

Research on Implementation Fidelity in Early Childhood: Supporting Parent Engagement in Home Visits



Lisa Knoche, PhD
Nebraska Center for Research on Children, Youth, Families and Schools

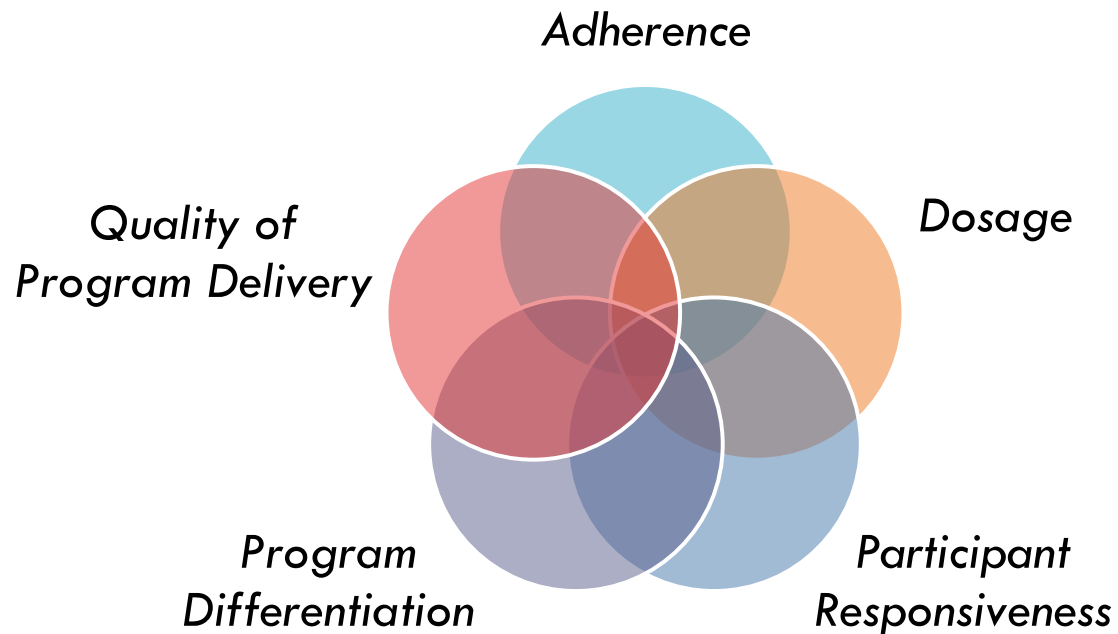
Introduction



- Implementing intervention efforts with fidelity is critically important. To adequately and reliably test the efficacy of interventions or treatment programs, it is necessary to understand if the intervention is actually occurring as designed (Dane & Schneider, 1998).
- Research has illustrated that variations in implementation fidelity contribute to programming **outcomes** (Durlak, 1998; Dusenbury, Brannigan, Falco, & Hansen, 2003; Zvoch, Letourneau, & Parker, 2007).
- ▣ Impact studies of early childhood intervention must take into account factors associated with implementation fidelity to fully understand programmatic outcomes, and the critical features of intervention that are linked to outcomes.

Introduction

- Fidelity can be conceptualized along multiple dimensions:
(Dane & Schneider, 1998)



Introduction

- Currently, there are limited studies in education broadly, and early childhood specifically, that address implementation fidelity.



Purposes of Study



- To examine the implementation efforts of early childhood professionals (ECPs) across both treatment and comparison conditions for individuals involved in the Getting Ready intervention, and
- To specify the relationship between fidelity to Getting Ready strategies and parent engagement.

Getting Ready Intervention



- The Getting Ready intervention is an integrated, multi-systemic, ecologically-based intervention that promotes school readiness through enhancing *parent engagement* for children from birth to age five.
- The model is focused on supporting the dyadic parent-child relationship, and an exchange of ideas and developmentally-appropriate expectations for children between parents and early childhood professionals (ECPs) (Sheridan, Marvin, Knoche, & Edwards, 2008).
- Professionals are trained to use *Triadic* (McCollum & Yates, 1994) and *collaborative* (Sheridan & Kratochwill, 2008) strategies in their work with families.

