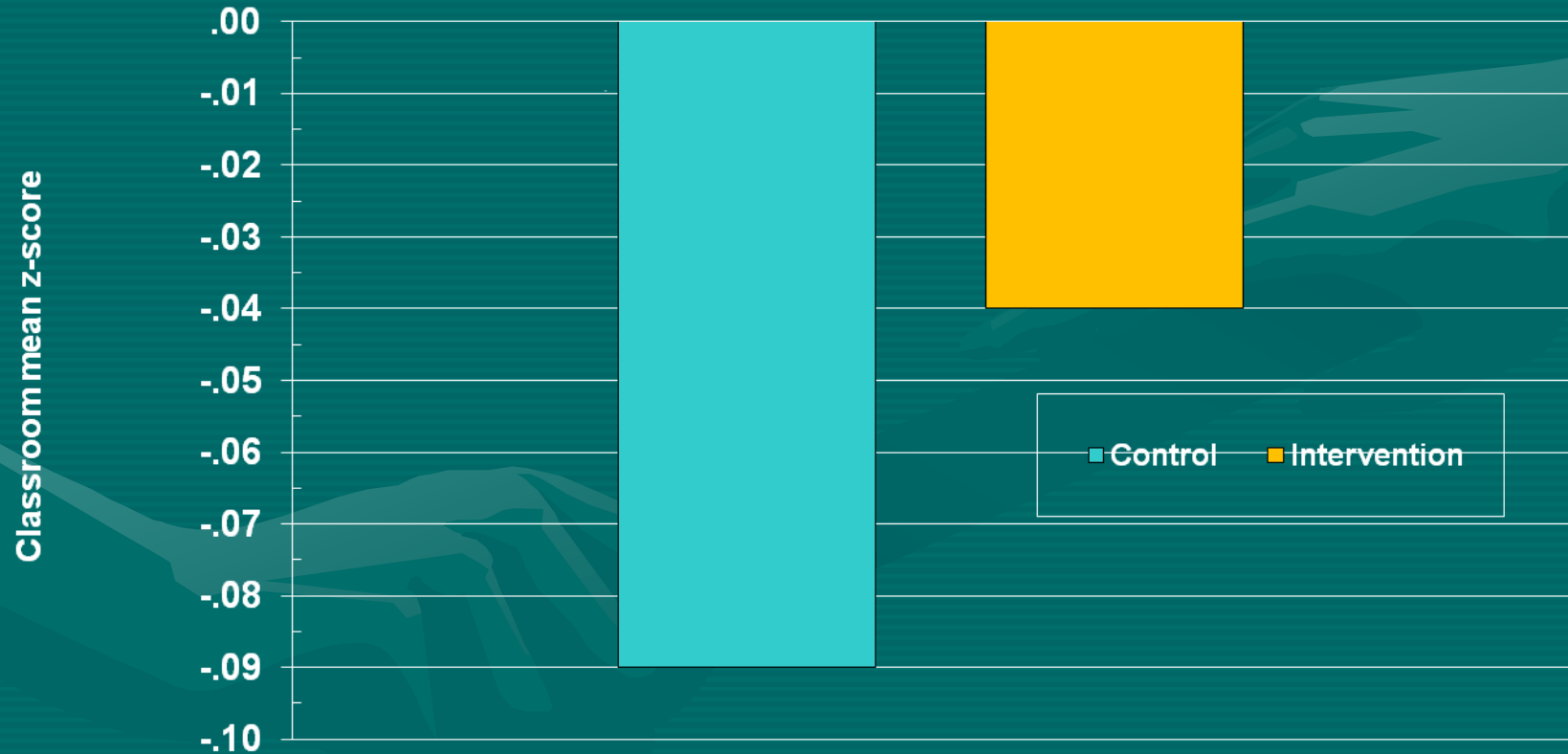


Children who receive PATHS rate their classmates as significantly less aggressive than do children in randomized comparison classes

Fast Track Study - 378 Classrooms - 6715 children
CPPRG, 1999 - Journal of Consulting and Clinical Psychology

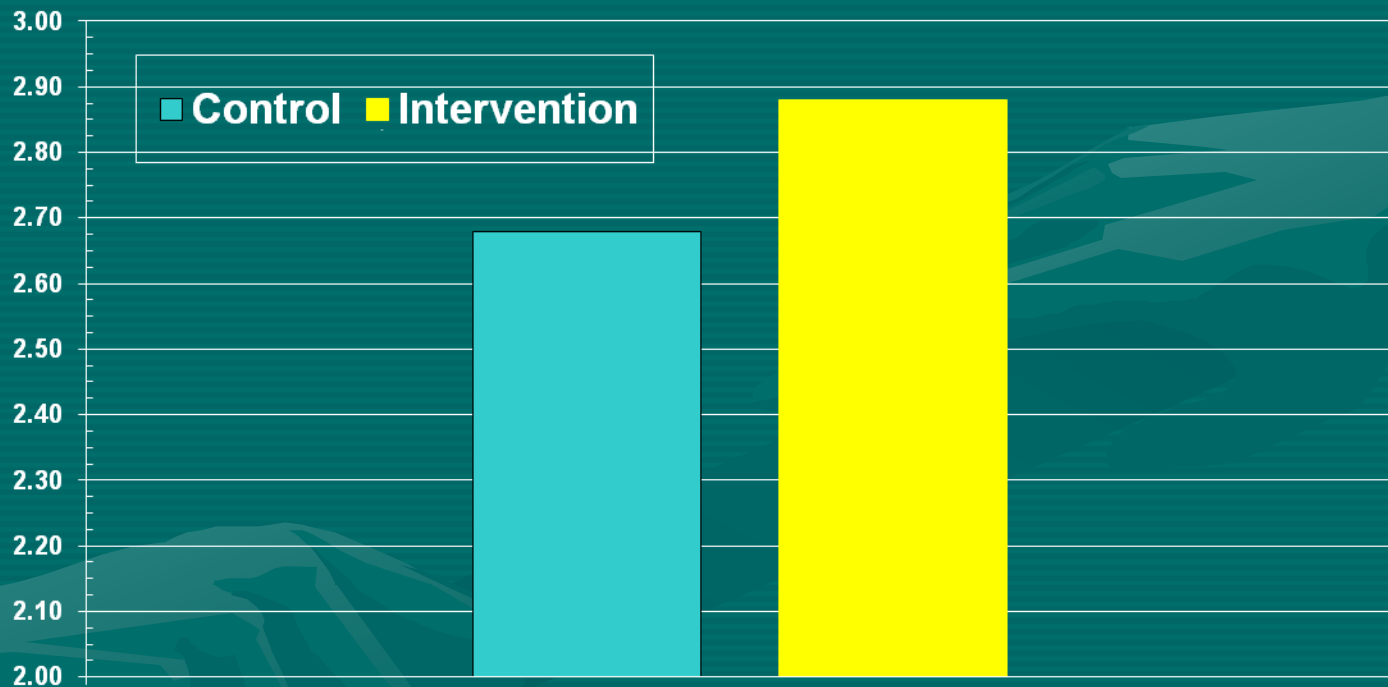
PATHS Universal Intervention End of First Grade

