

Rigorous, Responsive, & Responsible: Intervention Research with Children in Urban School Community-Contexts

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Map of My Talk

**Social Relationships
Program**

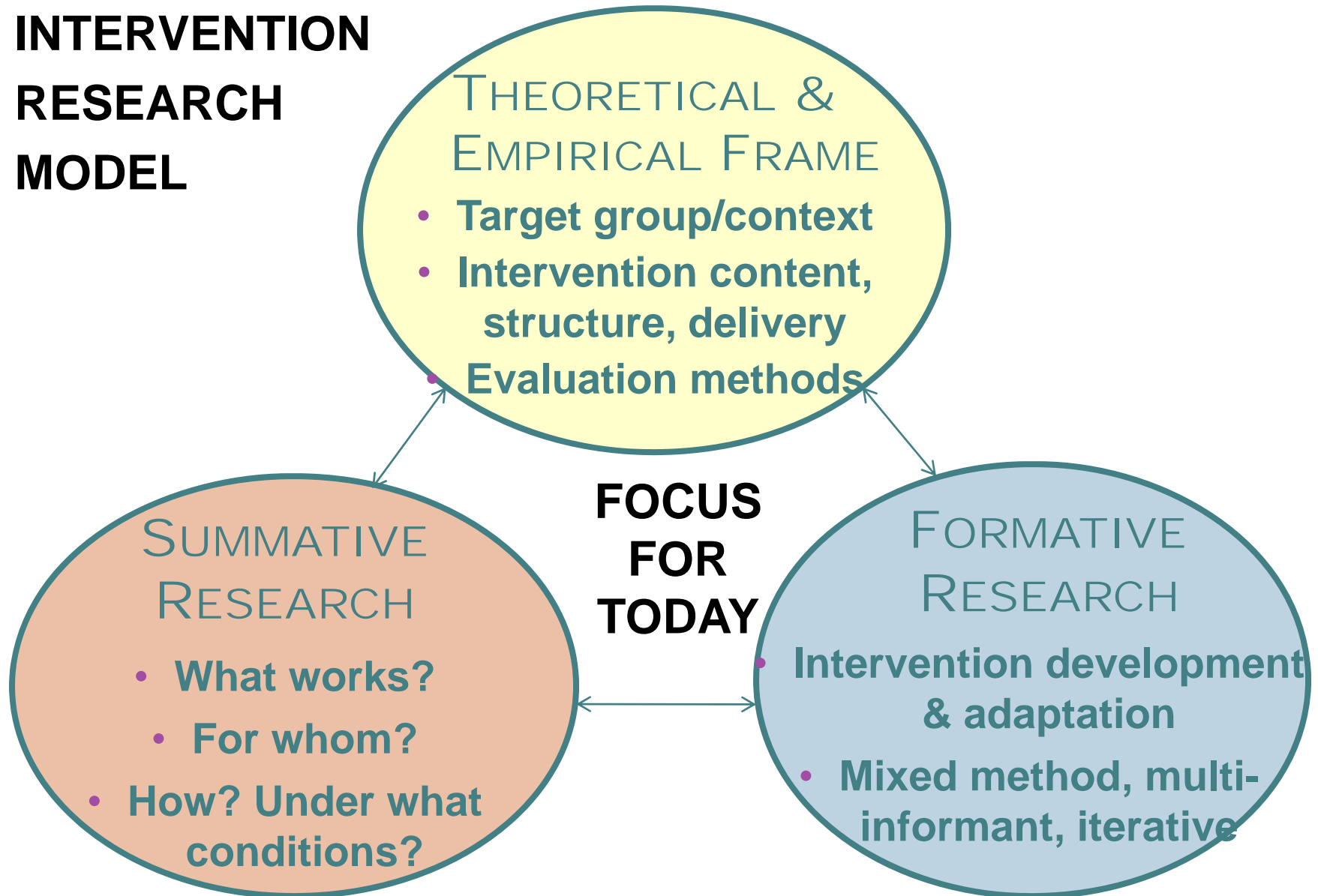
Links to Learning

**Research model &
underlying premises**

**Postscript: Basic
studies in intervention
research**

**Intervention Research in Schools:
Rigor, Responsiveness, Responsibility**

INTERVENTION RESEARCH MODEL



SUMMATIVE RESEARCH INTERVENTION STAGE

Efficacy



Effectiveness



**“Dissemination”
Transportability**



- ★ “Controlled” (RCT)
- ★ “Real world” (RCT or quasi-experiment)
- ★ “Scaling up” or “transporting” to systems/structures:
adoption, implementation, sustainability (various designs)

*** Hybrid models + theory-based evaluation design

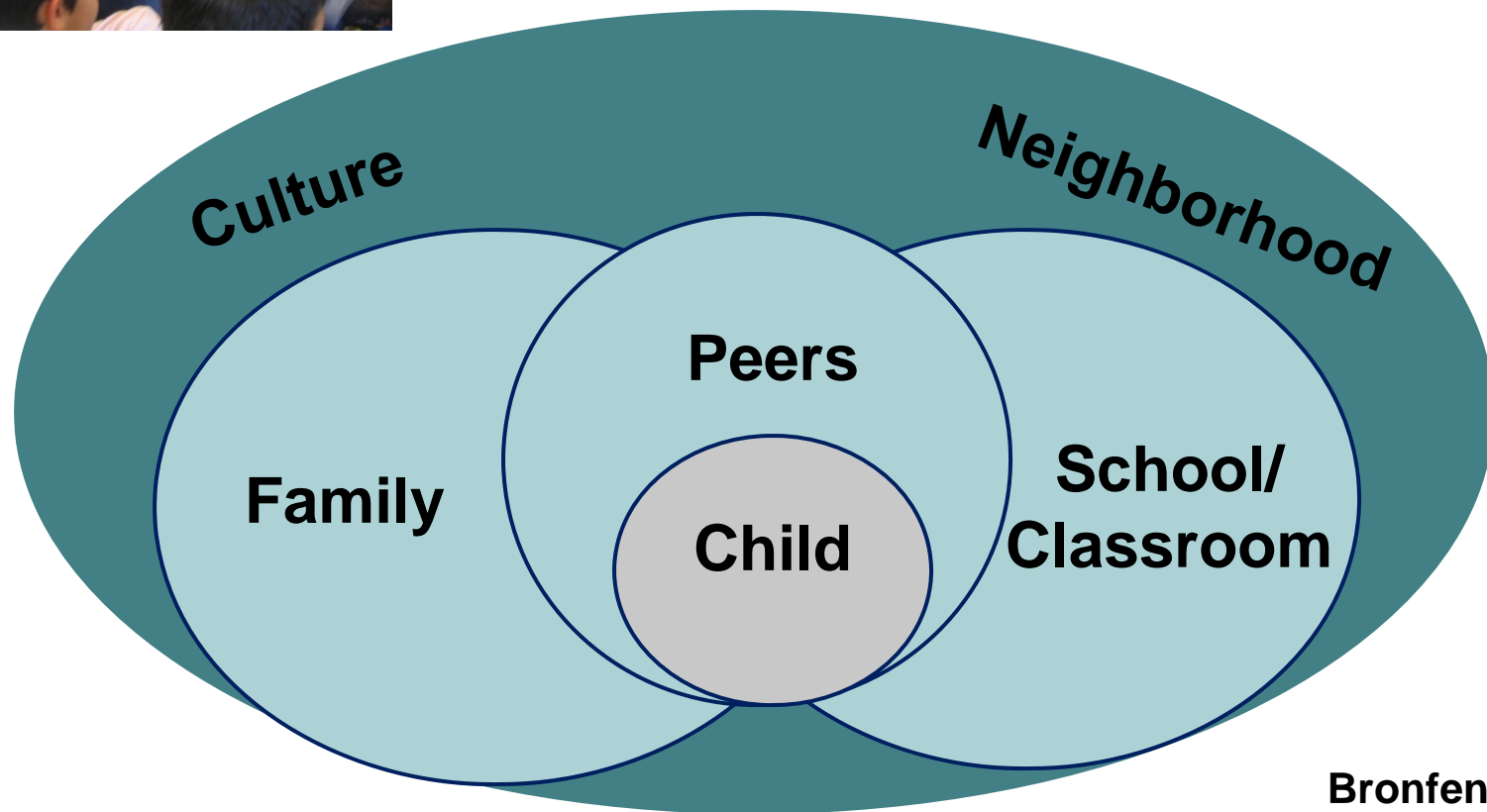
Underlying Premises of my Research

- Ground it in **real kids** who live in **families, classrooms, schools, and neighborhoods**
- Consider the entire continuum of intervention from **promotion/prevention to treatment**
- Methodological **rigor** must be matched by the **responsiveness** and **responsibility** of the intervention design and evaluation methods

