

When Are Informal and Formal Early Intervention Warranted? And Why?

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Thesis of the Presentation

The thesis of our presentation is that IDEA Part C early intervention as generally practiced by large numbers of practitioners does not maximize infant and toddler learning opportunities and does not involve parents in ways that build and strengthen family capacity to promote and enhance child learning and development. As a result, early intervention has a small probability of maximizing child and family outcomes.

Aims of the Presentation

- Propose a framework for defining formal and informal early childhood intervention
- Illustrate why formal early intervention as generally practiced is not characterized by features that are consistent with contemporary theory and research
- Describe how rather simple changes in how early intervention is currently practiced could significantly improve child and family outcomes

Formal and Informal Early Intervention

- Formal early intervention means the services included on an IFSP that are designed to meet the developmental needs of infants and toddlers with a disability by either practitioner-implemented or parent-implemented interventions
- Informal early intervention means the use of everyday family and community activities as sources of infant and toddler learning opportunities where naturalistic instructional practices are used by parents to support and strengthen child competence and confidence which, in turn, strengthens parent competence and confidence

Early Intervention As We Now Know It

- IDEA Part C early intervention as we now know it is best described as a service industry where more and more professionals increasingly work directly with children in mostly nonfunctional and noncontextual ways where meaningful (child and) parent involvement is not the mainstay of how providers practice their crafts
- These conditions are exacerbated when private provider models are used to provide early intervention in terms of professional services

Pre vs. Post Part H/C Early Intervention

As part of an analysis of the definitions of early intervention practices prior to and after the passage of the Part H/C early intervention legislation, results showed that:

- Up until 1986, early intervention was primarily defined in terms of experiences, activities, and learning opportunities afforded infants and toddlers to influence child behavior and development
- At the time of the passage of the Part H legislation in 1986, early intervention was redefined in terms of the services provided to infants and toddlers and their families

Dunst, C. J. (2012). Parapatric speciation in the evolution of early intervention for infants and toddlers with disabilities and their families. *Topics in Early Childhood Special Education*, 31, 208-215.

Content Analysis of IDEA Infant and Toddler Legislation (2004) and the Part C Final Regulations (2011)

Electronic searches of both IDEA and the Final Regulations for the terms *services* and *learning-related* terms (learning, experiences, facilitate, enhance, etc.) were conducted to determine the focus of early intervention.

IDEA Legislation

- Child learning-related terms appear only 7 times
- The term *services* appears 179 times

Part C Final Regulations

- Child learning-related terms appear only 3 times
- The term *services* appears 2,412 times

Foundations for the Thesis of the Presentation

- Meta-analysis of studies of the type of parent involvement in home-visiting programs
- Analyses of the content of more than 800 Individualized Family Service Plans
- Studies of practitioner use of everyday activities and routines as the contexts for early intervention
- Investigation of practitioner-recommended instructional practices