Getting Ready Strategies

- Establish/re-establish relationship with parent
- Asks parent to share observations and ideas
- Affirm parents' competence
- Establish dyadic context
- Help parents discuss and prioritize concerns/needs
- Focus parent's attention on child strengths
- Provide developmental information
- Brainstorm
- Make suggestions/ provide directives
- Promote practice and interaction through modeling
- Help plan for future goals, directions

Sample

- Participants were 65 early childhood professionals (ECPs) in Early Head Start ($n = 38$) and Head Start ($n = 27$) settings involved in the Getting Ready project.

	<i>Early Head Start</i> ($n = 38$)	<i>Head Start</i> ($n = 27$)	<i>Full Sample</i> ($N = 65$)
Treatment Sample	$n=19$	$n=14$	$n=33$
Comparison Sample	$n=19$	$n=13$	$n=32$
Ethnicity ^a :			
Hispanic/Latino	72%	4%	42%
Non-Hispanic/ Latino	28 %	96%	59%
Mean Age (years)	32.93	35.00	33.88

Educational Background of Professionals

	Early Head Start (n = 38)	Head Start (n = 27)	Full Sample (N = 65)
Level of Education ^a :			
High School Diploma	4%		2%
Some Training beyond High School but not a degree	35%		18%
One-Year Vocational Training Certificate	10%		6%
Two-Year Degree	35%		18%
Four-Year Degree	17%	46%	31%
Some Graduate Coursework		35%	16%
Graduate Degree		19%	9%
Child Development Related Degree	53%	100%	80%
Early Childhood Teaching Endorsement/Certificate	11%	100%	55%
Another Type of Endorsement or Certification	27%	78%	62%
Child Development Associate Credential	39%	10%	27%

^a Chi-square analyses reveal statistically significant distributions between EHS and HS groups, $p < .001$.

Experience of Professionals

	<i>Early Head Start</i> (<i>n</i> = 38)	<i>Head Start</i> (<i>n</i> = 27)	<i>Full Sample</i> (<i>N</i> = 65)
Mean Length of Employment	2.45 years	3.17 years	2.79 years
Mean Early Childhood Setting Experience	6.32 years	9.54 years	7.90 years
Mean Home Visiting Services Experience	2.78 years	4.10 years	3.40 years
Mean Length of Time in Intervention	11.73 months	15.09 months	13.22* months

* $p < .05$. ** $p < .01$. *** $p < .001$

Procedure

- Digital video recordings of home visits completed by ECPs in both the treatment and comparison conditions were collected initially after four months of involvement in the Getting Ready study, and then at least twice per year.
 - ▣ Between 1 - 7 home visits were recorded for each professional; a total of 154 visits were taped.