Know your/my limits and what you/I don't know



Developmental-Ecological Theory (+ Community Psychology Principles)



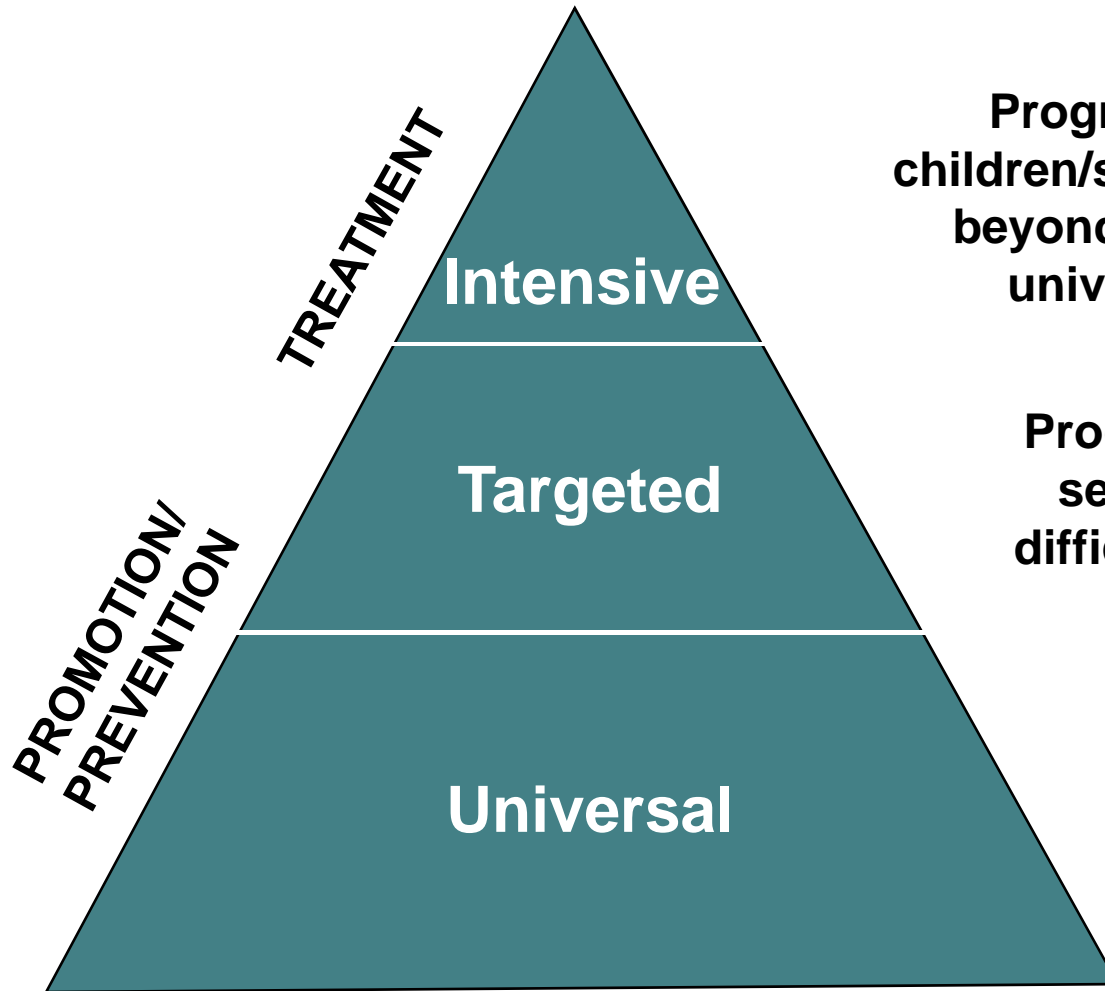
Bronfenbrenner &
Morris, 1998

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Know your/my limits and what you/I don't know

Intervention Continuum (Public Health)



Programs designed to impact children/settings with *intensive* needs beyond what will be impacted by universal or targeted efforts

Programs that target children/settings with *early signs* of difficulty or who may be *at risk* for later problems

Programs designed to reach *all children/settings* and provide a base for positive health and development

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Know your/my limits and what you/I don't know

The Three Rs

Rigor

inappropriate/inadequate
methods

appropriate/sound
methods



Responsiveness

university-oriented;
irrelevant

community-oriented;
relevant



Responsibility

lacking theoretical/
ethical grounding

theoretically- and
ethically-grounded



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 - Methodological **rigor** must be matched by the **responsiveness** and **responsibility** of the intervention design and evaluation methods
- *Know your (my) limits and what you (I) don't know**

Social Relationships Program (SRP)

Targeted peer group program to prevent social aggression (i.e., nasty rumors, malicious exclusion) and resolve conflicts



“We have a smile on our face, but inside we think they’re mean. If you say something to them, they could tell a lot of people and then no one will be your friend.”

Targeted:

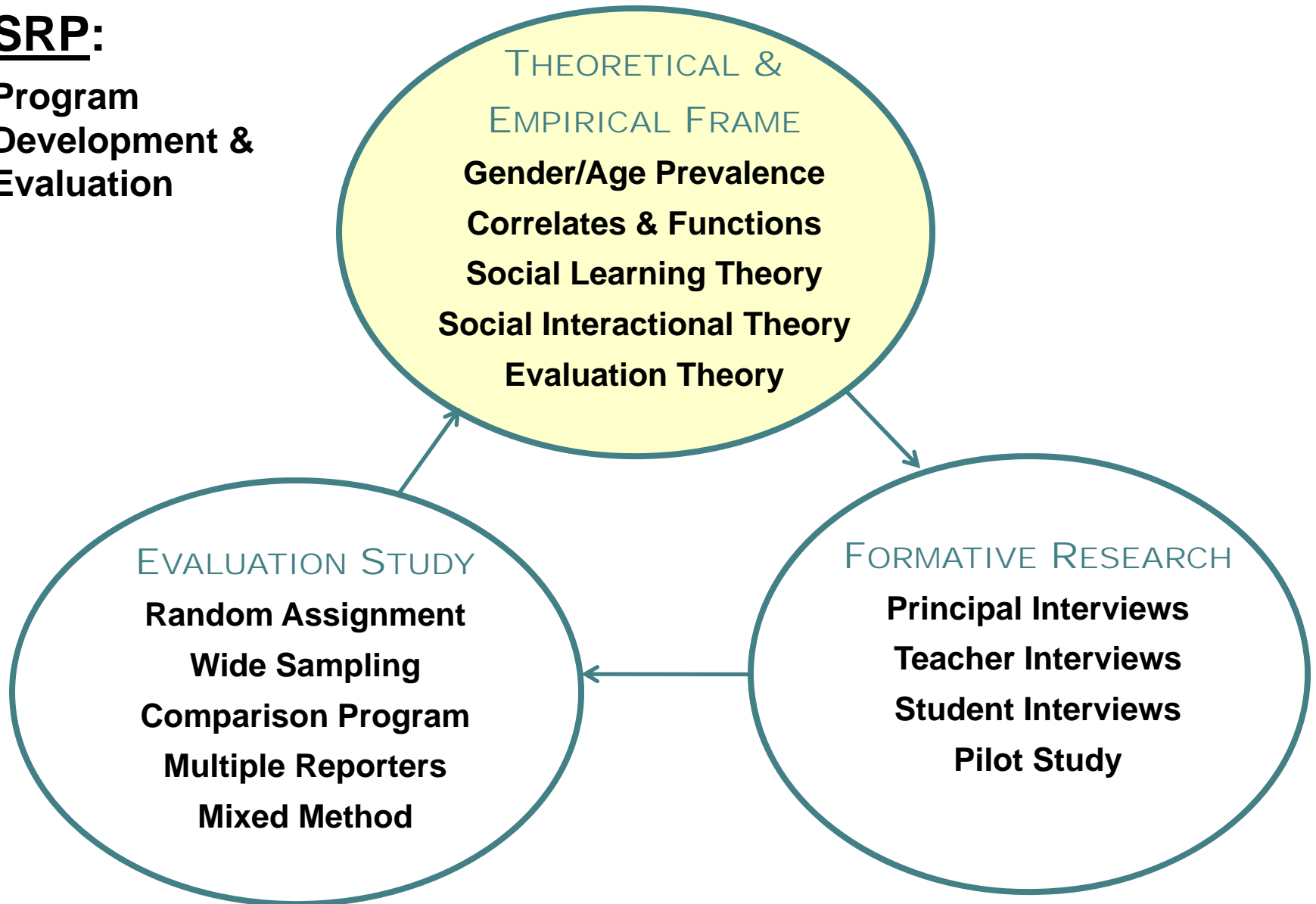
- Content (social aggression)
- Population (5th grade girls)
- Outcomes (cognitive & behavioral)