Peer Rating of Activity Level (Sociometrics)



PATHS Universal Intervention End of First Grade

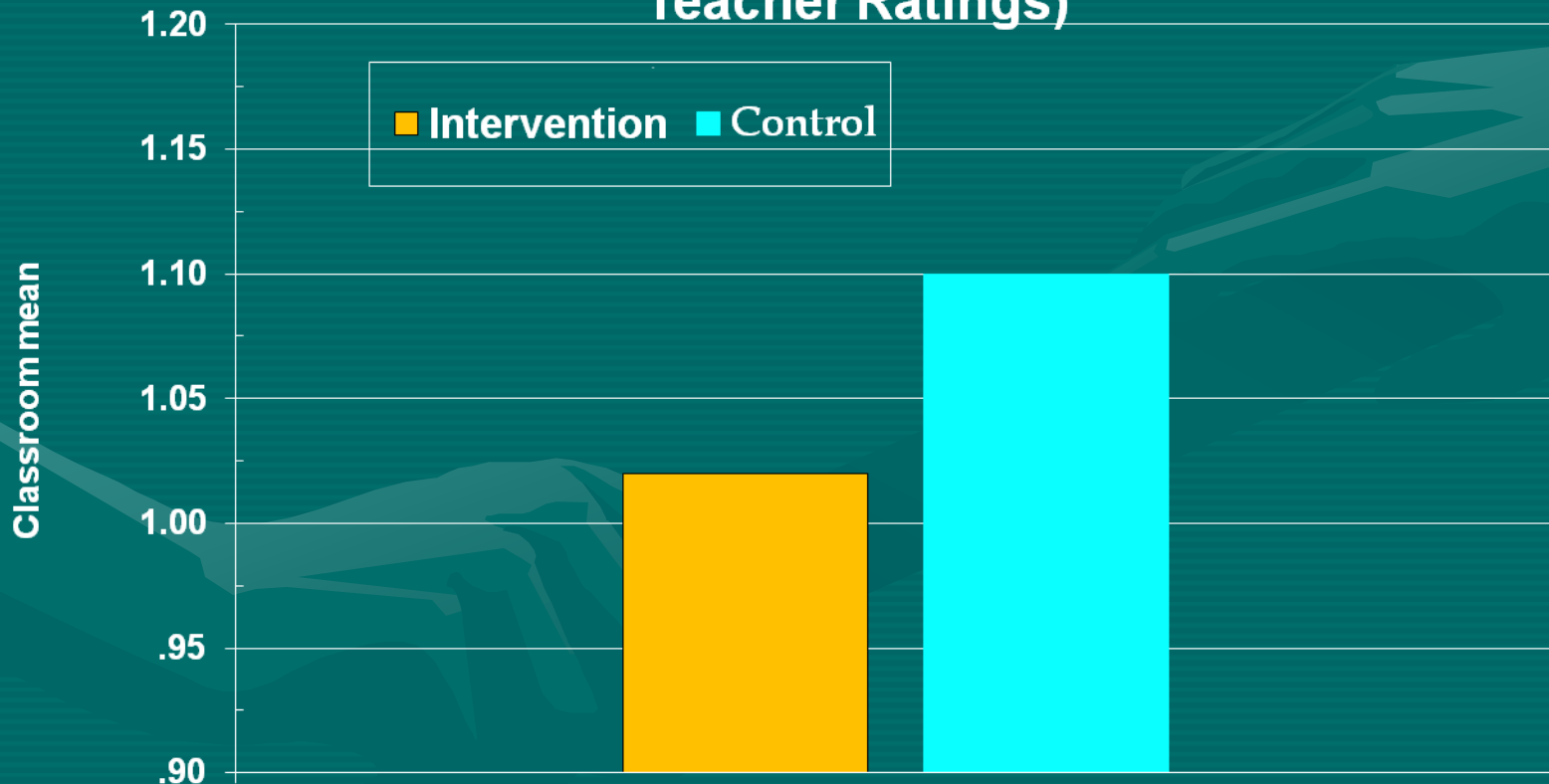
Classroom Atmosphere (Observer Ratings)



Independent Observers Rate PATHS Classrooms as having a Significantly More Positive Classroom Atmosphere

PATHS Universal Intervention End of First Grade

Authority Acceptance
Teacher Ratings)



Grade 3 Findings

Question: For Whom Does PATHS Work?