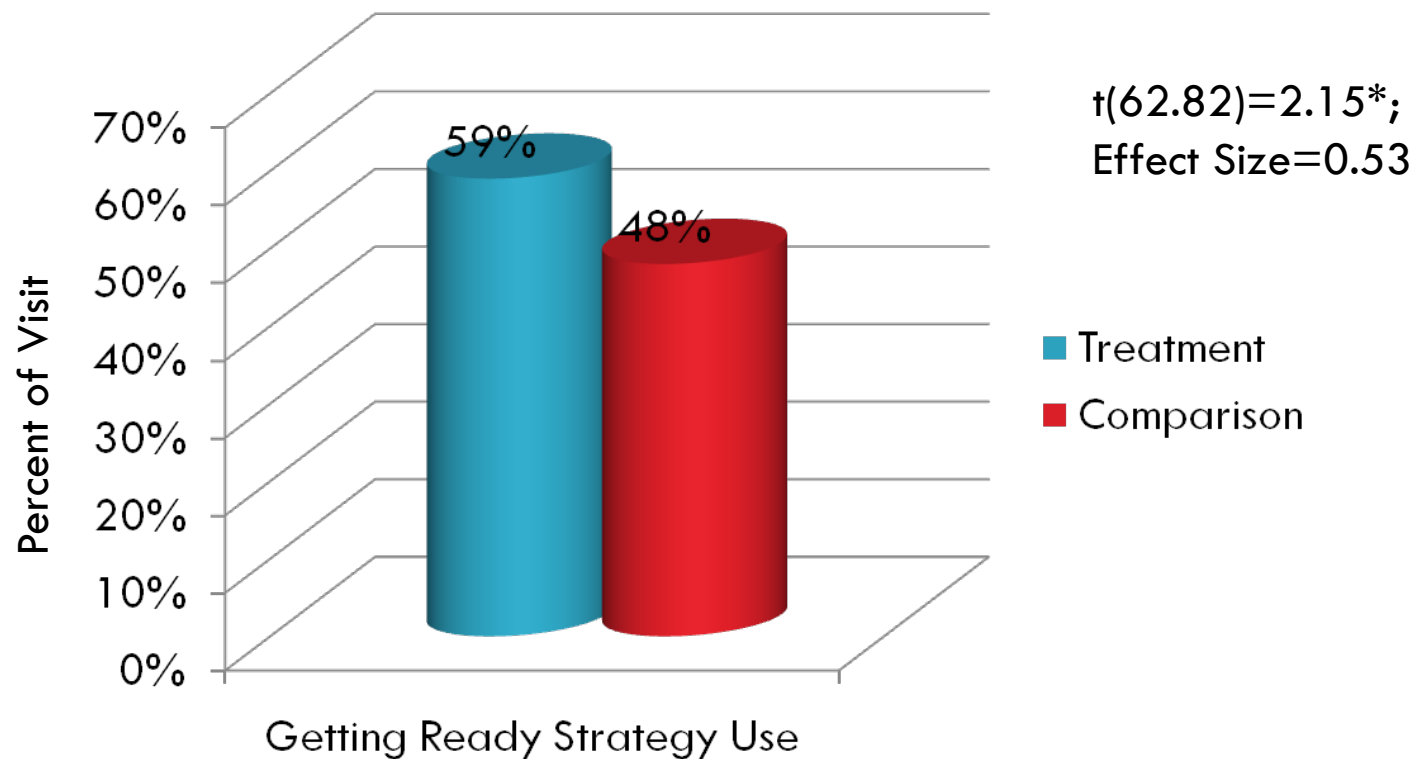
- Videos were rated by six trained, reliable coders using the modified *Home Visit Observation Form* for:
 - ▣ ECP's use of individual strategies (i.e., rate with which each Getting Ready strategy was used during home visit) as well as the total rate of strategy use and;
 - ▣ ECP's effectiveness at initiating overall parental interest and engagement as well as the interest and engagement levels between parents-children, and parents-ECPs, and ECPs-children.
 - ▣ The rate of interaction between parents-children, parents-ECPs and ECPs-children.

Question 1

Do early childhood professionals in the Getting Ready treatment group demonstrate greater frequency of intervention strategy use and more effectively engage parents than those in the comparison condition, following training?

Results/ Findings

- Early childhood professionals in the treatment group utilized Getting Ready strategies more than comparison ECPs over the course of a home visit.