Meta-Analysis of Parent Involvement in Early Intervention

Carl J. Dunst Marilyn Espe-Sherwindt Mary Beth Bruder

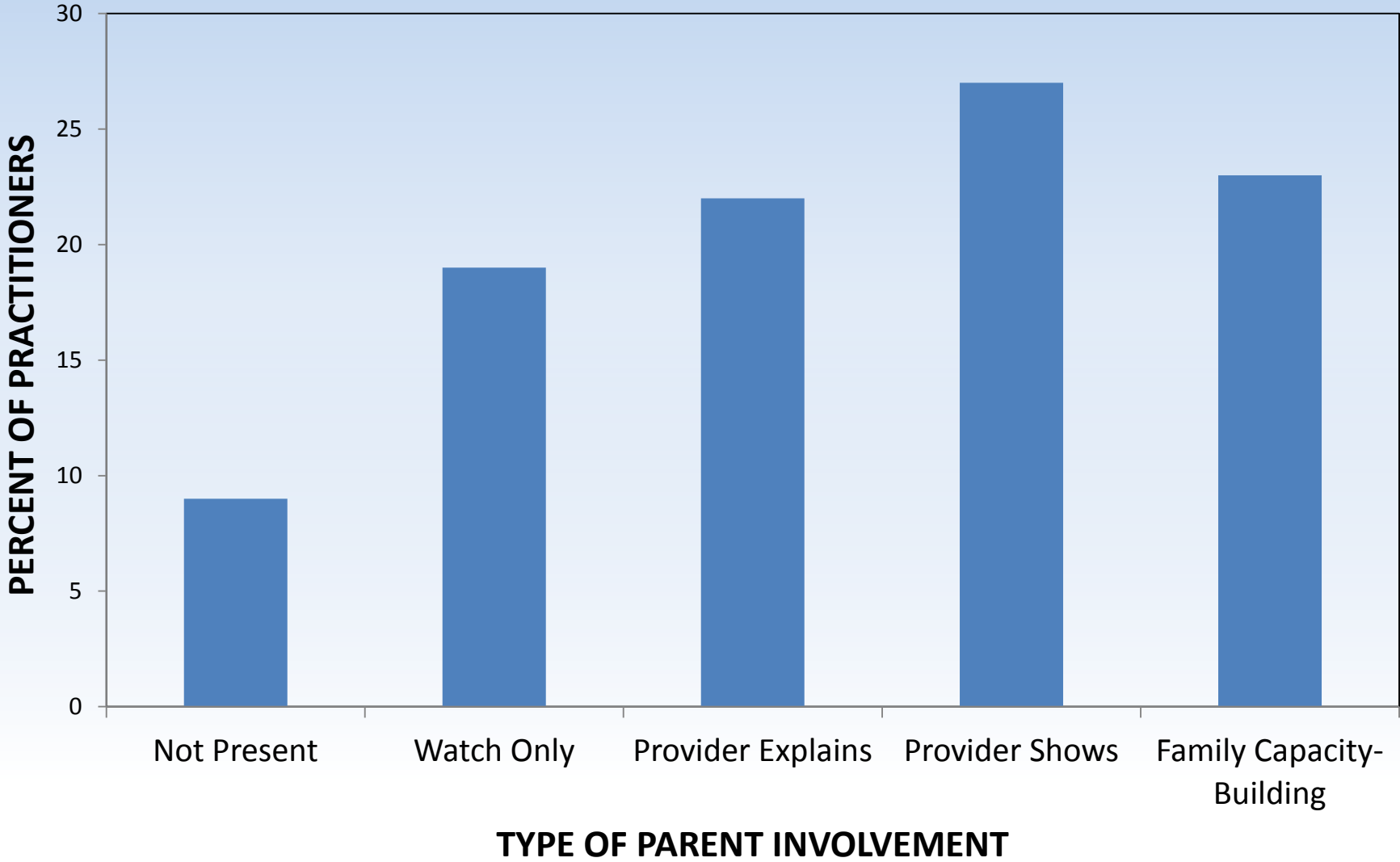
- More than 30 studies have been identified thus far that include a measure of parent involvement or participation in home-based interventions with preschool children
- Ten of the studies were investigations of parent involvement in early intervention with infants and toddlers with developmental disabilities or delays
- Types of parent involvement or participation are being coded so that the parenting measures can be aggregated across studies
- Preliminary findings indicate that in the absence of explicit attempts to influence or change home-visiting practices, early intervention practitioners actively engage parents in learning and implementing early intervention methods and techniques less than 50% of the time
- Findings from one study are used to illustrate the manner in which parents are involved in Part C early intervention programs

Types of Parent Involvement in Part C Early Intervention

As part of a national study of parents' experiences with Part C early intervention conducted by Mary Beth Bruder and myself, we asked parents to indicate the manner in which practitioners involved parents in their children's early intervention by asking them which of the following best represented provider practices:

- I am not present when my child receives services
- I watch my child receive services but do not interact with the provider
- Provider explains what he or she is doing with my child
- Provider shows me how to do the intervention my child
- Provider involves me in a way that I can do the intervention without the provider's continued assistance