Guided by:

- Empirical studies
- Theoretical models
- Formative research

SRP:

**Program
Development &
Evaluation**



Empirical Frame: SRP Structure & Content

Research



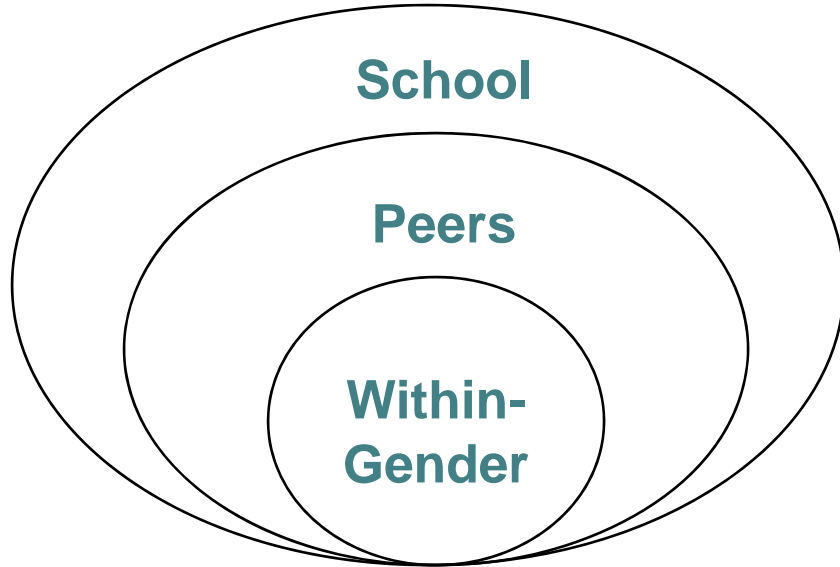
SRP

- Importance of broader *peer group* to outcome
 - Gender and age differences in prevalence and experience
 - Emerging understanding of correlates and functions
 - Empathy
 - Social information processing
 - Instrumental and reactive social aggression
- Focus on *multiple perspectives* of peers within social conflicts
 - Target *female 5th* grade students in *within-gender* groups
 - Curriculum content focuses on...
 - Empathic understanding
 - Social problem-solving
 - Both instrumental and reactive social aggression

Crick, 1995; Dodge & Coie, 1987; French et al., 2002; Paquette & Underwood, 1999; Pepler & Craig, 1995; Rys & Bear, 1997; Underwood, 2003; Xie et al., 2002; 2003

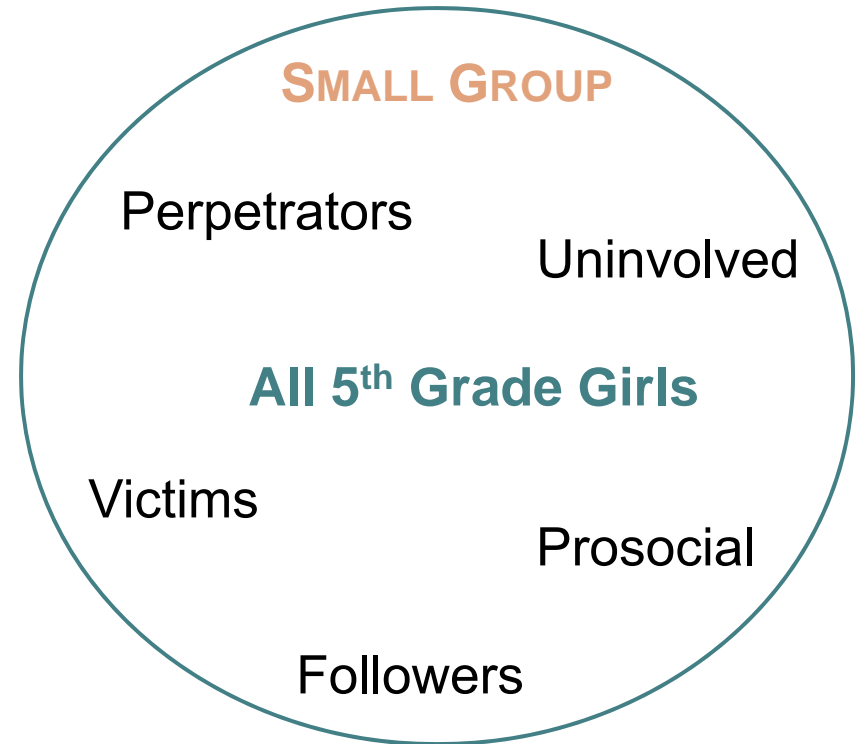
Theoretical Frame: SRP Structure

Social Interactional Theory



Paquette & Underwood, 1999; Grotmeter & Crick, 1996; Craig & Pepler, 2000; Xie et al., 2002