Examined the Effects of

1. Baseline Level of Aggression in Kindergarten
2. Level of School Poverty (related to Turnover & Chaos)
3. Gender

2,937 Children Followed From Grade 1- Grade 3

DATA ANALYTIC STRATEGY

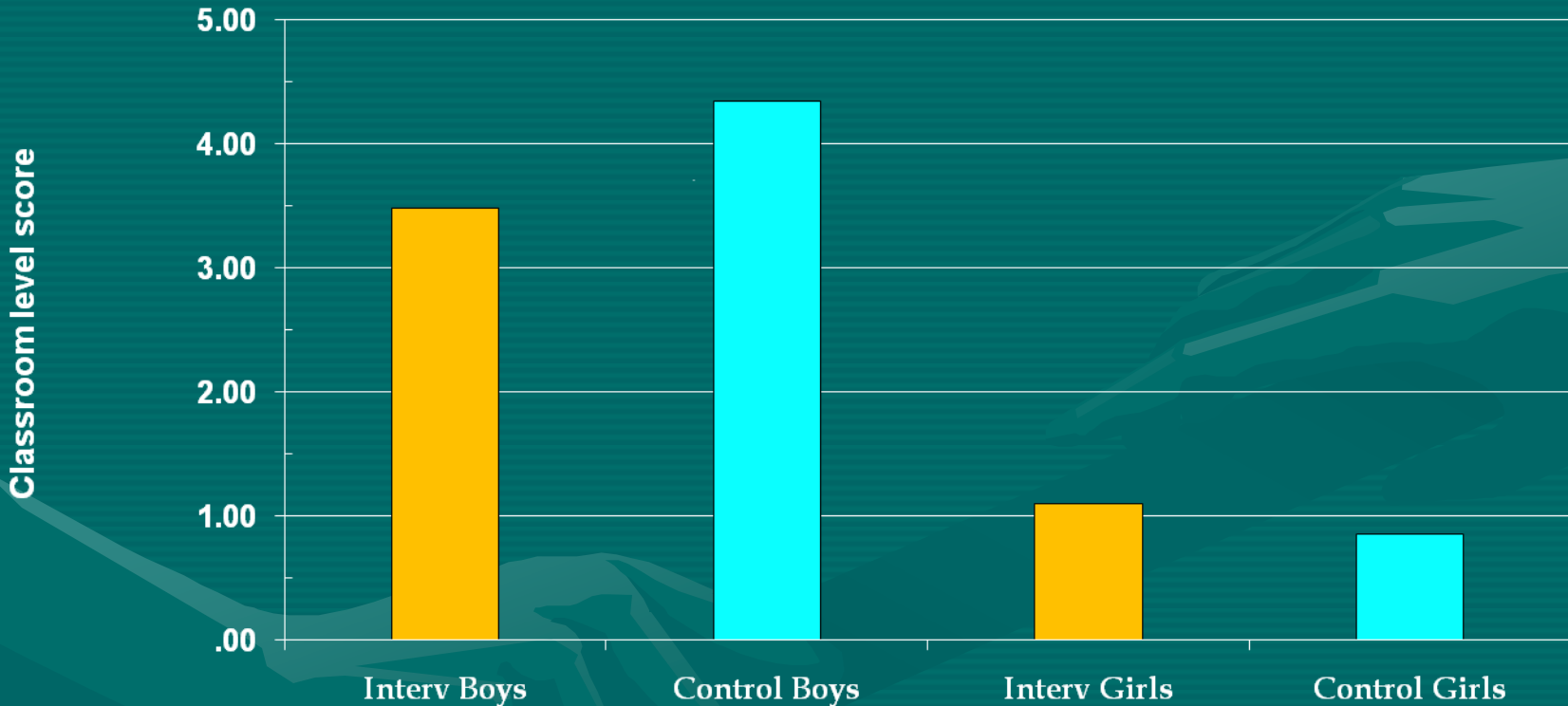
"Intent To Intervene" Model

- ❖ Three Level Model (Time, Child, School)
- ❖ Ordered-logistic regressions using Stata's *GLLAMM* (Rabe-Hesketh, Skrondal & Pickles, 2004) with random intercepts
- ❖ Covariates
 - ❖ Baseline Aggression
 - ❖ Poverty
 - ❖ Gender
 - ❖ Site
- ❖ Moderators
 - ❖ Baseline
 - ❖ Poverty
 - ❖ Gender

PATHS INTERVENTION EFFECTS

End of Grade 3

Peer Sociometric Rating of Aggression

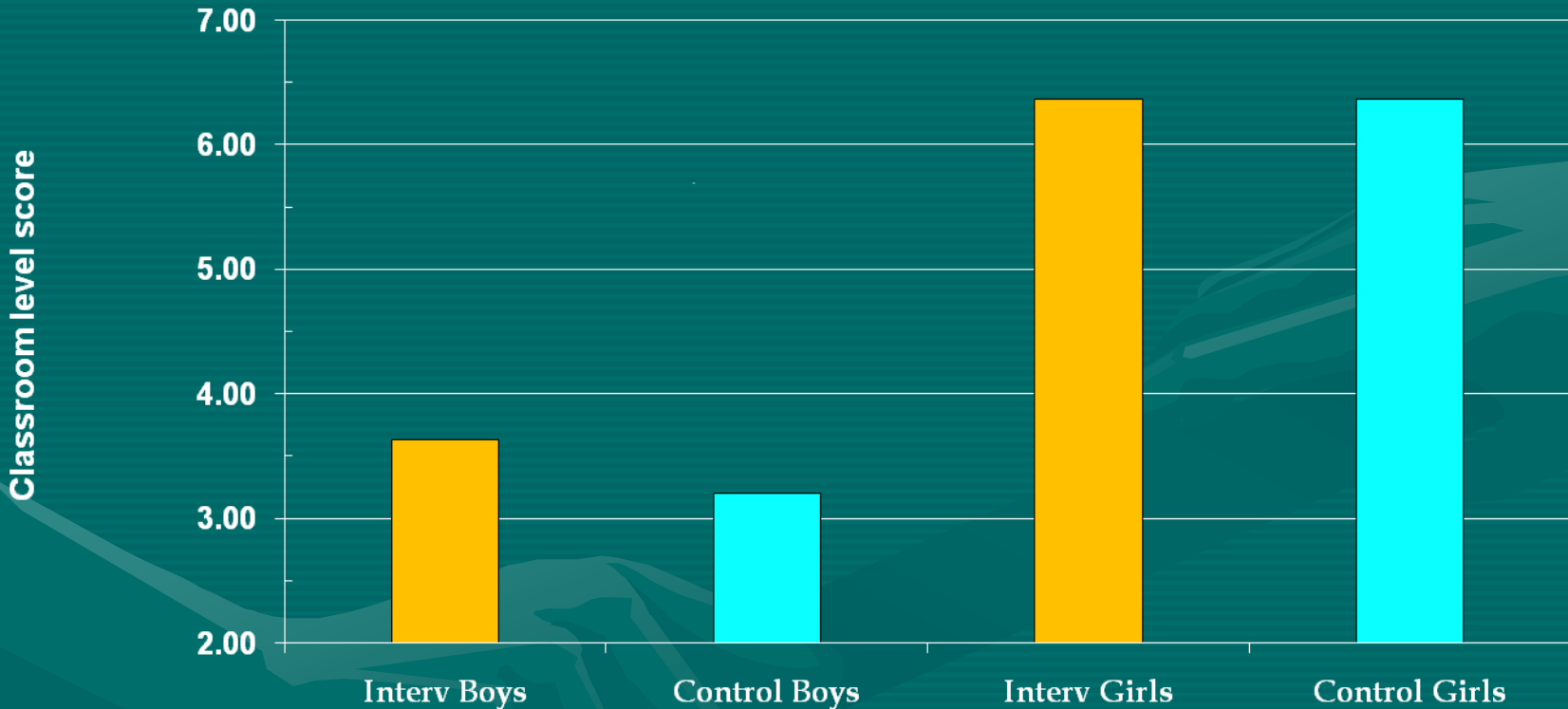


Significant Interaction Effect with Lower Aggression for Intervention Boys (effect size = .20)