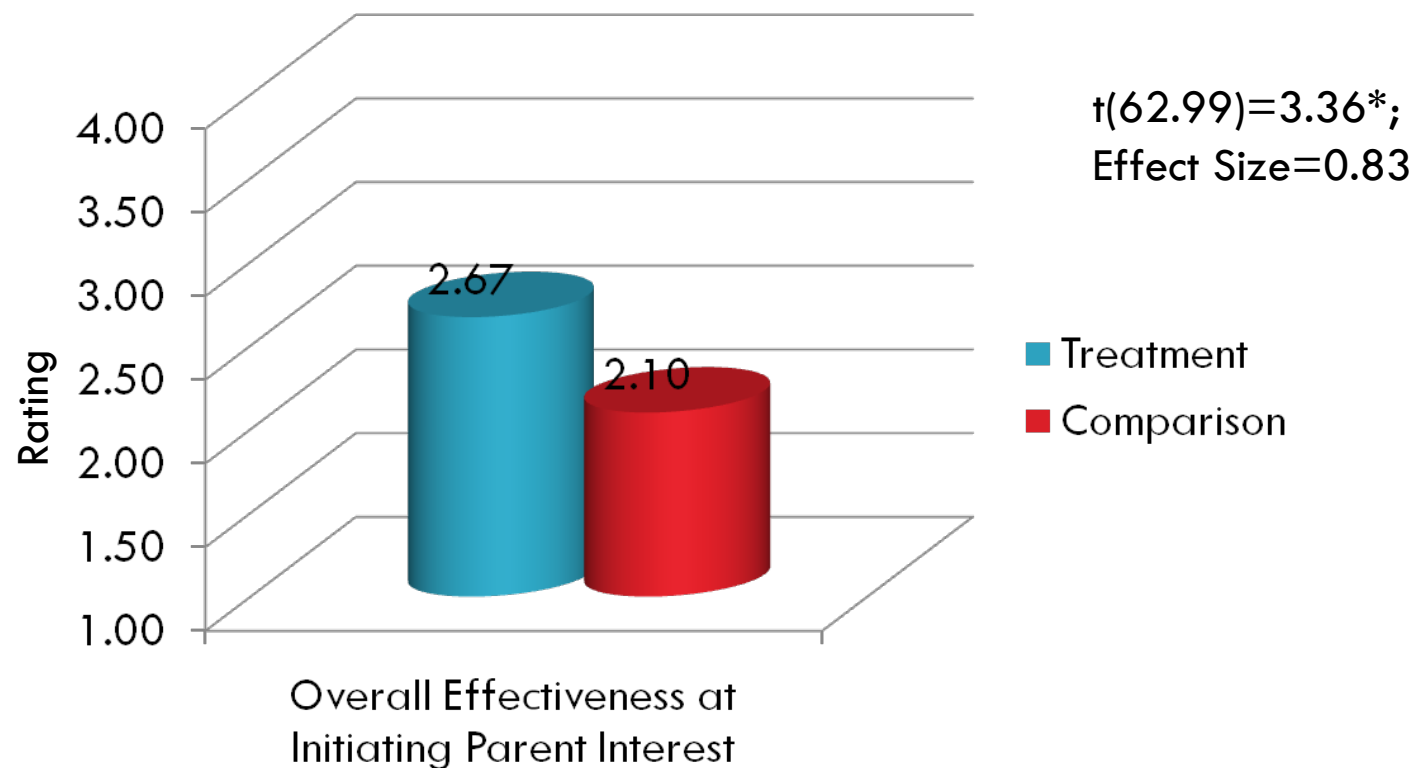


Results/ Findings

- *Relative to comparison participants, treatment group participants:*
 - **offered more affirmations of parent's competence;**
($t(46.67)=3.94^{***}$; Effect Size=0.97)
 - **engaged in a higher rate of brainstorming with families during the home visit;**
($t(43.67)=2.27^*$; Effect Size=0.55)
 - **demonstrated more frequent efforts to establish the dyadic context between parent and child.**
($t(62.95)=2.35^*$; Effect Size=0.58)

