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# Quality of Relationships with After-School Program Staff and Child Developmental Outcomes

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## Others have documented linkages between teacher-child (T-C) relationships and children's school adjustment

- **Birch & Ladd (1997)**
    - Higher T-C conflict in K concurrently associated with less school liking and more school avoidance; T-C closeness in K concurrently associated with higher academic achievement and more school liking
  - **Pianta, Steinberg, & Rollins (1995)**
    - Positive T-C relationships in K related to reductions in the likelihood of retention and referrals for at-risk students
  - **Hughes, Cavell, & Jackson (1999)**
    - In a sample of highly aggressive children, positive T-C relationships predicted declines in aggression over a 1-year period
  - **Hamre & Pianta (2001)**
    - Relational negativity in K predicted lower math and reading achievement, fewer positive work habits, and more disciplinary infractions in Grades K-4 controlling for gender, ethnicity, verbal IQ, and prior behavior problems
  - **Birch & Ladd (1998)**
    - T-C conflict in K predicted declines in prosocial behaviors and increases in peer reports of aggression in first grade
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## Similar relations have been found in younger children who attend child care

- Howes & Hamilton (1993)
    - Older toddlers who experienced a negative shift in the quality of T-C relationships displayed more aggressive behaviors in child care
    - Younger toddlers who became more secure displayed relative gains in prosocial behaviors
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## Several processes have been suggested as contributing to these obtained relations

- **Attachment security** – Children who are securely attached to their teachers may feel freer to explore, may be less preoccupied, and may display greater cognitive flexibility
  - **Motivational factors** – Children who have more positive relationships with their teachers may like school more and be more attentive to their teachers, which may improve academic performance
  - **Social referents** – Children may use teachers' behaviors as a guide or referent for their own positive (or negative) evaluations of classmates and interactions with classmates
  - **Time and effort allocations** – Teachers may expend less time and effort with students with whom they have conflictual or negative relationships
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## In this presentation, we extend consideration of adult-child relationships to the related context of after-school programs

Almost 2.5 million children (K-G2) attend after-school programs for 7.5 hr/wk on average (U.S. Department of Education, 2004).

Questions have been raised about the effects of these experiences on academic, social, and behavioral outcomes (see National Research Council, 2002, 2003).

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**Positive relationships between children and program staff are believed to be important, but there has been little systematic study of effects associated with staff-child relationships**

■ **Pierce, Hamm, & Vandell (1999)**

- Staff positivity associated with boys displaying fewer internalizing and externalizing problems at school according to first grade teachers
- Staff negativity associated with poorer reading and math grades in boys

■ **Vandell & Pierce (2001)**

- Positive caregiving by staff predicted higher academic grades and better work habits for boys and girls in Grade 3
  - Supportive relations with staff also predicted less loneliness and depressive symptoms in Grade 3
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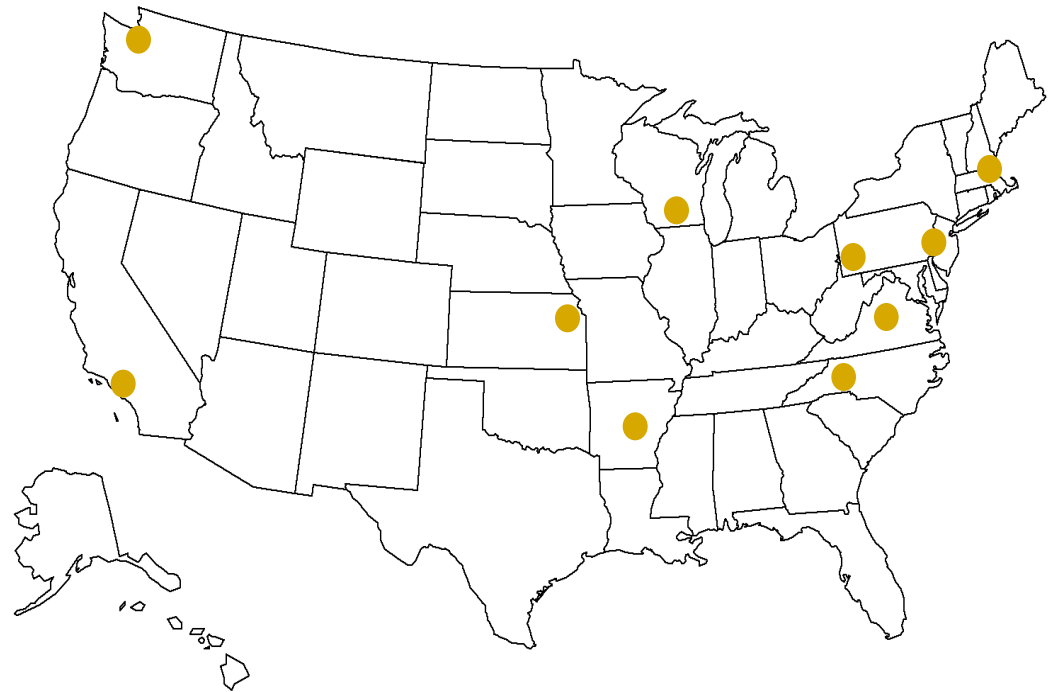
**The current study uses data from the NICHD Study of Early Child Care to extend the study of staff-child relationships**

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# Sampling Plan and Recruitment

- 10 sites selected by competitive review of proposals (scientific merit), not on basis of demography.
- All births in 24 study hospitals defined the *catchment*, which is the “reference population of the study.”
- Sampling designed to produce unbiased estimates of effects for the catchment while assuring adequate representation of major socio-demographic niches.