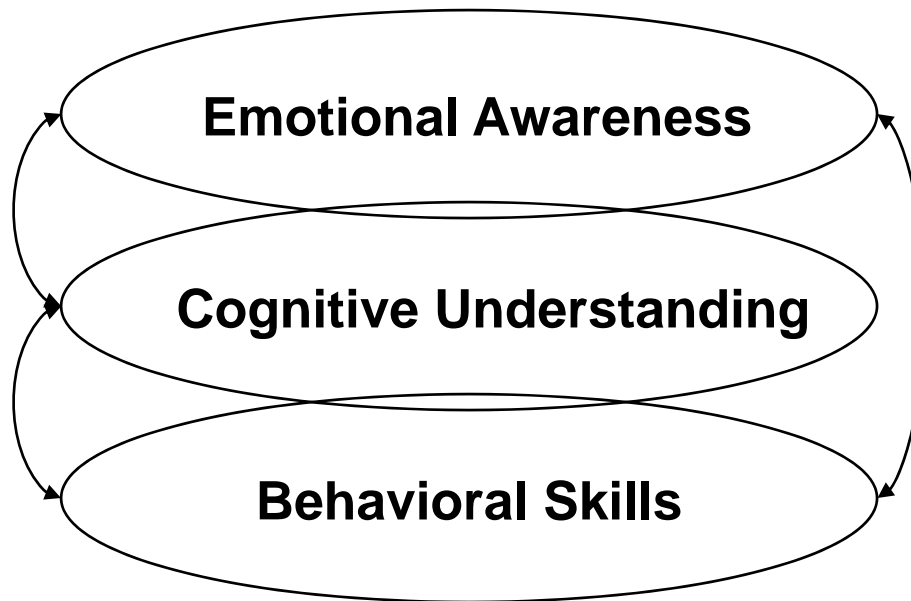
Social Learning Theory



Bandura, 1973; Huesmann & Eron, 1984; Craig, Pepler, & Atlas, 2000

Theoretical & Empirical Frame: SRP Content

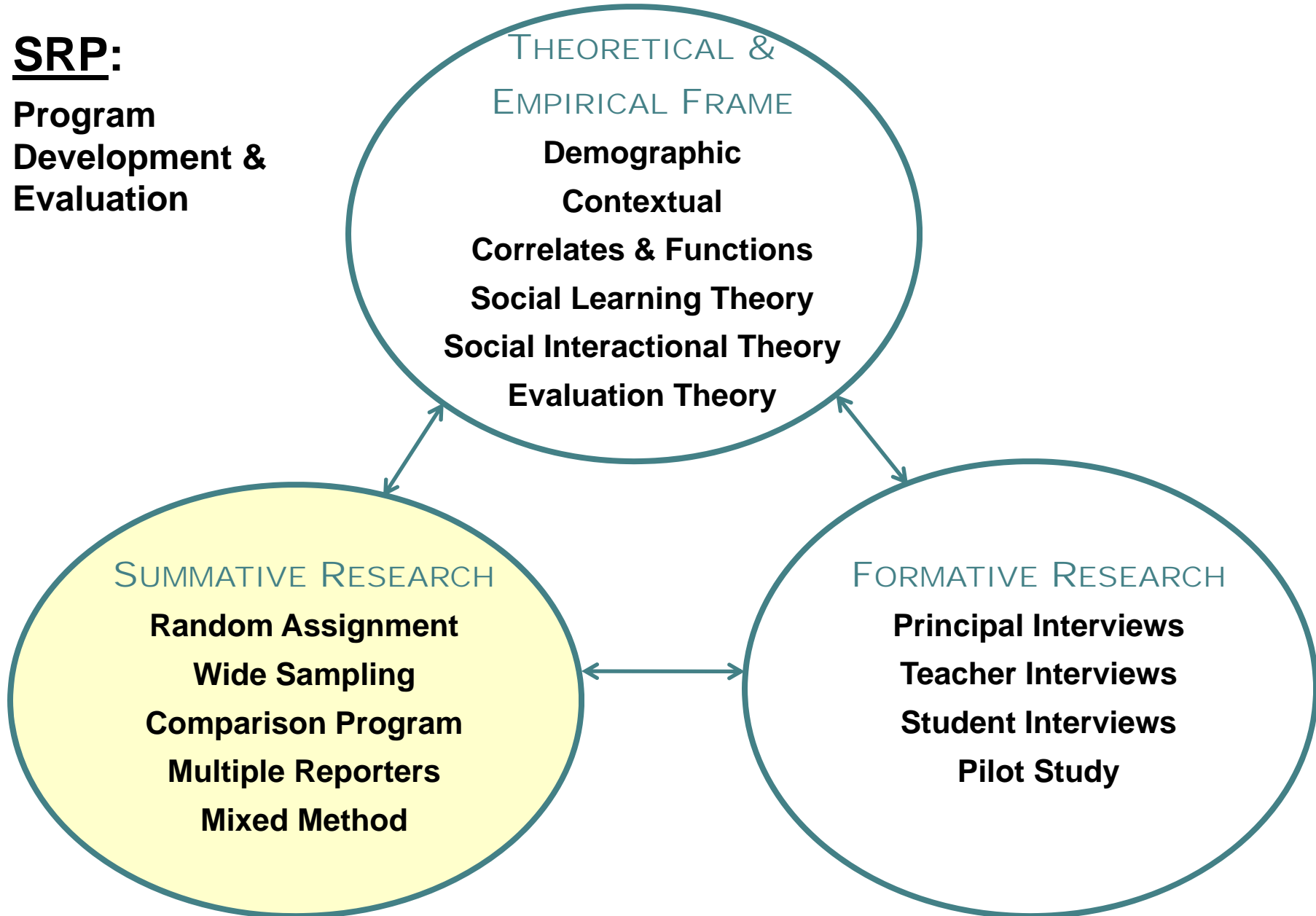
ABCD Model of Development (encompasses multiple theories)



PATHS; Greenberg & Kusché, 1993; Greenberg et al., 1995

SRP:

**Program
Development &
Evaluation**



Evaluation Design

- Random assignment + wide sampling
- Comparison program: ***Reading Club (RC)***
 - Matched SRP in structure, not content
 - Allowed study of curriculum *content*
 - Designed to advance reading skills
- Multiple reporters (teachers, peers, self)
- Mixed method (quantitative, qualitative)
- Short-term longitudinal (fall, spring)
- Outcome and fidelity measurement

Participants

N = 134 female students

- SRP = 70
- RC = 64

Ethnically diverse

- Caucasian 26.1%
- African-American 25.4%
- Latina 23.9%
- Asian 18.7%
- Other 6.0%

Average age = 10.5 years old

Urban fringe, northern CA

1 public school district

6 elementary schools

- Average school size 476

13 teachers

- Average class size 30
- 5th grade or combined 4/5, 5/6

Low-middle income families

- 37% free/reduced price lunch

Measures

Demographic: Student and School-Level

Wechsler Individual Achievement Test (WIAT): Basic Reading Subtest

Fidelity Measures: Weekly Session Summary + Group Experience Form

Social Aggression Problem-Solving Scenarios

- Hypothetical scenarios from multiple perspectives within relational conflict
- “*What do you say or do?*” Responses recorded verbatim; Coding manual: Prosocial/Assertive (+1); Neutral/Unsophisticated (0); Antisocial/Aggressive (-1)
- Adequate interrater reliability (Cohen’s kappa = .75-.83)

Children’s Social Behavior Scale – Revised

- Peer-report & Teacher-report
- Aggression Perpetration (Relational & Overt) & Prosocial Behavior
- Continuous data: Frequency with which child used behavior