Part C Practitioners

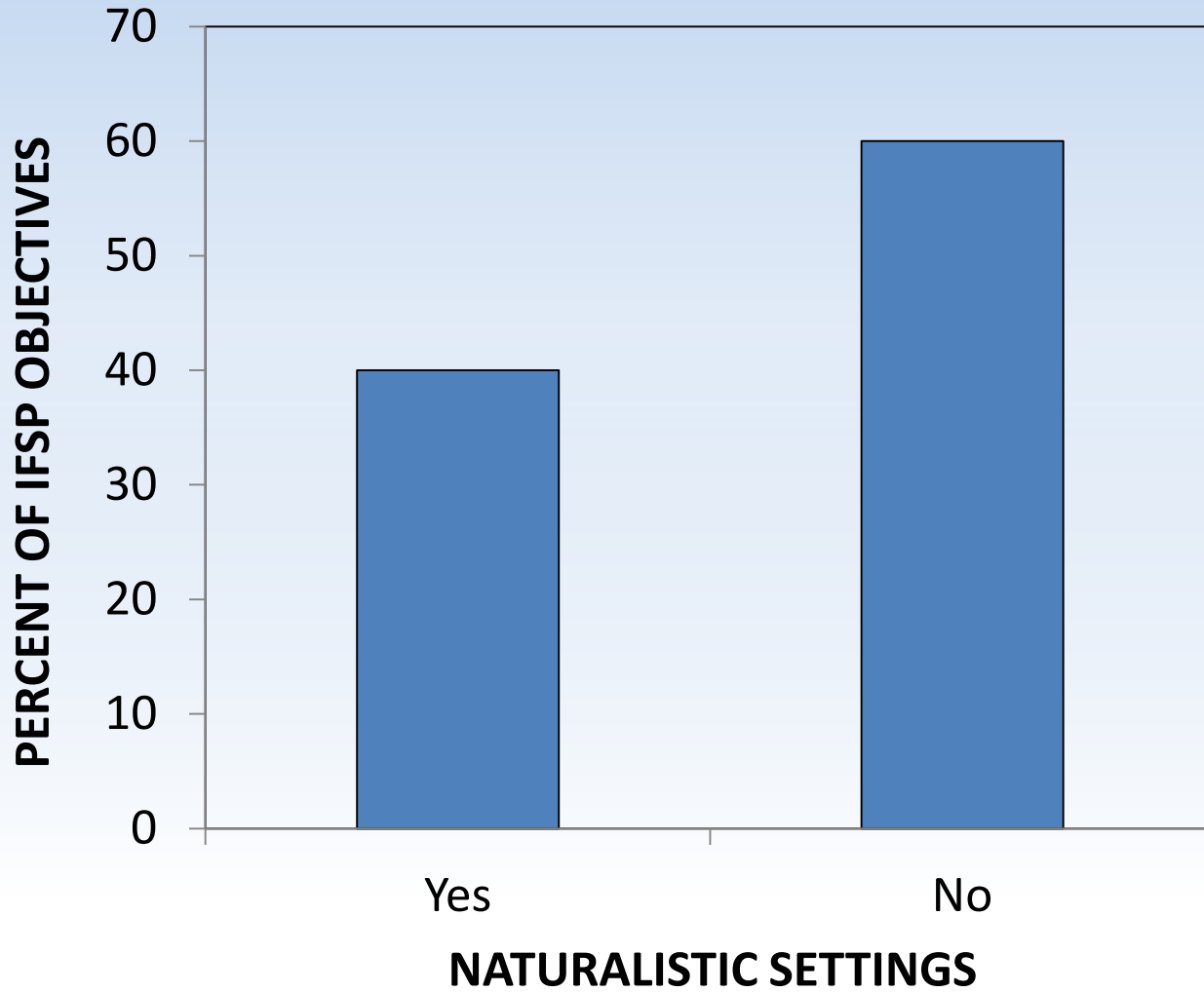


Analyses of Individualized Family Service Plans

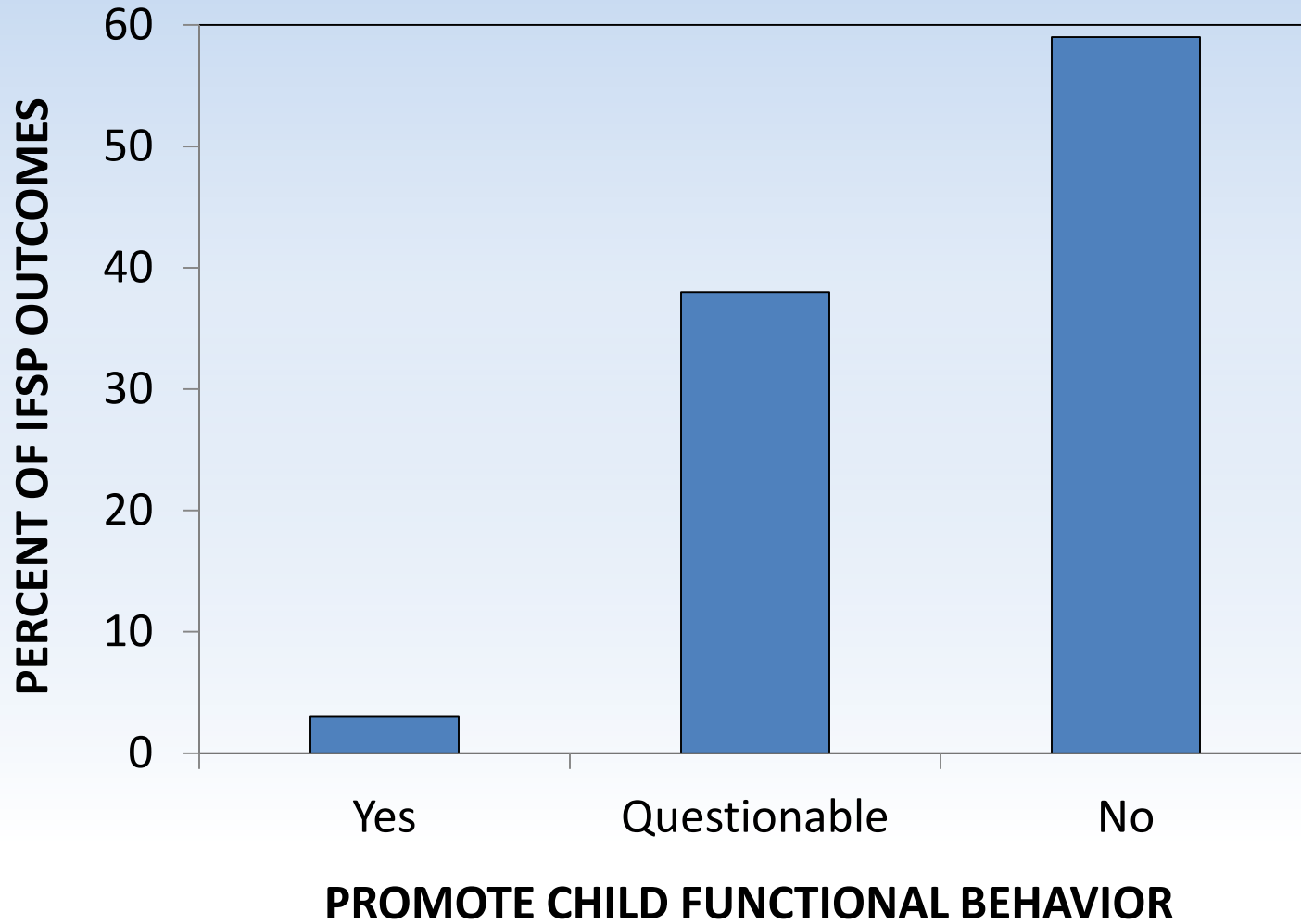
More than 25 features of more than 800 IFSPs were examined to determine, among other things, whether:

- IFSP objectives and interventions were described in terms of intervention occurring in naturalistic manners as part of everyday activities
- IFSP objectives and interventions included behavioral outcomes that were functional in terms of the acquisition of everyday adaptive skills

IFSP Objectives



IFSP Outcomes



Practitioner Use of Everyday Activities as Sources of Child Learning Opportunities

Three studies of practitioners' use of home or community activities as sources of child learning opportunities were conducted that included questions asking parents to indicate:

- How often early intervention providers worked with their children in different everyday activities (2 studies)
- How often early intervention providers suggested or recommended parents use everyday activities as sources of child learning opportunities (1 study)

Everyday Activities that Were the Focus of Investigation

Parents in each of the studies were asked to indicate on a 5-point scale ranging from *never* to *often* if the early intervention practitioners implemented their interventions in the everyday activities (2 studies) or suggested the parents use everyday activities as sources of intervention with their children (1 study)