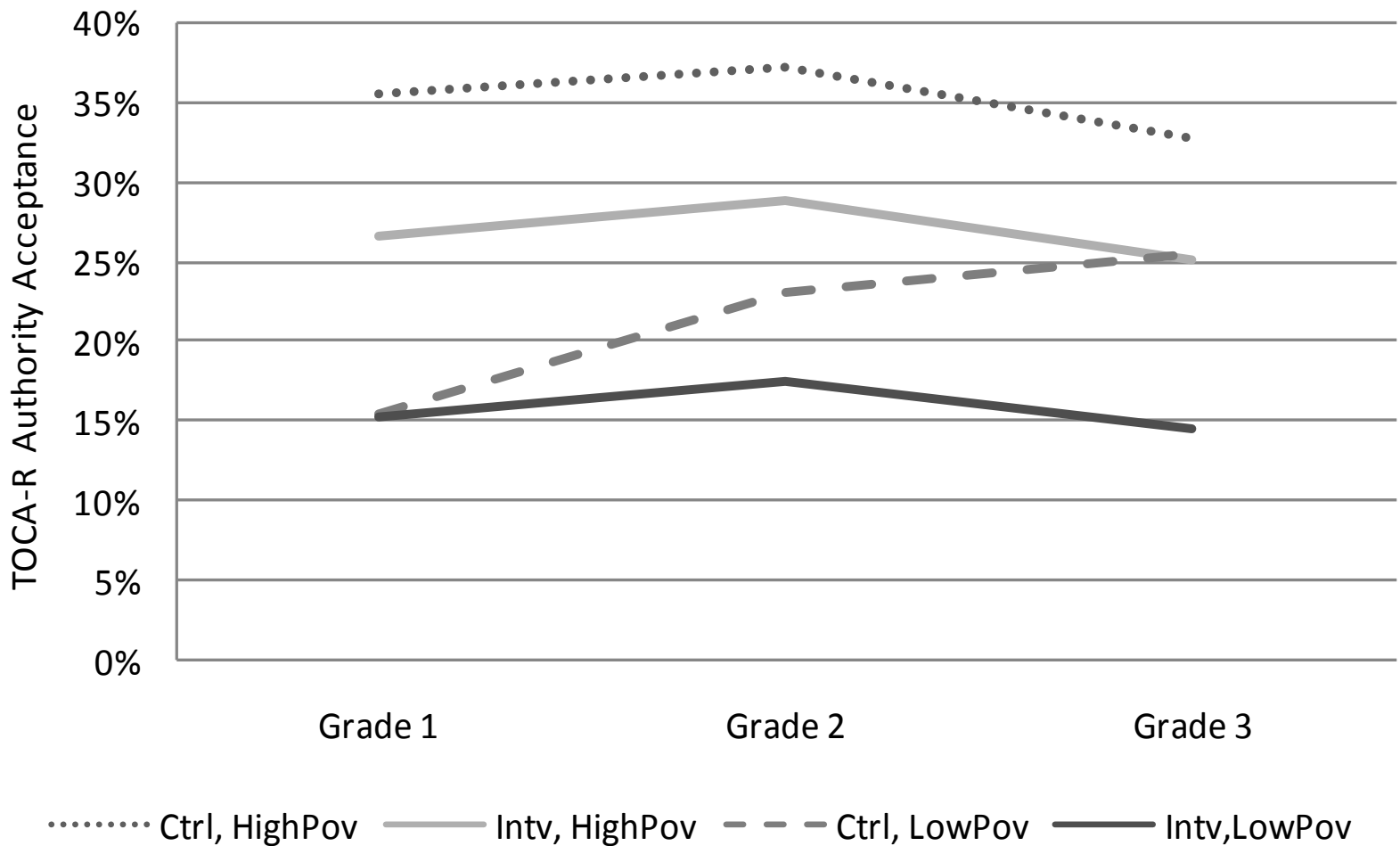
PATHS INTERVENTION EFFECTS

End of Grade 3

Peer Sociometric Rating of Prosocial Behavior



Significant Interaction Effect with Higher Prosocial Behavior for Intervention Boys (effect size - .12)



Predicted probability for a high level (top 20th percentile) of Authority Acceptance problems: Intervention group X Poverty X Grade (high/low poverty= above/below 1 std.dev. from the mean)