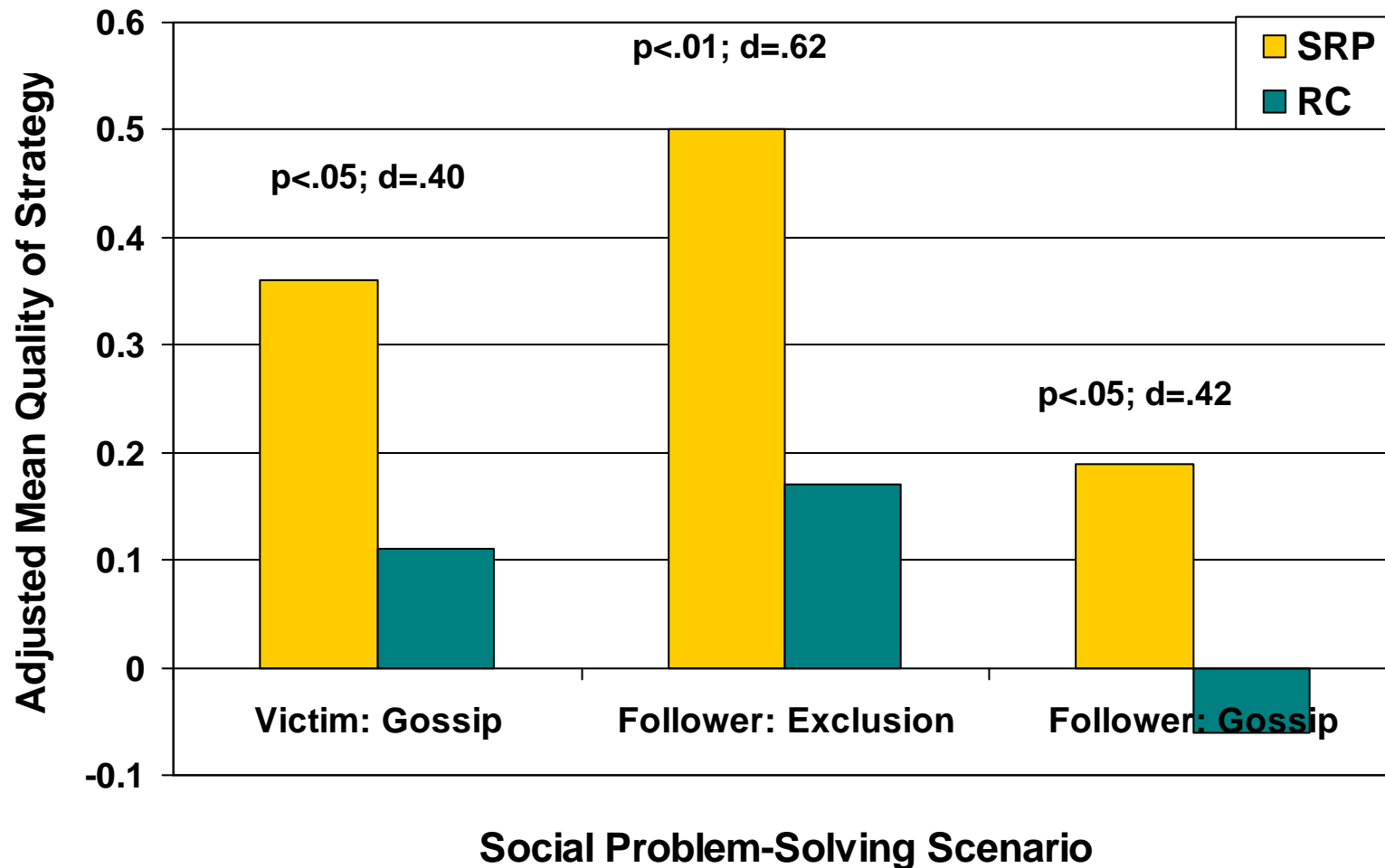
Empathic Behavior Scale – Short Form

- Teacher-report

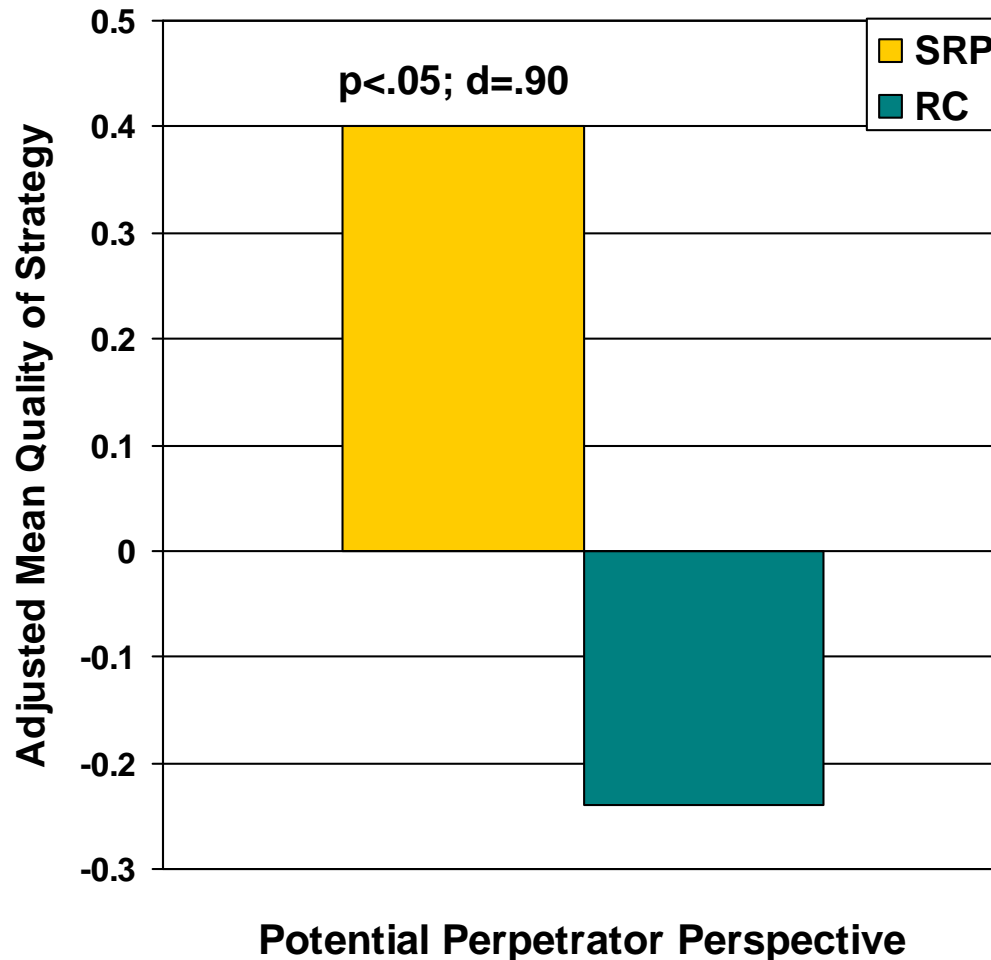
Highlights of Results

- Implementation quality high
 - Overall program impact on *social problem solving* from multiple perspectives (victim & follower)
 - Program impact on teacher-reported prosocial behaviors for students with high social problems at the start
 - Curriculum content important: RC participants improved reading achievement at higher rates than SRP participants
- *No significant findings for peer report social behaviors or teacher report social aggression perpetration

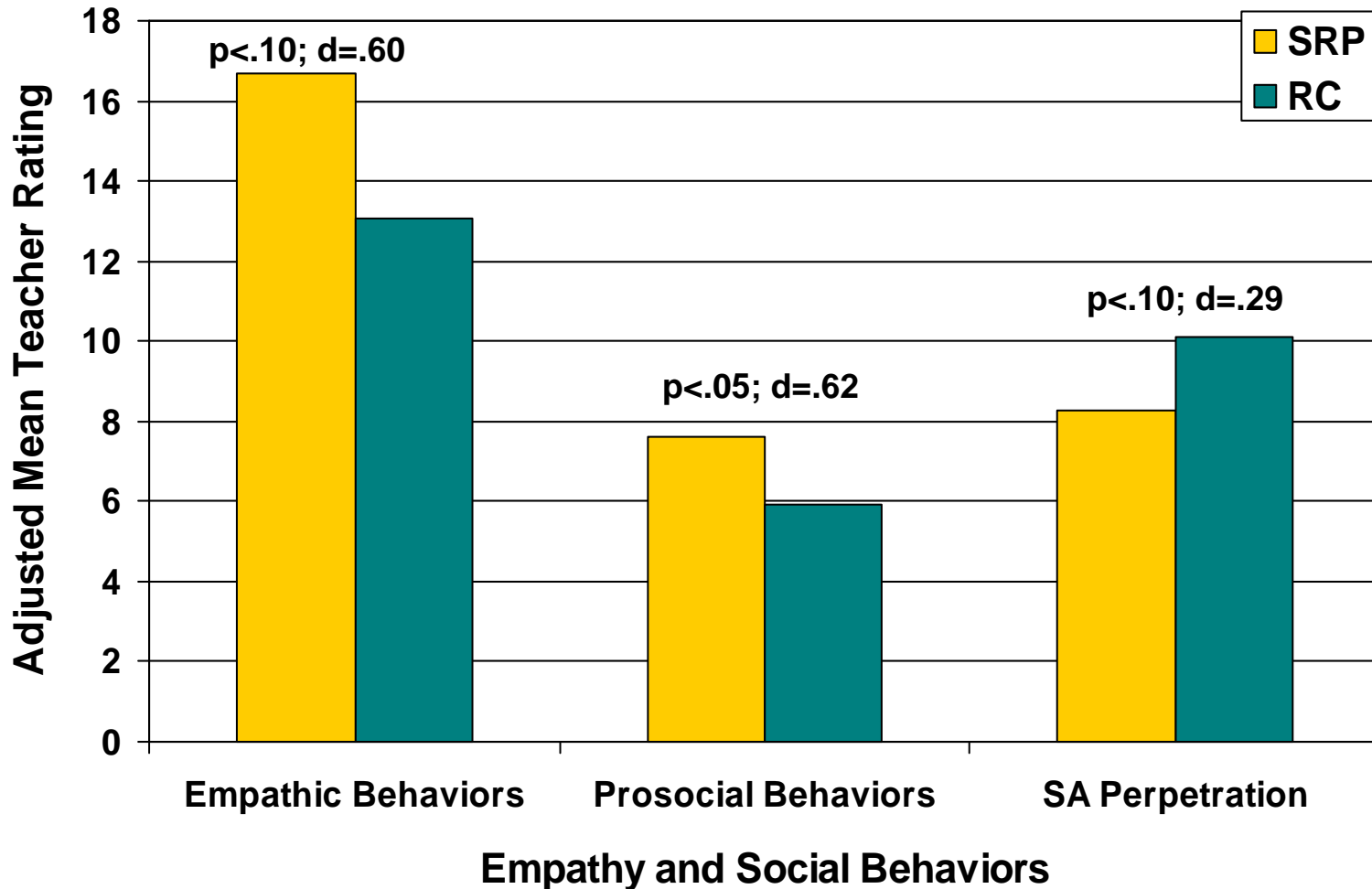
Quality of Social Problem-Solving: Victim and Follower Perspectives



Quality of Social Problem-Solving: Perpetrator Perspective (Students with High Baseline Social Problems)



Teacher-Reported Empathic and Social Behaviors: (Students with High Baseline Social Problems)



Discussion

1. Impact on *Positive* Social Behaviors

- Matched emphases in program curriculum
- Easier to add prosocial strategies than remove antisocial ones?
- Need intervention components at multiple levels

2. Discrepancy by Reporter (Teacher & Peer)

- Different contexts in which behavior is observed
- Different definitions of behaviors
- Power of reputation among peers

3. Cognitive versus Behavioral Change

- Emphasized in program
- Self-report measure
- Cognitive change may precede behavioral change

SRP In Sum

CURRENT PROGRAM:

1. Systematic process of developing and studying a targeted, small scale program in schools
2. Focus on peer group and multiple perspectives within girls' social conflicts
3. Impact on social problem solving and prosocial behaviors, particularly among those with social problems at the start

NEXT STEPS:

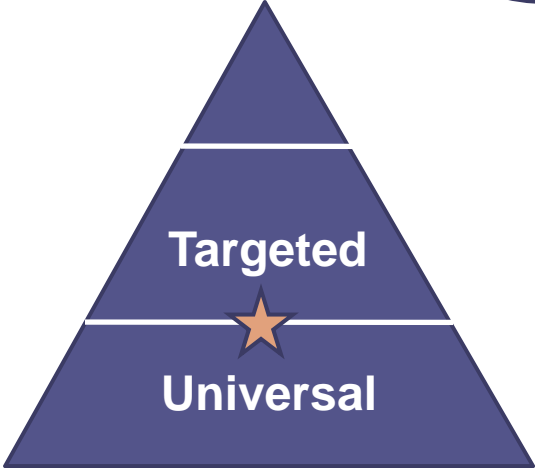
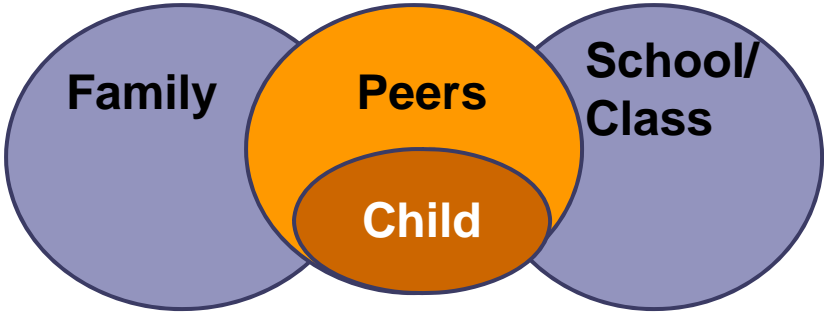
1. Sustainable integration of intervention into broader multi-level programs in schools
2. Contextual-level analyses: Peer social networks and classroom climate

Where Does This Intervention Study Fall?

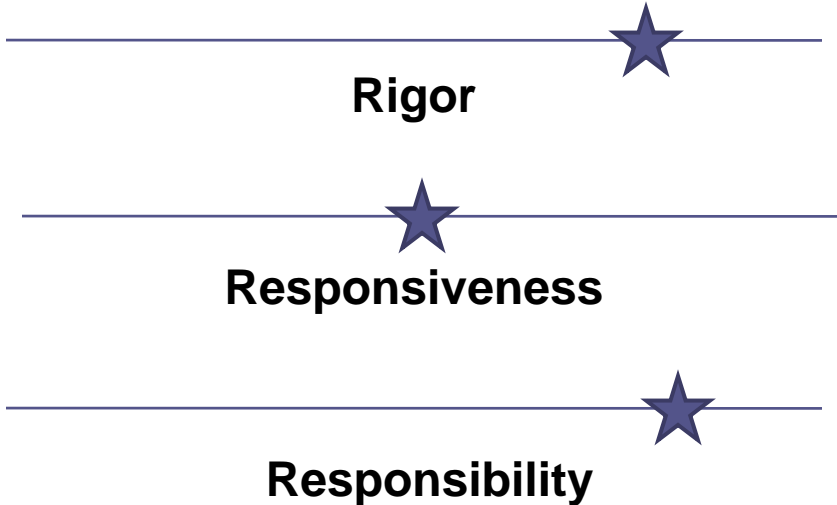
Efficacy

Effectiveness

“Dissemination”



Intervention Continuum





Links to Learning (L2L)

New mental health service model bridging ...

- Prevention and treatment in schools
- Achievement and mental health
- School and community

... focused on ...

- Academically struggling schools in high poverty urban neighborhoods
- Sustainable mental health services

Need for New Model

- Schools are de facto providers of social services for youth (provide 70-80% of psychosocial services); Teachers as unacknowledged mental health providers
- Unmet psychosocial needs of children and families overwhelm the resources of schools and undermine their capacity to educate children
- Few mental health service models are *effective, sustainable, and integrated* into high poverty school settings
- Prevention program implementation is often inconsistent, treatment remains separate, and the business of schools – learning – is not the primary goal

Schools as a Context for Mental Health

Academic achievement linked with:

- Enhanced sense of competence or self-concept
- Social emotional adjustment
- Supportive relationships with peers, teachers, parents

Particular instructional strategies predict mental health:

- Individual or class-wide tutoring promotes learning and social-emotional outcomes
- Peer assisted learning approaches can improve time on task and social competence

Links to Learning (L2L) Overview

- Unite key adults in children's lives around *learning*
- *Link* community mental health providers with teacher leaders and parent advocates to support teachers and parents to promote children's learning
- Focus on children in grades K-5 in high poverty Chicago Public Schools identified with *disruptive behavior disorders*
- *Compare* classroom- and home-based model focused on children's learning with clinic-based mental health services
- *Sustain* program through fee-for-service Medicaid billing

Empirical and Theoretical Base

Ecological theory

- Interacting contexts of development
- Focus on natural settings where children live

Public health models

- Universal → targeted → intensive
- In high need settings, prevention is first priority

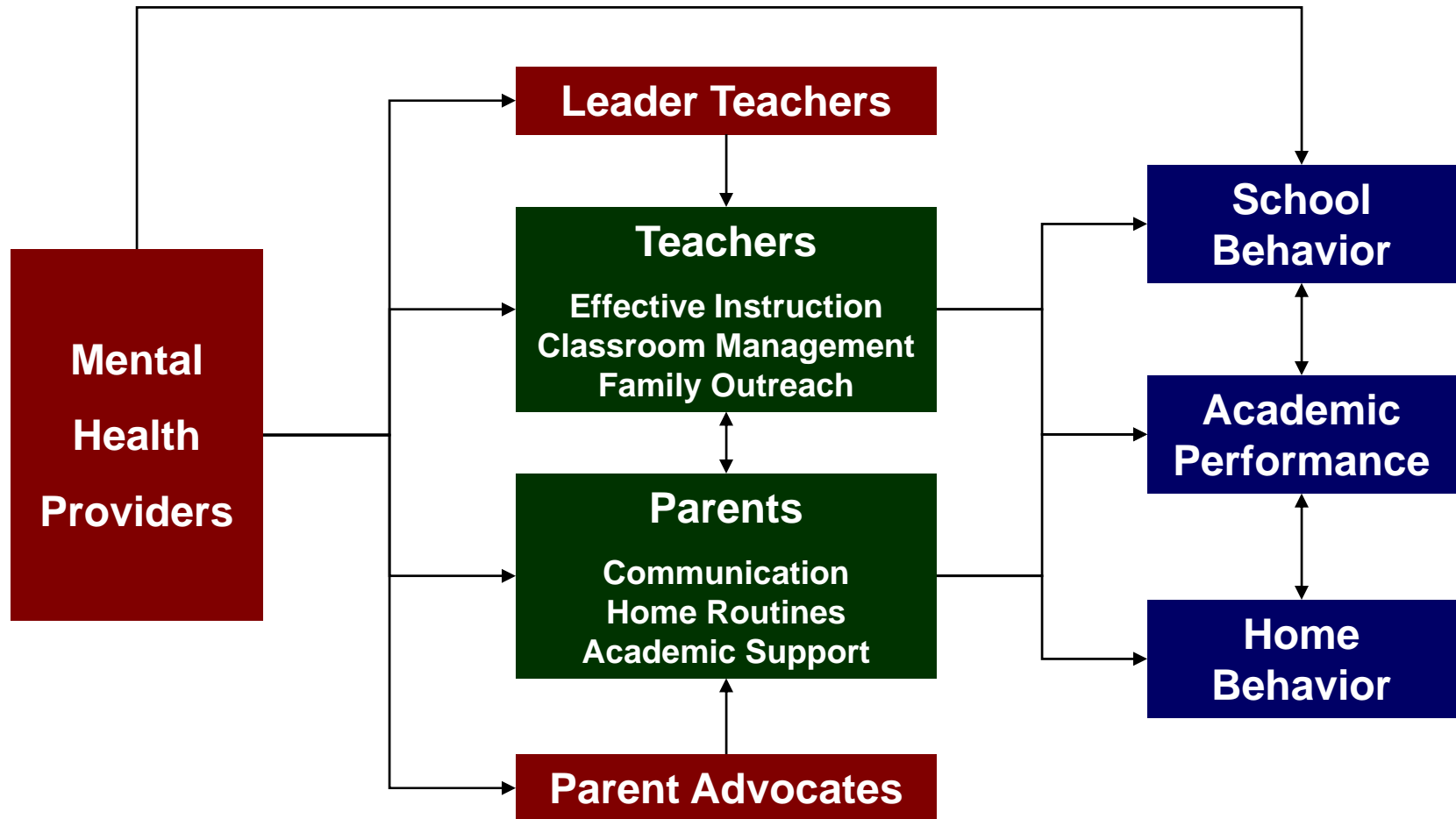
Diffusion of innovation theory

- Influential peers are instrumental as change agents
- Innovative interventions are initiated by opinion leaders in a social network