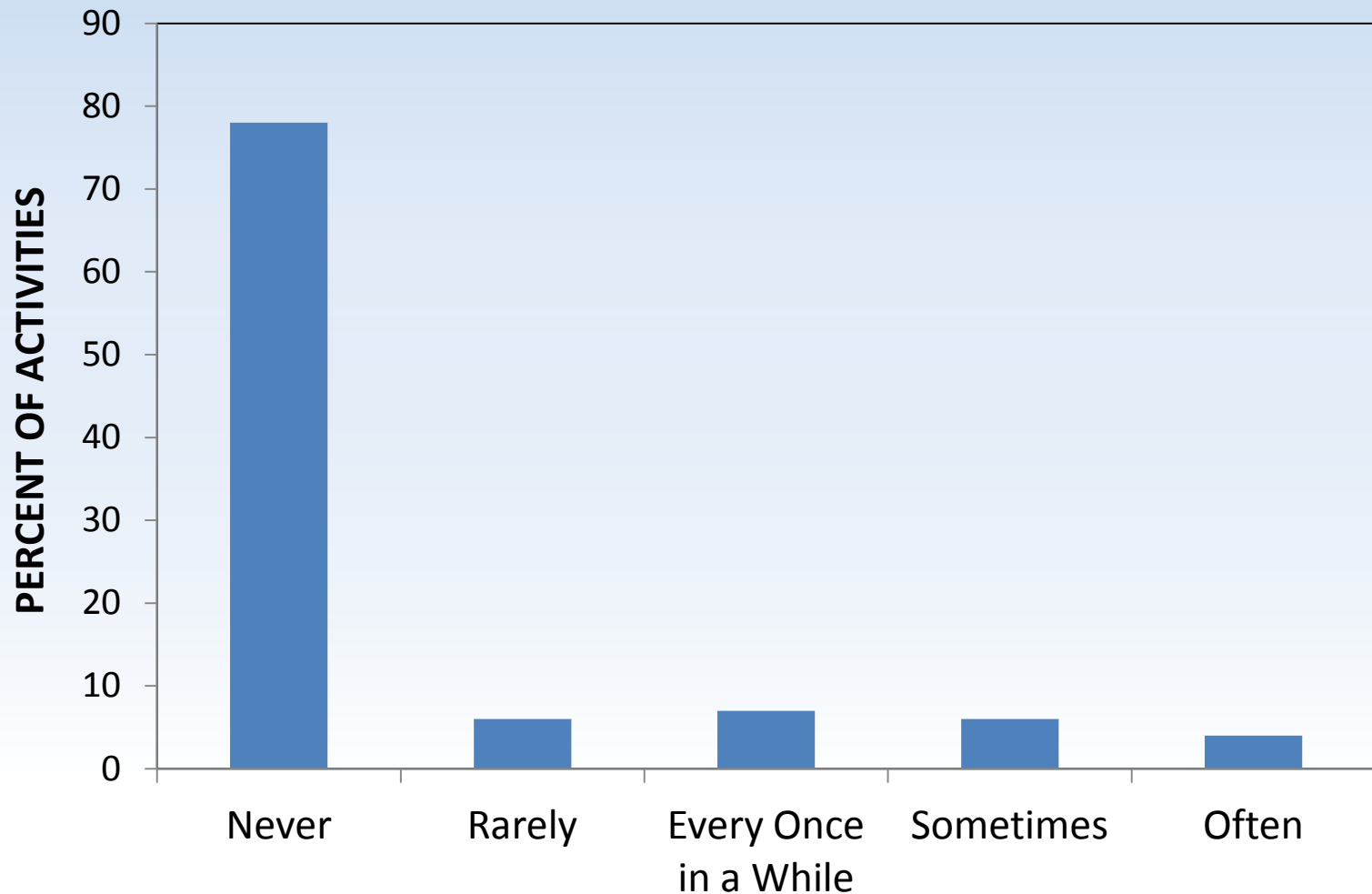
Family Activities

Family meal times, child bath time, child dressing/undressing, playing outside, family gatherings