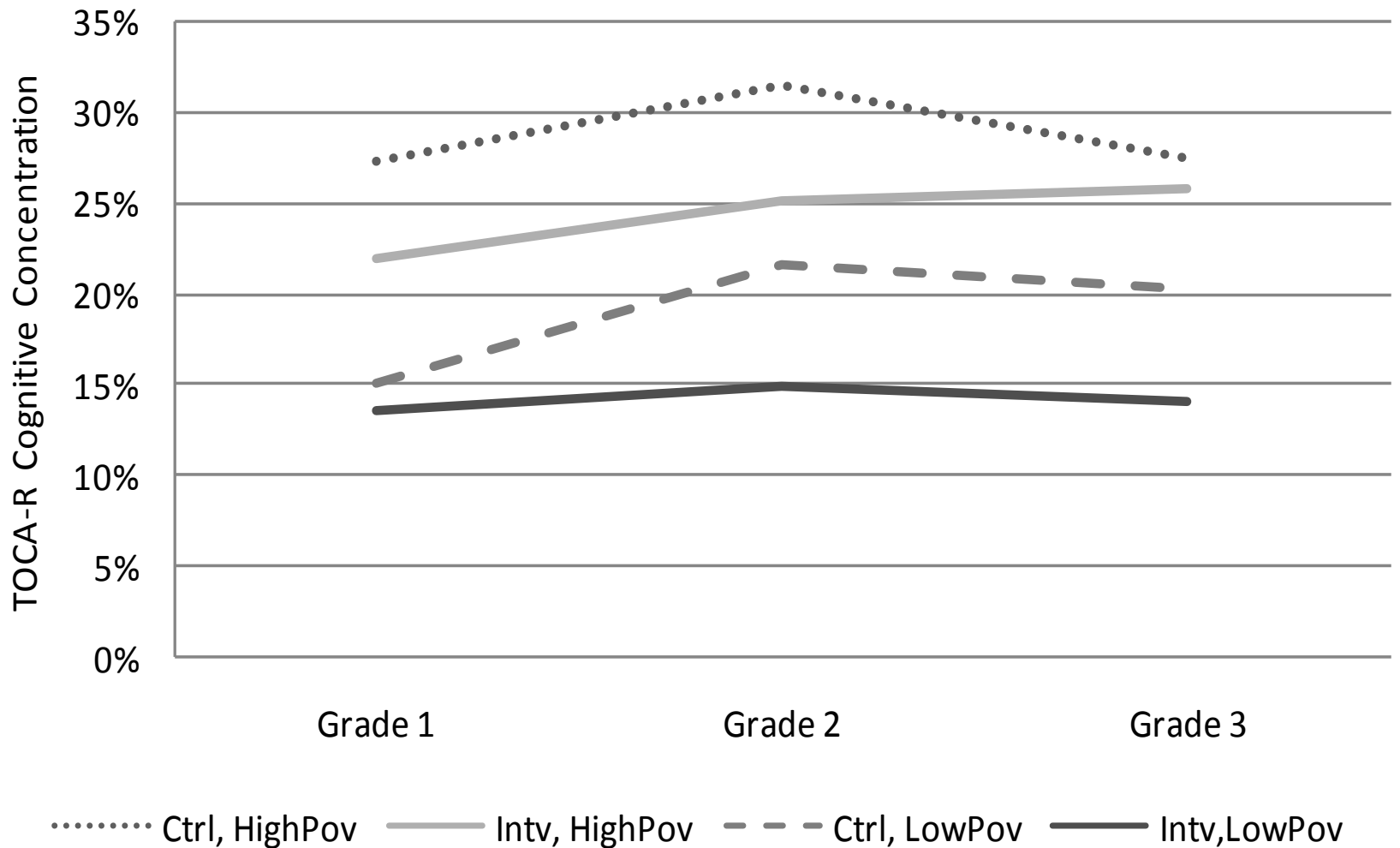
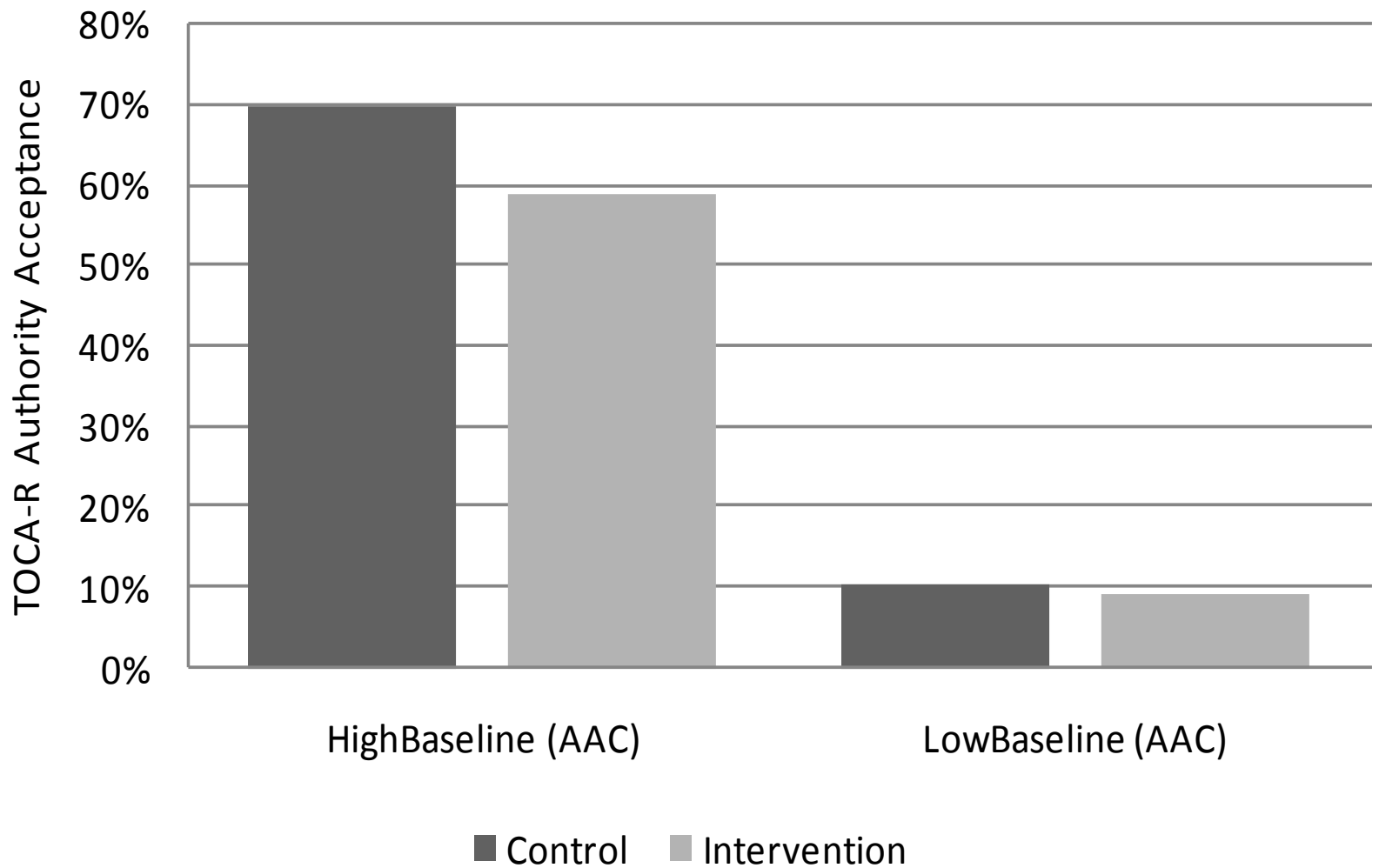


Figure 2: Predicted probability for a high level (top 20th percentile) of Cognitive Concentration problems: Intervention group X Poverty X Grade (high/low poverty= above/below 1 std.dev. from the mean)



Predicted probability for a high level (top 20th percentile) of Authority Acceptance problems at grade 3: Intervention group X Baseline status at grade 3 (high/low baseline= above/below 1 std.dev. from the mean)

Fast Track

Grade 1 through Grade 3 Effects

	Low Baseline Problems	Medium Baseline Problems	High Baseline Problems
Low School Poverty	Yes	Yes	Yes
Medium School Poverty	Yes	Yes	Yes
High School Poverty	Yes	Yes	No Effect

The background is a solid teal color. In the lower half, there is a faint, semi-transparent illustration of two hands shaking, symbolizing agreement or partnership. The hands are rendered in a lighter shade of teal, creating a subtle watermark effect.