Empirically-based predictors of learning

- Classroom = instructional method; classroom management; family outreach; teacher-student relationships
- Home = Communication about learning; Home routines

Links to Learning Intervention Model



L2L Research Design

(NIMH R01MH073749)

- Longitudinal field experiment
 - **3 years:** 2+ year intervention & ½+ year follow-up
 - **Random assignment** at school level to intervention (L2L) and control conditions (enrolled in clinic services)
- Multi-informant, multi-method
 - **Parents** (child behavior; family stress, support, services, etc.)
 - **Teachers** (child behavior, achievement; work life, climate, etc.)
 - Classroom **observations** (emotional support, instructional support, classroom organization; on- & off-task behavior)
 - **School records** (grades, test scores, attendance, discipline)
 - **Individual assessment** (reading achievement)
 - **Implementation fidelity** (content, quality, dosage)

Curriculum Content

Classroom: Predictors of Learning

Instructional Method Classroom Management Family Outreach

Universal

Peer Tutoring

Good Behavior Game

Good News Note

Targeted

Individual Tutoring

Self-Monitoring

Daily Report Card

Family: Home Environments that Support Learning

1. Communication about Learning (parent-child and parent-teacher)
2. Home Routines that Support Learning
 - Focus on Homework Completion
 - Focus on Reading Development

Participants

N = 170 students

- L2L = 100
- Control = 70

African-American = 100%

Free lunch = 100%

All students met criteria by teacher- and/or parent report for 1 or more Disruptive Behavior Disorder (ADHD, ODD, and/or CD)

Chicago Public Schools

7 elementary schools

- <33% state reading test scores
- >85% African-American
- High poverty neighborhoods
- Within 1 SD of mean CPS school size

78 K-5th grade teachers

3 Community MH Agencies

Preliminary Findings

- L2L is **feasible** to implement in high poverty schools
- Families and teachers are **satisfied** with support
- Early indications (6 months) that L2L students are **remaining stable** or **improving slightly** in problem behaviors and academic achievement; *control students are getting worse*

BUT... addition of 9 new schools in Cohort 2 interrupted by:

- (1) ethical issues related to control condition
- (2) intensity of implementation + cuts in grant budget

Experimental design → Quasi-experimental design

L2L In Sum

CURRENT PROGRAM:

1. Feasible and sustainable model for delivering mental health services in urban communities
2. Integration of universal (prevention) and targeted (intervention) strategies
3. Focus on learning closes school/agency divide

NEXT STEPS:

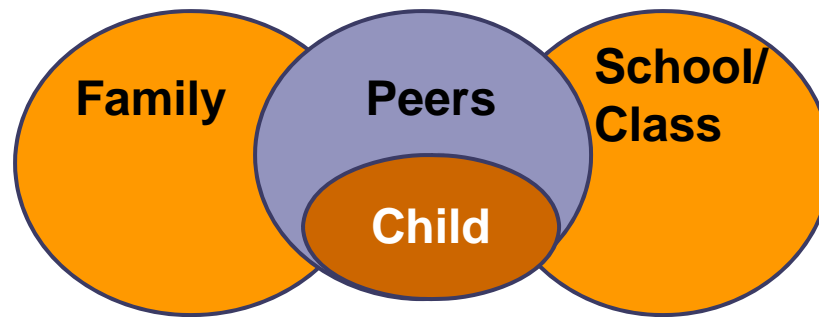
1. Impact on students
2. Focus on peers as resources (alongside parent advocates and leader teachers)
3. “Drill deeper” into urban classroom context (see postscript)

Where Does This Study Fit?

Efficacy

Effectiveness

“Dissemination”



Intervention Continuum

Rigor

Responsiveness

Responsibility

Postscript:

Know your limits and what you don't know

Intervention research in schools:

- Helps us to understand what we do not know (a lot!)
- Provides opportunity for collection of rich data

BUT also:

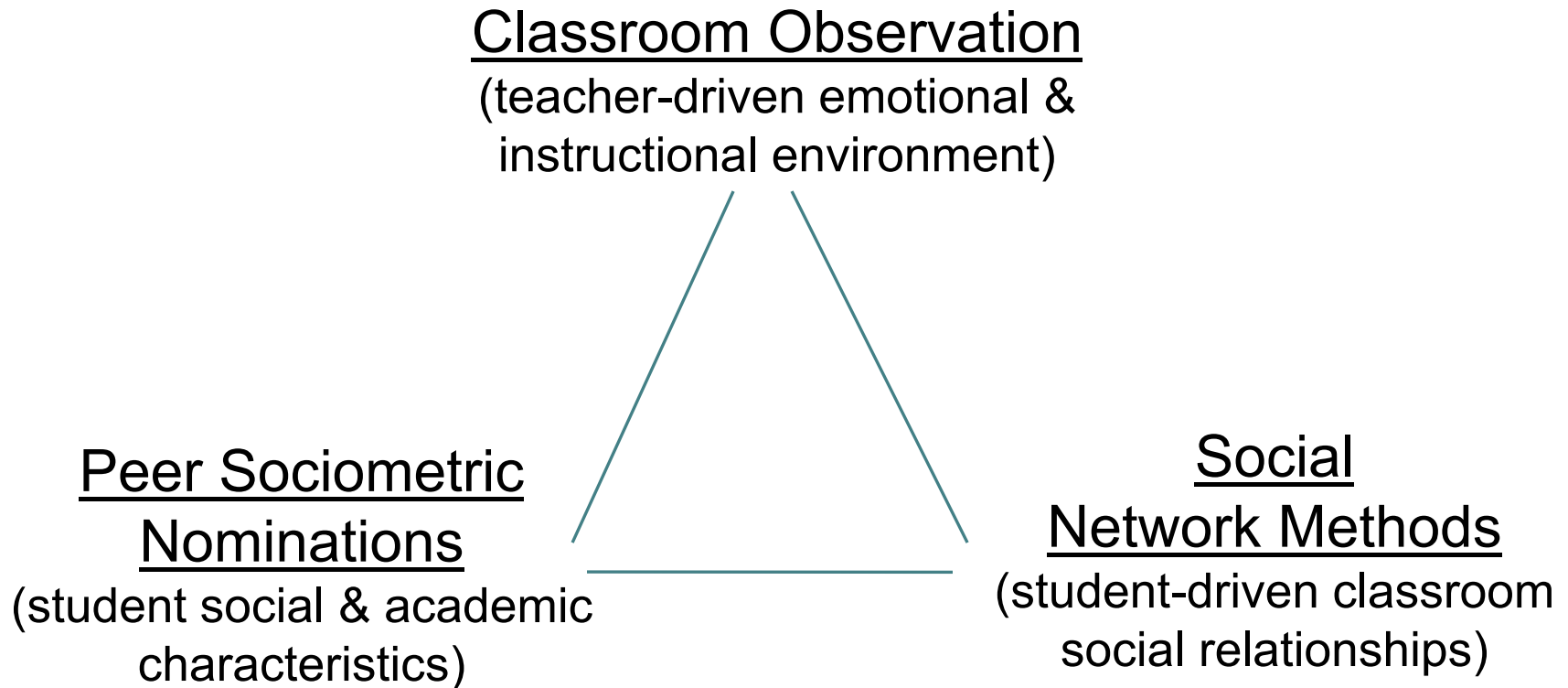
- Takes a LONG time

Basic Research within Intervention Research

Lead to an interest in:

- Unpacking the dynamic and interacting influence of peers and teachers in children's classroom experiences
- Utilizing measurement and analytic advances to gain a more precise and accurate assessment of classroom social, emotional, and instructional processes that relate to child outcomes

Intervention Research Sub-Study: Measurement Innovation



Assess association between teacher-led classroom interactions and characteristics of students positioned across classroom social system

Measures: Social Networks

Cognitive Social Structures (Krackhardt, 1987; Neal, 2008)

Assesses presence or absence of relational tie: “Who does _____ hang out with often?”