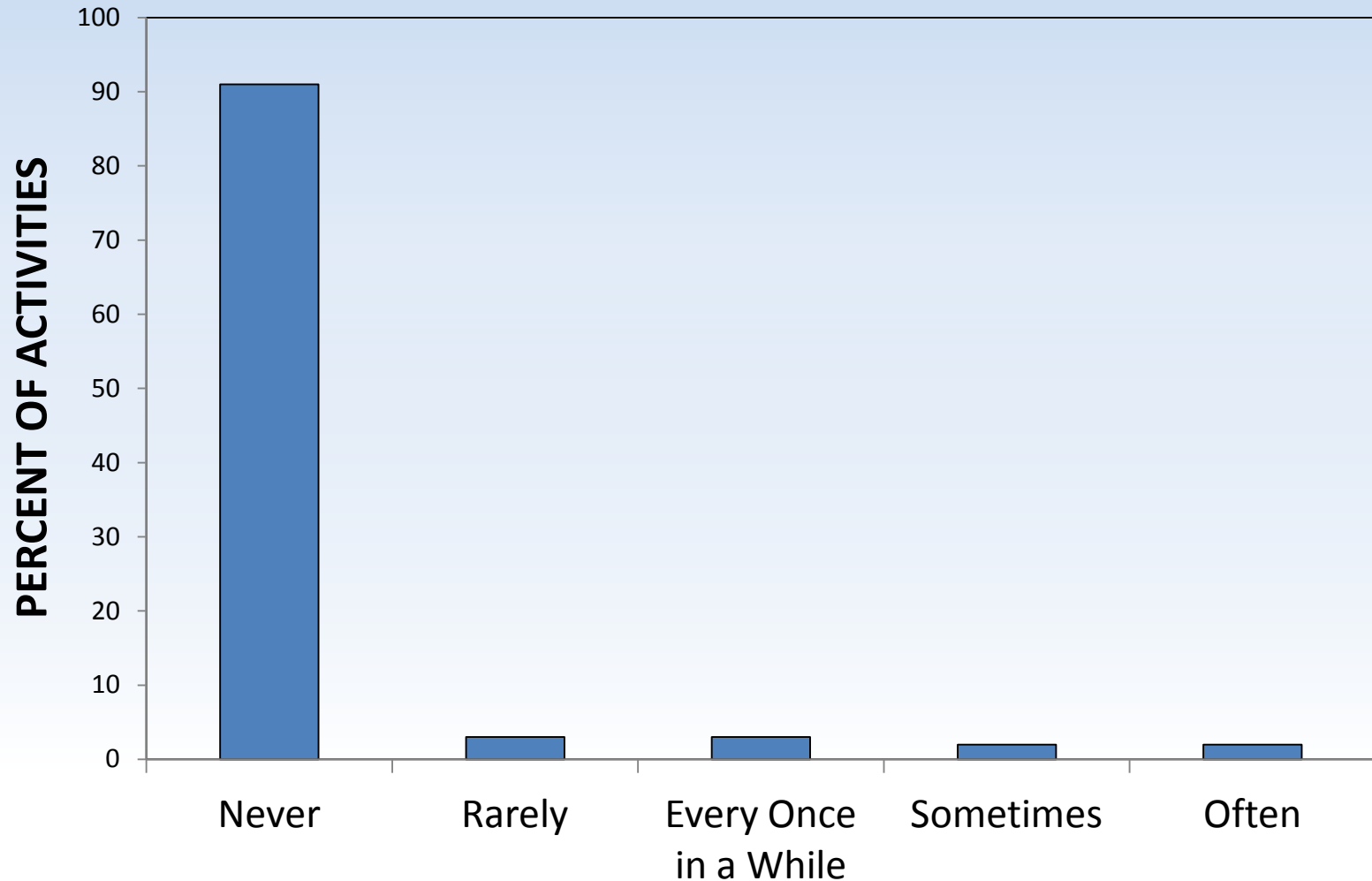
Community Activities

Food shopping, eating out, neighborhood/community walks, library/book store story hours, playground/playlands

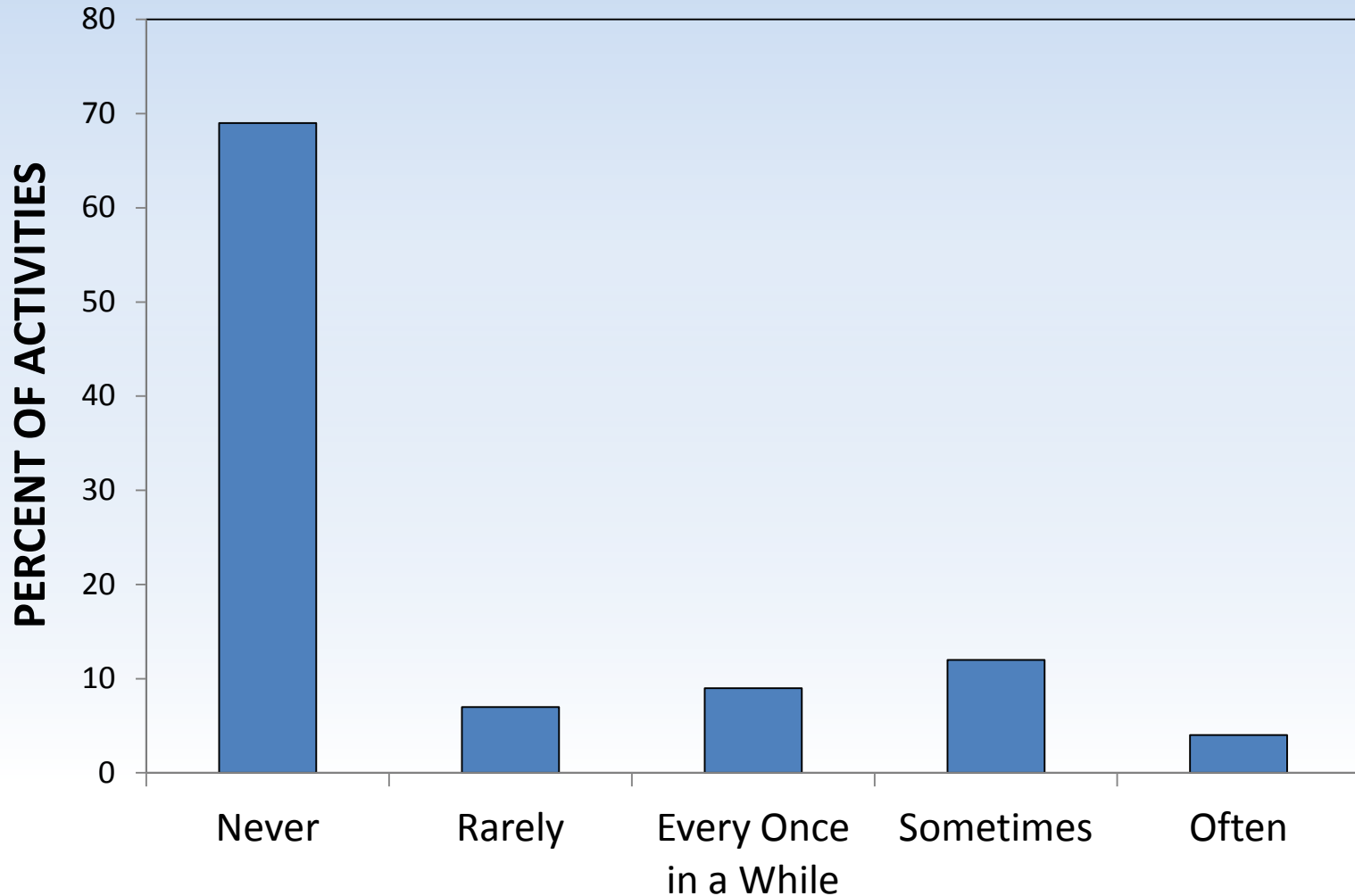
Practitioner Use of Everyday Activities as Contexts for Early Intervention (Study 1)