International Findings

Grade 2 PATHS (Zurich, Switz)

Manuel Eisner - Cambridge University

Zurich City Government

Randomized Trial Design

Neighborhoods with high rate of War Refugees and
high rates of delinquency

Findings after two years:

Significantly lower rates of:

Aggression

ADHD Symptoms



Grade 3/4 PATHS (Rochester, NY)

Children's Institute – Univ. of Rochester
Crean, Johnson, Lazenby and others
Randomized Trial Design
Grade 3 Intervention

Significant Experimental versus Control differences found in:

- Peer Social Skills

- Shy-Anxious Problem Behaviors

- Assertive Social Skills

- Frustration Tolerance

- Acting Out Problem Behaviors

No significant differences in:

- Learning Problems

- Task Orientation



Grade 1-4 PATHS (The Netherlands)

Univ. of Utrecht – DeCastro, Overveld, Louwe

Quasi – Experimental Design

Learning Resource Classroom for Behavior Problems

Special Program for BD Kids

Significant Experimental versus Control differences found in:
Reactive Aggression over Two Years



After-School PATHS

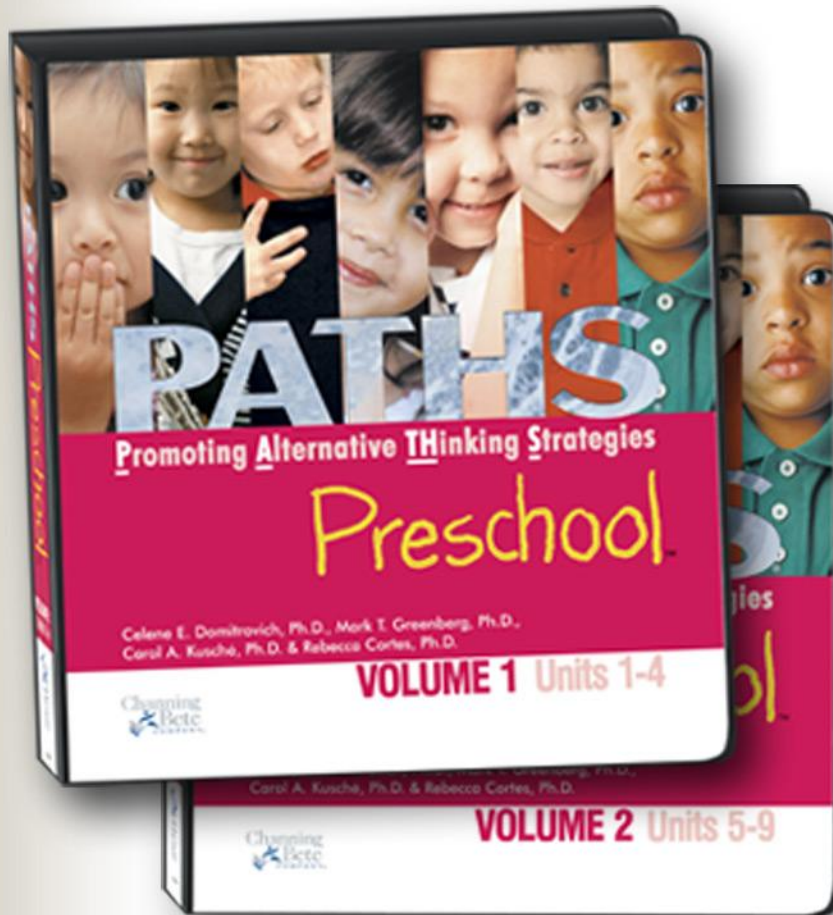
Urlangen, Germany (Von Hacker, Losel, Stemmler and others)

- Quasi-experimental Design
- 93 Children in Grades 2 and 3
- 16 Lesson PATHS After-School Model
- **Results:** Significant Reduction in Problem Behavior

Gettysburg, PA (Riggs and others)

- Migrant Latino program
- **Results:** more days attended higher rated social and emotional competence by teachers

Preschool Promoting Alternative THinking Strategies Curriculum



Authors:

Celene Domitrovich, Mark
Greenberg, Carol Kusché,
Rebecca Cortes





How to do Turtle

- 1 Stop.
- 2 Breathe.
- 3 Say the problem and how you feel.

The problem is...

What do friends do?

- Friends play.
- Friends help.
- Friends share.

Tamara Feels Worried

The Hidden Toy

Jerry and Bobby

Twiggie Makes Friends

Twiggie Learns to Do Turtle

Twiggie's Special Day

Twiggie and his friends

Our Feelings Chart

PATHS

Promoting Alternative Thinking Strategies

Preschool

Colene E. Dombrowski, Ph.D., Mark T. Greenberg, Ph.D., Carol A. Kozaie, Ph.D. & Rebecca Cohen, Ph.D.

VOLUME 1

VOLUME 2

PATHS

Promoting Alternative Thinking Strategies

Preschool

Colene E. Dombrowski, Ph.D., Mark T. Greenberg, Ph.D., Carol A. Kozaie, Ph.D. & Rebecca Cohen, Ph.D.

INSTRUCTOR'S MANUAL





Promoting Academic and Social-emotional School Readiness: The Head Start REDI Program



**K. Bierman, C. Domitrovich, R. Nix,
S. Gest, J. Welsh, M. Greenberg, C. Blair, K. Nelson, S. Gill**

The Pennsylvania State University

Funded by NICHD grants HD046064 & HD43763

Intervention Components:

Social-Emotional Competencies

Language/Literacy Skills

PATHS Curriculum

Interactive Reading

Sound Games

Print Center

- Prosocial Skills
- Emotional Competence
- Self Control

Major Emphasis on Hands-On, Proactive Teacher Coaching

Preschool Head Start Intervention

- Randomized Clinical Trial in Head Start Centers
- Significant Effects on
 - Behavior
 - Social Cognition
 - Thinking Skills



PATHS Abroad



New Translations:

Spanish
Chinese - Hong Kong
German
Korea
Croatia
Greek

New Studies

Korea
Croatia
N. Ireland

Future Projects

Brazil
Italy-Switzerland
Chile



PATHS Research Projects : In the Planning Stage

Planned

PATHS with Enhanced Parenting

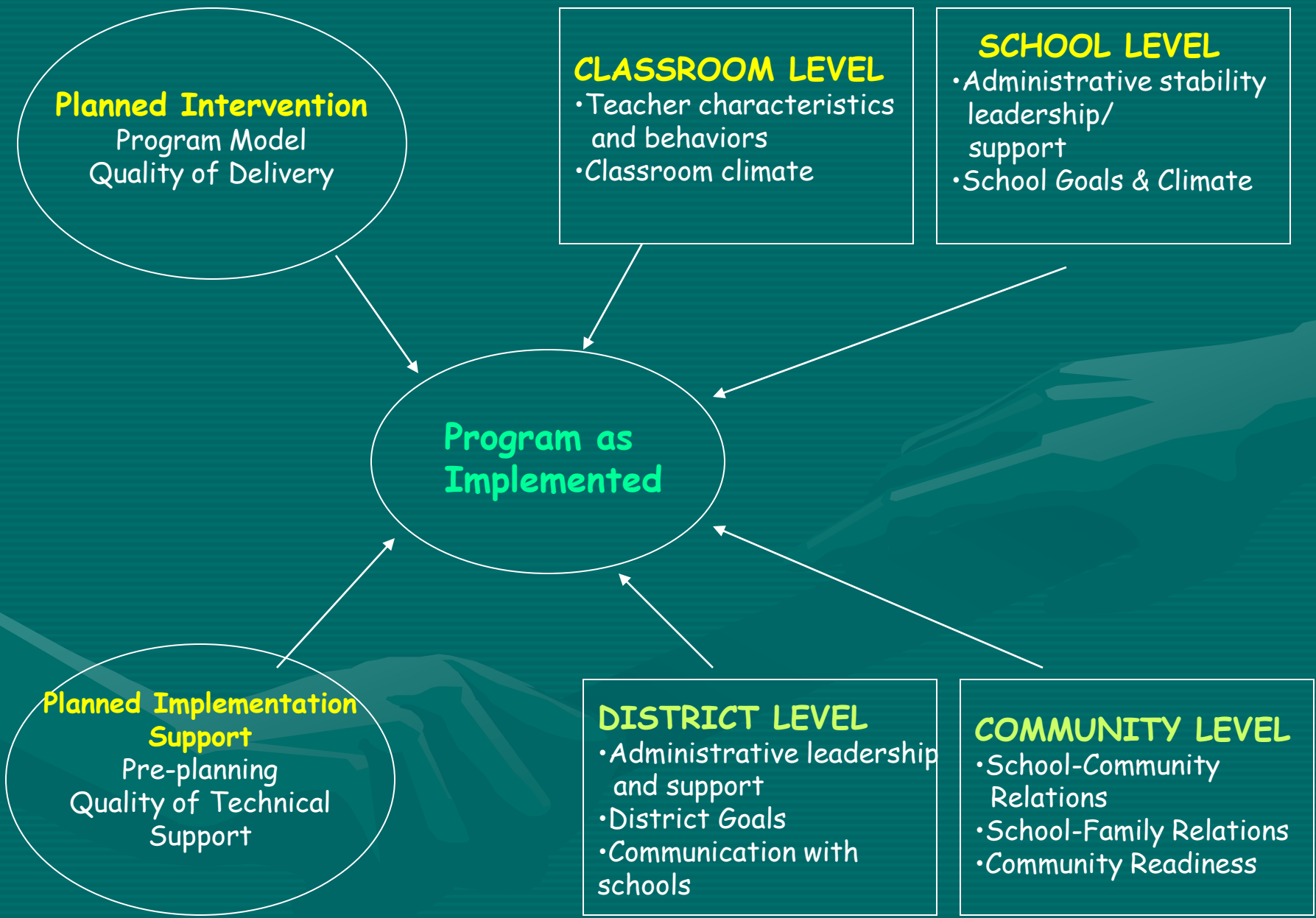
PATHS and Mindfulness

PATHS and Autism Spectrum (I hope!)



Implementation Of SEL Programs

- Why focus on implementation?
 - Programs will likely show no effect when implemented poorly
 - It is so important to build the right context to effectively implement programs
 - High quality implementation should support sustainability



Planned Intervention

Program Model
Quality of Delivery

CLASSROOM LEVEL

- Teacher characteristics and behaviors
- Classroom climate

SCHOOL LEVEL

- Administrative stability leadership/ support
- School Goals & Climate

Program as Implemented

Planned Implementation Support

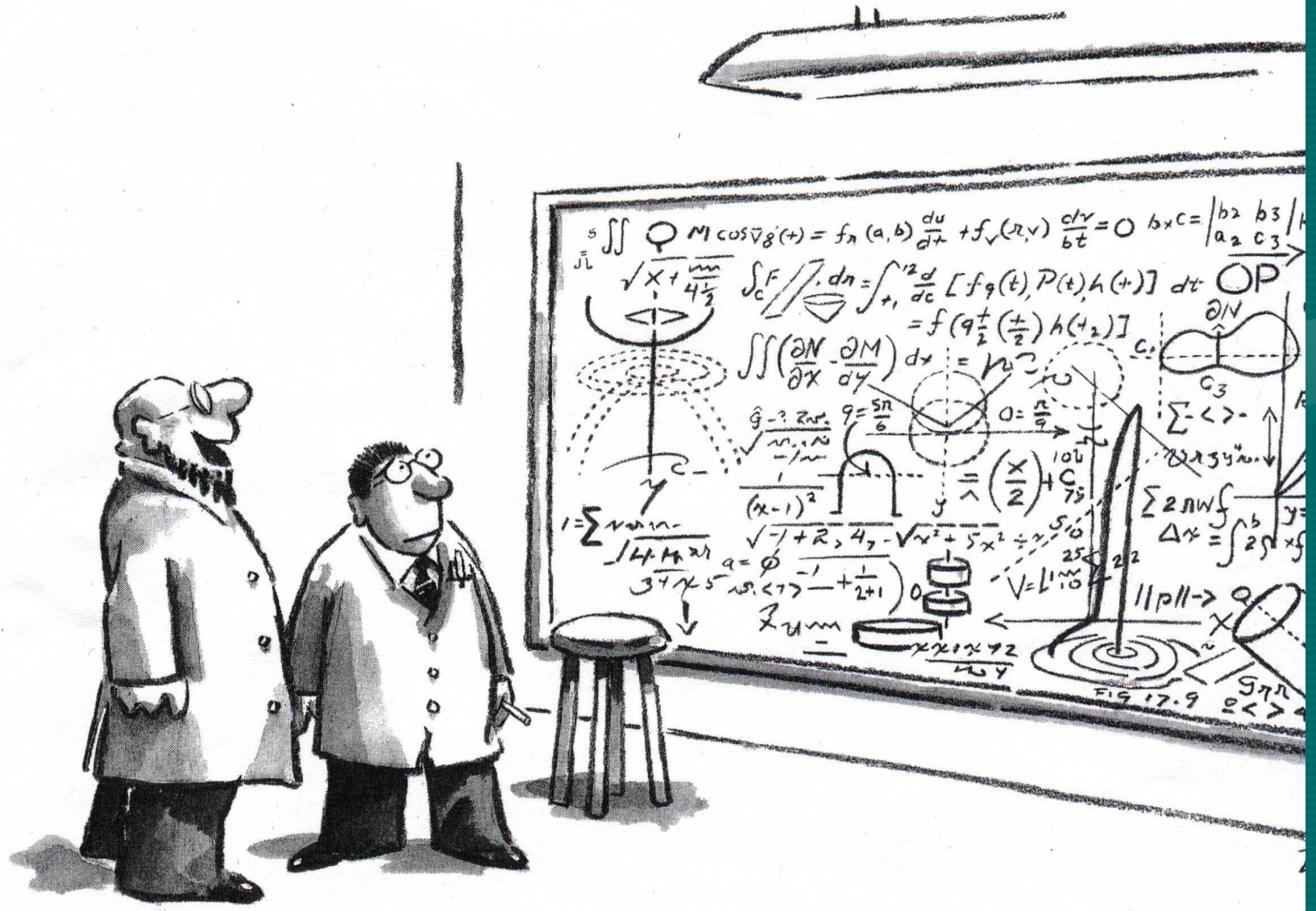
Pre-planning
Quality of Technical Support