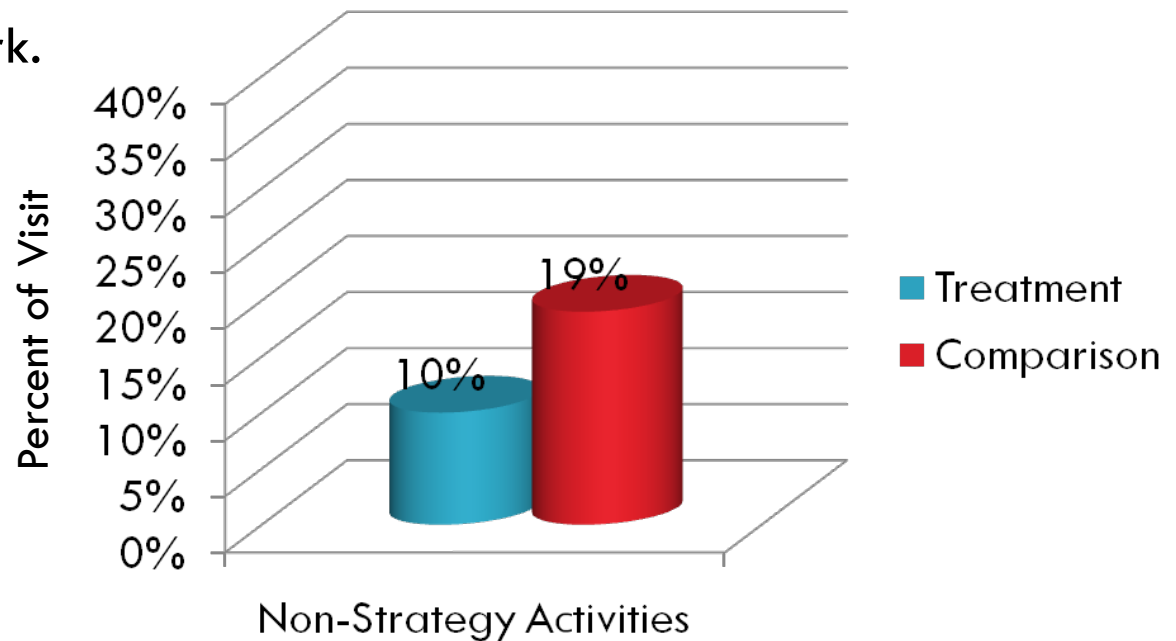
Results/ Findings

- Early childhood professionals in the treatment group were rated to be **more effective** at initiating parental interest and engagement during the home visit.