Practitioner Use of Everyday Activities as Contexts for Early Intervention (Study2)



Practitioners Who Recommended Parents Use Everyday Activities as Sources of Child Learning Opportunities



Practitioners' Recommended Instructional Practices

- Parents involved in the *Everyday Children's Learning Opportunities Institute* were asked to describe or demonstrate the types of instructional practices that early childhood practitioners recommended or taught them to use with their children
- A modified version of Mark Wolery's and Diane Sainato's (1996) categorization of types of intervention strategies was used to code the instructional practices used by the parents
- The focus of analyses was the extent to which naturalistic instructional practices were recommended or taught to the parents by early childhood practitioners

Wolery, M., & Sainato, D. M. (1986). General curriculum and intervention strategies. In S. L. Odom & M. E. McLean (Eds.), *Early intervention/early childhood special education: Recommended practices* (pp. 125-158). Austin, TX: PRO-ED

Practitioner-Recommended Instructional Strategies

Maternal Availability/Environmental Arrangements	21%	}	52%
Promoting/Elicitation Strategies	17%		
Physical Manipulation	14%		
Child Preference-Based Practices	11%		
Modeling/Demonstration	13%		
Naturalistic Instruction (e.g., responsive teaching)	4%	}	5%
Guided Participation	1%		

Framework for Categorizing Early Intervention Practices

Informal and formal early intervention can be described along a number of different continua:

- Type of intervention practices ranging from everyday activities to services as sources of learning opportunities
- Type of intervention setting ranging from contextual to noncontextual
- Agent of the interventions (primary caregivers or professionals, or both)
- Type of instructional practice ranging from naturalistic to structured teaching methods
- Type of child behavioral targets ranging from functional to nonfunctional outcomes

Types of Intervention Practices

- The use of everyday activities as sources of child learning opportunities would provide a child hundreds and hundreds of meaningful experiences to learn functional behavior
- The use of services as a primary type of intervention is more likely to limit the number of learning opportunities afforded a child

Types of Intervention Settings

- Context matters. The use of everyday activities as sources of learning opportunities is more likely to be contextually relevant for a child to learn and master functional behavior
- Noncontextual early intervention is more likely to promote a child's acquisition of behavior that is not functional and does not easily generalize across settings and people

Type of Intervention Agent

- Building and strengthening family capacity to use everyday activities as sources of child learning opportunities are more likely to promote both child and parent competence and confidence
- Professional provision of early intervention in the absence of meaningful (capacity-building) parent involvement is more likely to compromise parenting beliefs about their role in their children's learning and development

Type of Instructional Practices

- The use of naturalistic instructional practices (incidental teaching, responsive teaching, milieu teaching, etc.) by parents as part of child participation in everyday activities is more likely to support and strengthen child acquisition of contextually specific functional behavior
- The primary or sole use of highly structured teaching methods aimed at elicitation of adult-selected IFSP child behavior are more likely to attenuate child development and growth