## Location of Data Collection Sites



# Sample Demographics

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	<b>1 Month</b> N=1364	<b>Grade 1</b> N=137
<b>Child gender</b>		
% boys	51.7	48.9
<b>Child ethnicity</b>		
% minority	23.6	20.4
<b>Income-to-needs</b>		
% poor or near poor	37.9	15.9
<b>Maternal education</b>		
M years	14.2	15.2

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# Measures of the Family & School Contexts

- **Family context**

- Demographic factors: Family structure, maternal education, child gender
- Observed mother-child interaction in Grade 1

- **School context (Grade 1)**

- Observed instructional quality in the classroom
  - Observed emotional quality in the classroom
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# Measures of the After-School Context

## ■ **Mother reports**

- After-school hrs/wk

## ■ **Program staff reports**

- Childrearing beliefs (Schaefer & Edgerton, 1985)
    - 5-point Likert scales
    - Authoritarian beliefs (30 items; alpha = .90 )
  - Teacher-Child Relationship Scale (Pianta, 1994)
    - 5-point Likert scales
    - Closeness (8 items; alpha = .84)
    - Conflict (7 items; alpha = .85)
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# Child Developmental Outcomes in Grade 1

- **Externalizing behavior problems**
  - ❑ Mother: Child Behavior Checklist (33 items, alpha = .89)
  - ❑ Teacher: Teacher's Report Form (34 items, alpha = .94)
  
- **Social skills: Social Skills Rating System**
  - ❑ Mother: 38 items, alpha = .88
  - ❑ Teacher: 30 items, alpha = .93
  
- **Academic achievement: Woodcock-Johnson Revised**
  - ❑ Letter-Word Identification
  - ❑ Applied Problems
  
- **Academic performance: Mock Report Card**
  - ❑ Academic grades (6 items, alpha = .93)
  - ❑ Work habits (6 items, alpha = .95)

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# Analytic Plan: Hierarchical Multiple Regressions

## Block 1

- Boys (1=yes)
- Single parent (1=yes)
- Maternal education
- Mother positive caregiving
- Classroom instructional quality
- Classroom emotional quality
- Prior functioning at 54 months

## Block 2

- Staff-child conflict
  - Staff-child closeness
  - Staff childrearing beliefs
  - Hours in after-school care
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# RESULTS

	Block 1	Block 2	Staff-child conflict	Staff-child closeness	Childrearing beliefs	After-school hours
	Adj R <sup>2</sup>	ΔR <sup>2</sup>	beta	beta	beta	beta
Externalizing (M)	.575***	<b>.032*</b>	<b>.179*</b>	.035	.007	.065
Externalizing (T)	.333***	<b>.092**</b>	<b>.357*</b>	.049	.025	.028
Social skills (M)	.351***	.033	-.088	.102	.130	-.026
Social skills (T)	.207***	.045	<b>-.241*</b>	-.067	-.053	-.003
WJ letter-word	.254***	<b>.063*</b>	<b>-.162<sup>+</sup></b>	<b>.167*</b>	-.034	-.099
WJ applied problems	.390***	<b>.049*</b>	<b>-.148<sup>+</sup></b>	.092	<b>-.141<sup>+</sup></b>	-.071
Academic grades	.190***	.047	-.108	<b>.180*</b>	-.002	-.016
Work habits	.153***	.024	-.132	-.010	-.106	.052

## Effect Sizes Associated with Staff-Child Conflict

	<i>d</i>	<i>r</i>
Externalizing (M)	.91	.41
Externalizing (T)	1.35	.56
Social skills (T)	-.93	-.42
WJ letter word	-.57	-.28
WJ applied problems	-.44	-.21

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## Effect Sizes Associated with Staff-Child Closeness

	<i>d</i>	<i>r</i>
WJ letter-word	.54	.26
Academic grades	.66	.31

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# CONCLUSIONS

- The quality of children's relationships with after-school program staff is associated changes in academic, social, and behavioral functioning.
    - Staff-child **closeness** predicted relative **gains in reading achievement and academic grades**. These effects are medium in size, according to Cohen's rubric. The findings are consistent with other research that has found teacher-child closeness to be associated with gains in academic performance.
    - Staff-child **conflict** predicted **increases in externalizing problems** according to teachers and mothers. These effects were medium to large, according to Cohen's rubric. These findings are consistent with other research that has found teacher-child conflict to be linked to increased aggression.
    - Staff-child **conflict** also predicted **decreases in reading and math achievement**. This medium-size effect underscores the importance of social relationships for academic outcomes as well as social outcomes.
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# Limitations

- Relatively small sample
  - Correlational design
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## Next Steps

- Longer term follow-up of the relations between staff-child relationships and child functioning
  - Identification of strategies to improve staff-child relationships
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