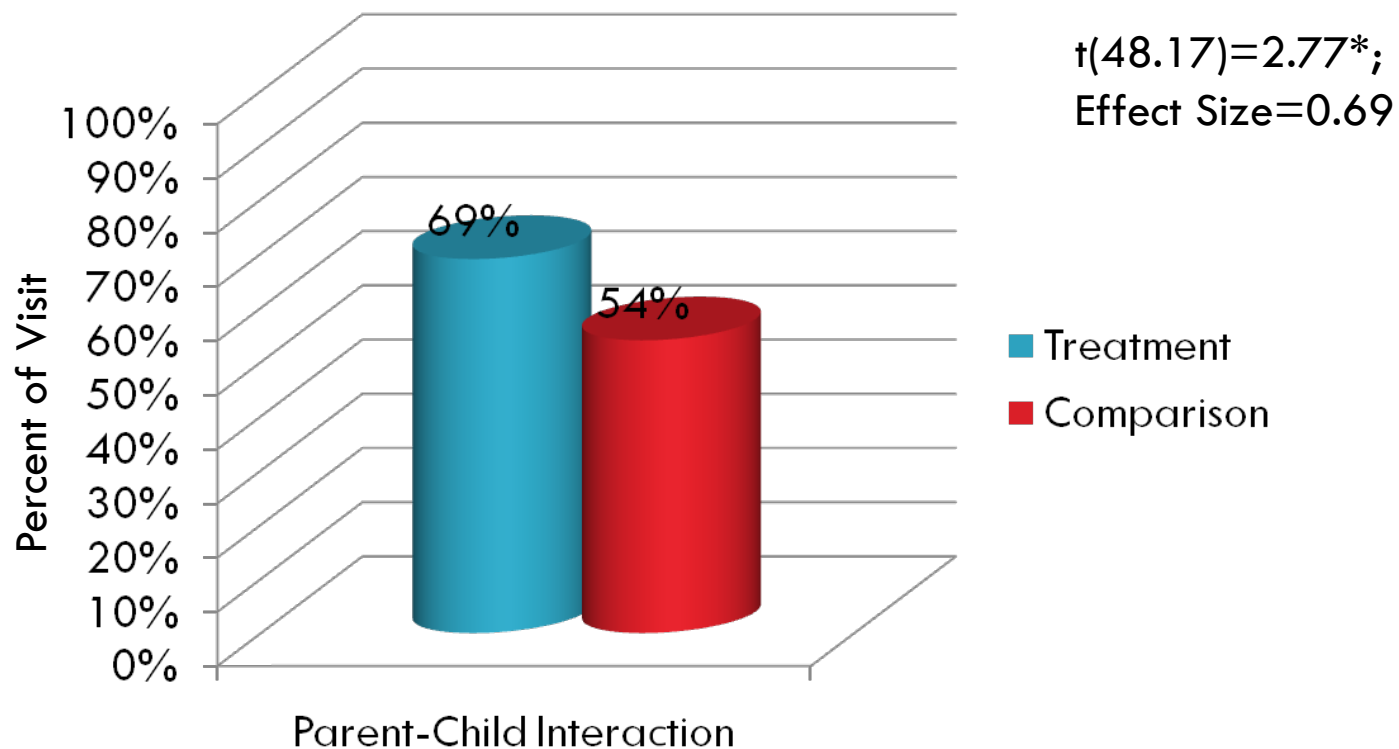
Results/ Findings

- When ECPs in the treatment group were coded as not engaging in Getting Ready strategies, they were observed to be:
 - providing updates to parents on classroom activities;
 - sharing agency-required information;
 - collecting paperwork.



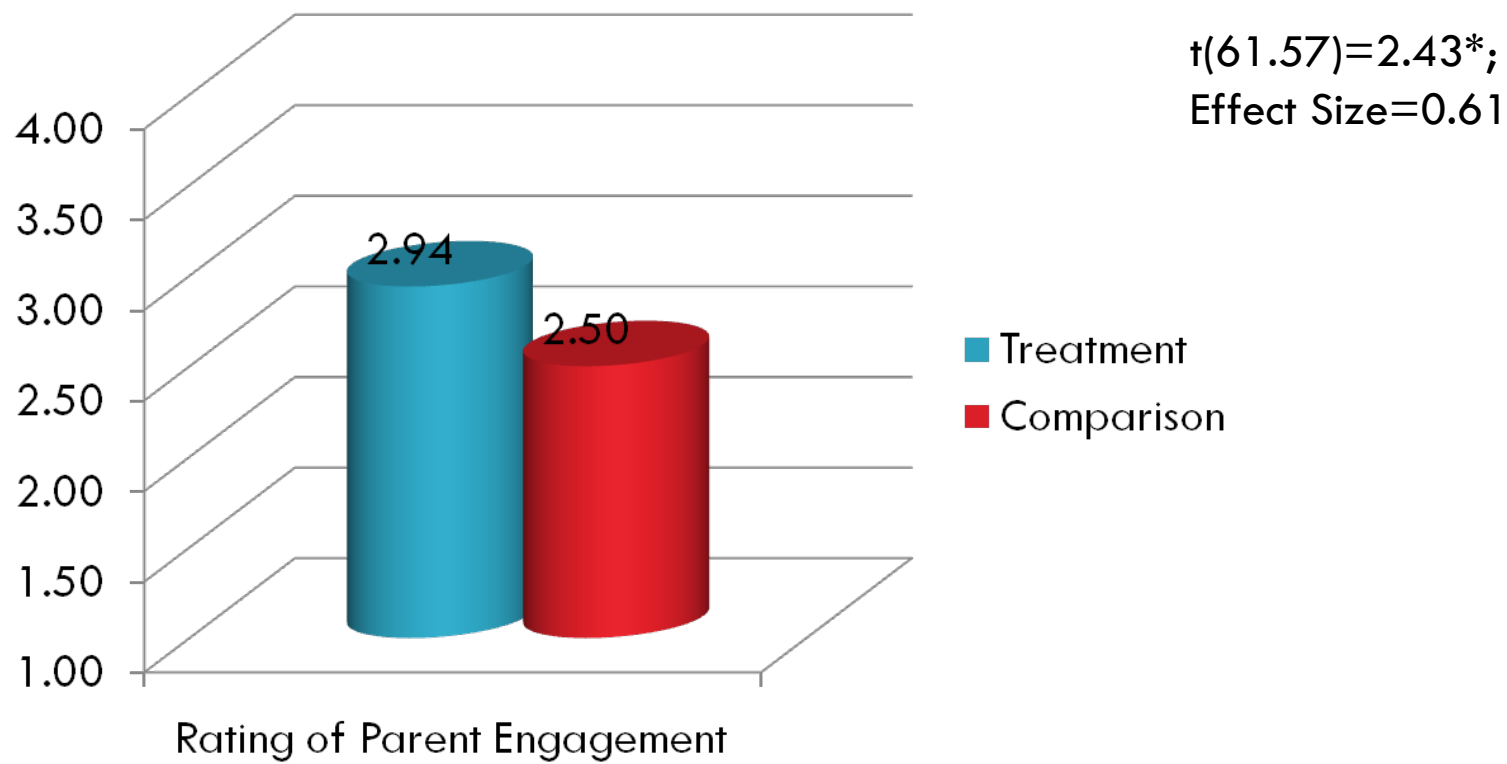
Results/ Findings

- Parents and children in the treatment group were observed to be interacting with each other more than in the comparison group.