1. Individual data *symmetrized* (Borgatti et al., 2002)
 - Average value of report of tie from Rob to Kiara & Kiara to Rob
2. Whole class data *aggregated* using binomial test
 - # of respondents needed to endorse a tie to exceed random chance (considers total # of respondents in each classroom and underlying probability of any child endorsing any tie)
3. Normed network degree centrality
 - Percentage of students in the classroom with whom an individual child spends time (between 0-100)

Measures: Peer Nominations

- Unlimited nominations
- Items developed and tested previously
- Positive descriptors (focus for this study)
- Standardized by classroom

Prosocial Behavior (Crick & Grotpeter, 1995)

3 items: e.g., “Who says or does nice things for other classmates?” ($\alpha = .85$)

Academic Orientation (Lease et al., 2002)

2 items: e.g., “Who tries hard to do good school work?” ($\alpha = .77$)

Measures: CLASS (Pianta et al., 2007)

- 2-hour observations by researchers trained to reliability
- Morning literacy instruction
- Scores averaged across 4 recording periods (scale from 1-7)

Emotional Support ($\alpha = .85$)

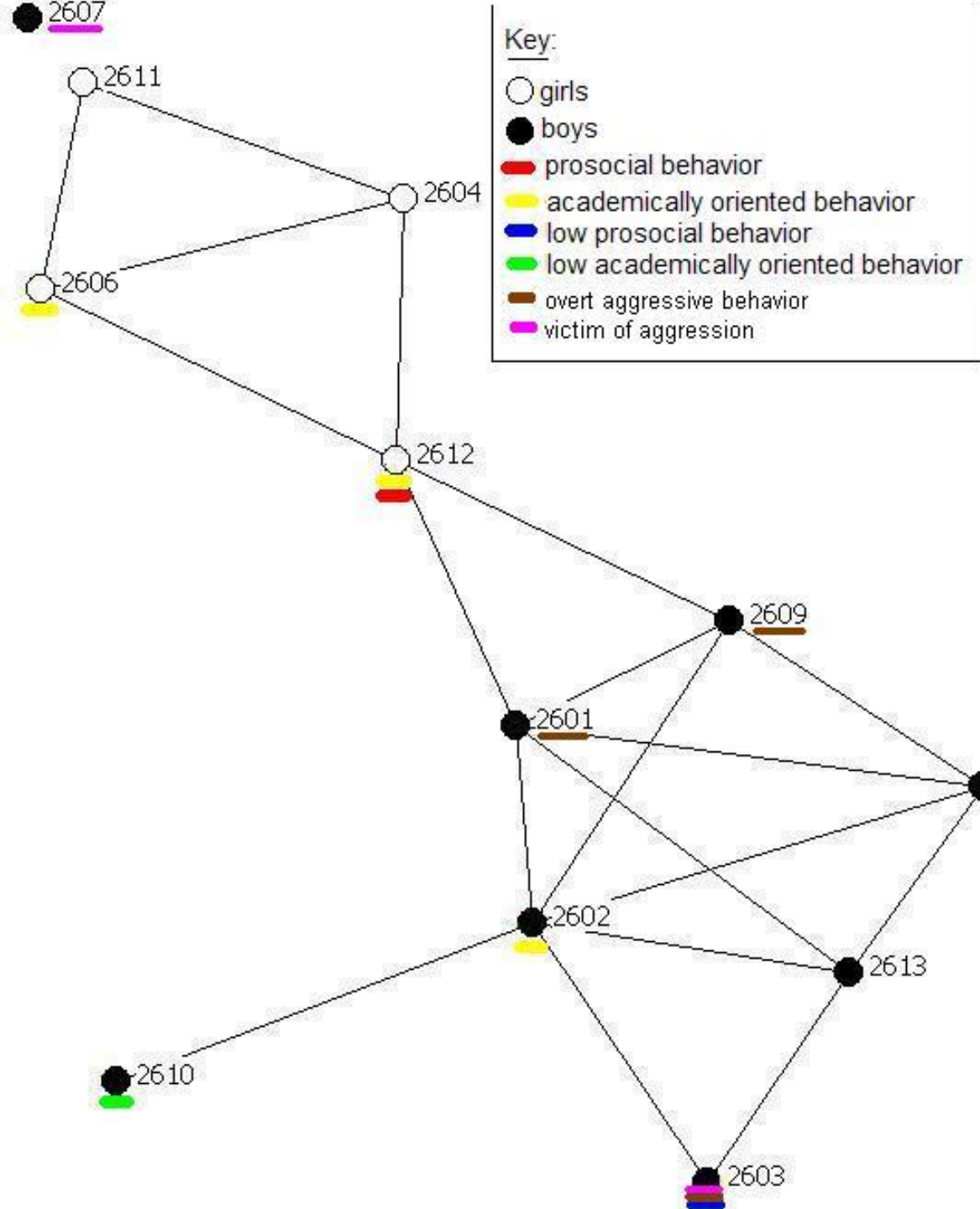
- Positive Climate
- Negative Climate
- Teacher Sensitivity
- Regard for Student Perspectives

Classroom Organization ($\alpha=.84$)

- Behavior Management
- Productivity
- Instructional Learning Formats

Instructional Support ($\alpha=.91$)

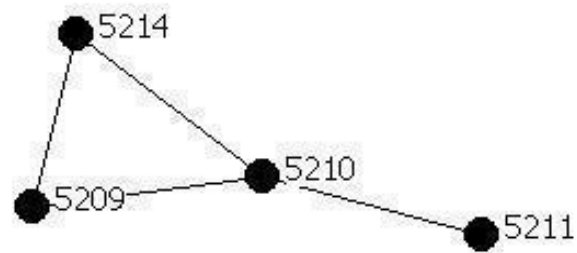
- Concept Development
- Quality of Feedback
- Language Modeling



Teacher ID: 2009
 Classroom: 3rd Grade
 CLASS Dimensions:

Emotional Support (5.13)
 Classroom Organization (4.42)
 Instructional Support (2.92)

5219



KEY:

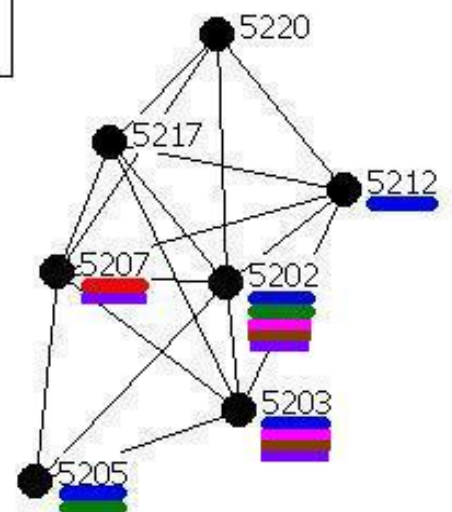
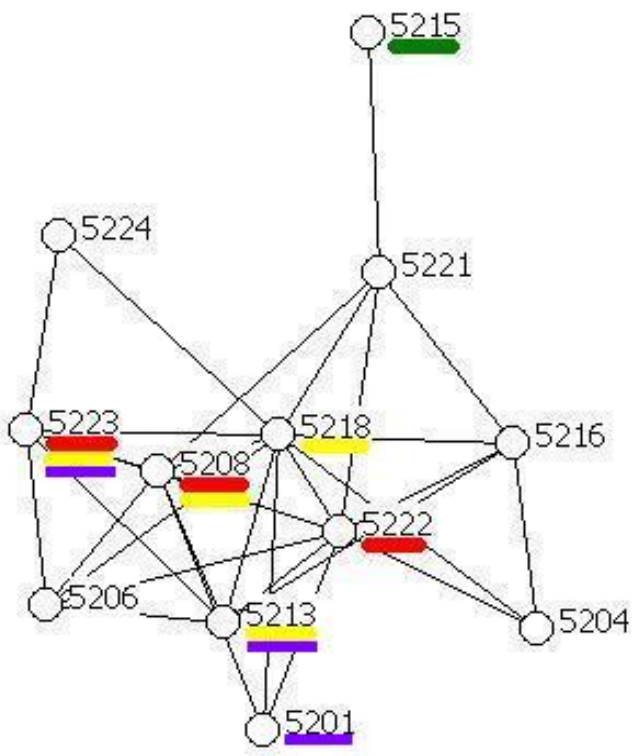
- Girls
- Boys

- Prosocial Behavior
- Relational Aggressive Behavior
- Academically Oriented Behavior
- Overt Aggressive Behavior
- Low Prosocial Behavior
- Victim of Aggression
- Low Academically Oriented Behavior

Teacher ID: 5008
 Classroom: 2nd Grade

CLASS Dimensions:

Low Emotional Support (3.69)
 Classroom Organization (3.75)
 Instructional Support (2.16)



Conclusions

- Maximize rigor, responsiveness, and responsibility while maintaining patience as we strive to reach that goal
- No intervention is all things to all people
- When intervention is grounded in theory, research, and real lives, studies produce both fundamental and applied knowledge
- Beyond knowledge, intervention research provides support to people and settings that can make a meaningful difference in their lives

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