DISTRICT LEVEL

- Administrative leadership and support
- District Goals
- Communication with schools

COMMUNITY LEVEL

- School-Community Relations
- School-Family Relations
- Community Readiness



"Hey, no problem!"

The Role of Teacher Characteristics and Environmental Supports

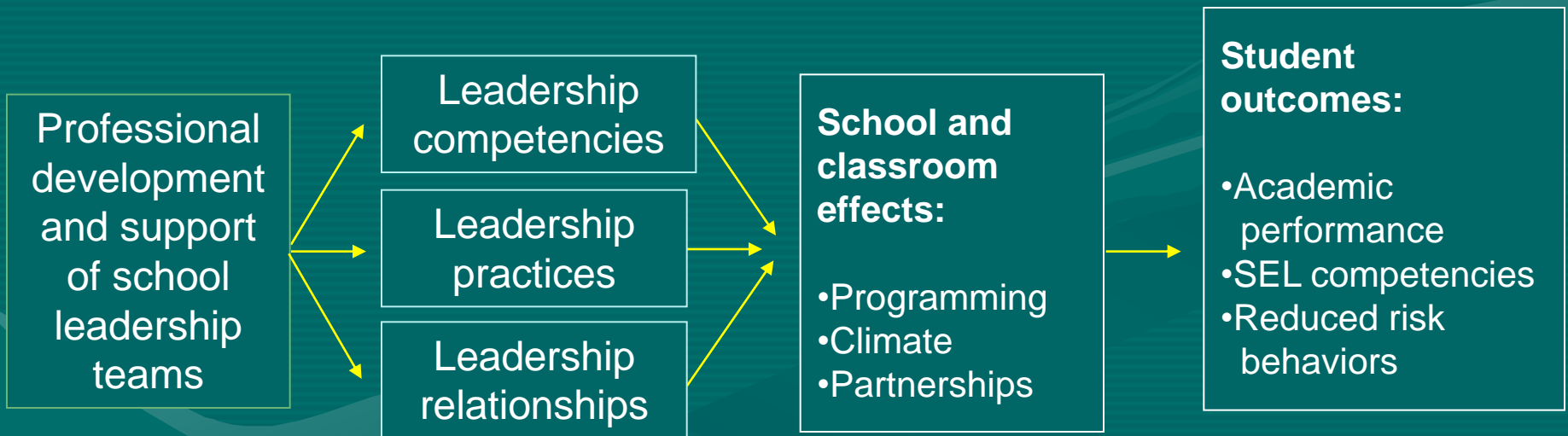
- Buss and Hughes

Teacher with Higher Meta-Emotion Scores (more positive view of teaching re emotions) showed better lesson adherence and more positive ratings by PATHS consultants

- Ransford et al.

Principal support and quality of the school environment predict teachers report of implementation quality of PATHS

The Effects of Leadership Development and Support on SEL Practices and Student Outcomes



What Makes A School Successful?

- School Wide Use
- Strong Leadership
- Consistency
- Flexibility
- Integration
 - With curriculum
 - With school culture
 - With community culture

Practical Strategies

- Peer coaching, peer observation
- Schedule regular opportunities for reflective practice and de-briefing
- Never let the initial training be the only training
- Data in must **ALWAYS** require data out - create feedback loops and safe environments for reflection

IMPLEMENTATION PHASE

Lights, Camera ... Action!

- Provide PATHS Training
- Provide Sufficient Teacher Support
- Adjust based on experiences
- Expand and integrate
- Focus on monitoring and improving

SUSTAINABILITY FACTORS

Ongoing processes. Relevant throughout implementation, and beyond...

- Professional development
- Monitoring, evaluating, improving
- Developing infrastructure
- Expanding and integrating
- Nurturing partnerships
- Reflecting on and sharing progress

Lessons Learned from Practice

- Building staff readiness
- Progressive implementation
- Building wide use and strong leadership
 - Not just the classroom
- Consistency
- Flexibility and Integration



Closing Thoughts

- Universal preschool prevention programs with:
 - strong theoretical models
 - well-trained teachers
 - sufficient dosage (density of lessons and generalization)

can substantially:

- reduce the rate of mental health problems
 - promote positive, healthy development
 - improve cognitive performance
- Improving the "Underlying Shared Constraints" can significantly reduce the public health burden of poor outcomes for children

A faint, stylized illustration of two hands shaking is visible in the background, centered behind the text. The hands are rendered in a light teal color, matching the background, and are positioned as if in a firm handshake.

Building Compassion and
"Living"
The Golden Rule





**The Collaborative for Academic
Social and Emotional Learning**

www.CASEL.org