Results/ Findings

- Ratings of parents' engagement with their children were also higher in the treatment group.



Question 2

What is the relationship between the ECPs' adherence to Getting Ready intervention strategies and their overall effectiveness at initiating parental interest and engagement for participants in the treatment group?

What is the relationship between the ECPs' adherence to Getting Ready intervention strategies and the rate of parent-child/parent-professional interaction and the quality of parent-child/parent-professional engagement in home visits, for participants in the treatment group?

Do these relationships vary by program type (Early Head Start or Head Start)?

Getting Ready Strategies

- Establish/re-establish relationship with parent
- Asks parent to share observations and ideas
- Affirm parents' competence
- Establish dyadic context
- Help parents discuss and prioritize concerns/needs
- Focus parent's attention on child strengths
- Provide developmental information
- Brainstorm
- Make suggestions/ provide directives
- Promote practice and interaction through modeling
- Help plan for future goals, directions

Results/ Findings

- The **more strategies** that were used by ECPs, the ***higher the rate of parent-professional interactions*** during home visits. ($r=.49^*$)
 - Significant for both Early Head Start and Head Start

- For Head Start ECPs, **the greater the rating of effectiveness, the higher the rate of interaction** between parents and professionals ($r=.59^*$); this was not related for EHS.

- Effectiveness at initiating parental interest/engagement was not related to rates of interaction between professionals and children, or parent and children.

Question 3

What is the relationship between implementation fidelity and professional characteristics (i.e., education, years of experience), program type (Early Head Start vs. Head Start) and time in intervention for participants in the treatment group?

Results/ Findings

- Overall, teachers with higher levels of education ($r=.52^{**}$) and with more experience working in early childhood ($r=.40^*$) received higher ratings of effectiveness than those with less education and experience.
- Experience conducting home visits, length of time in current work settings, and time since training in the Getting Ready intervention did not significantly relate to professionals' use of strategies or effectiveness.



Implications

Implications

- Some of the ECPs in the comparison group were delivering relatively high levels of parent-child and parent-professional strategies, independent of exposure to the Getting Ready intervention training and support.
- Participants in the ***Getting Ready treatment group, however, were using strategies at a higher rate and were demonstrating lower rates of “non-strategy” behaviors.***
- In home visits conducted by ECPs in the treatment group, ***parents and children were more highly engaged.*** Programs should consider supporting this type of intervention if the objective is to enhance parent-child interactions.

Implications

- **Getting Ready** strategies, when used by ECPs in the intervention group, **supported a higher rate of interaction between parents and professionals (teachers, home visitors)**. Programs should consider supporting this type of intervention if the objective is to enhance parent-professional interactions.
- Importantly, **findings highlight that the length of time in the intervention, the notion that “longer is better,” is not necessarily salient**. Attention must be paid to experience and education of ECPs, as well as program type.

Conclusion



- Understanding implementation fidelity is important as we move forward in designing, developing, and implementing early childhood interventions.
- Investigation of fidelity in early childhood intervention studies help determine whether important implementation features are intact, allowing us to more effectively examine questions about an intervention's potential to produce desired child and family outcomes.



- Special thanks to administrators, staff, children and families from Blue Valley Community Action Program, Central Nebraska Community Services, Head Start Child and Family Development, Inc. and Lincoln Public Schools who participated in this research.

- Publication is available: Knoche, L.L., Sheridan, S.M., Edwards, C.P., & Osborn, A.Q. (in press). Implementation of a relationship-based school readiness intervention: A multidimensional approach to fidelity measurement for early childhood. *Early Childhood Research Quarterly*.
 - *Special issue of Early Childhood Research Quarterly on implementation fidelity*