Type of Child Behavioral Targets

- Child-initiated behavior in the context of participation in everyday activities is more likely to result in the acquisition of child functional behavior that is used to initiate and sustain child interactions with the social and nonsocial environment
- Child acquisition of nonfunctional behavior that is not contextually meaningful is more likely to result in child acquisition of splinter skills

Examples of the Use of Informal Early Intervention Practices

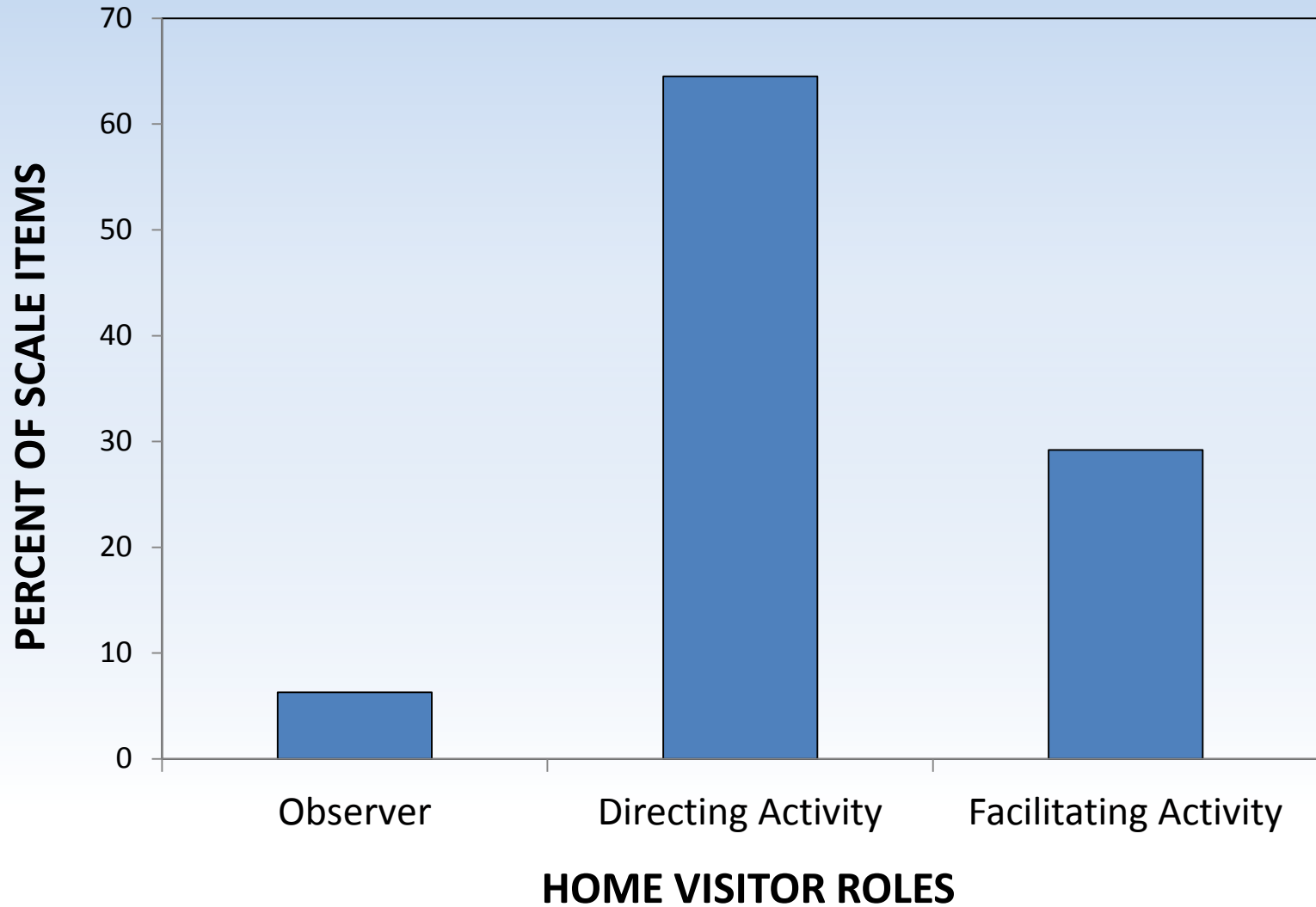
- Participation-based home-visiting practices (Campbell & Sawyer, 2009)
- Informal vs. traditional early intervention practices (Dunst et al., 2001, 2007)
- Caregiver capacity-building natural environment practices (Swanson et al., 2011)

Promoting Participation-Based Home Visiting Practices ^a

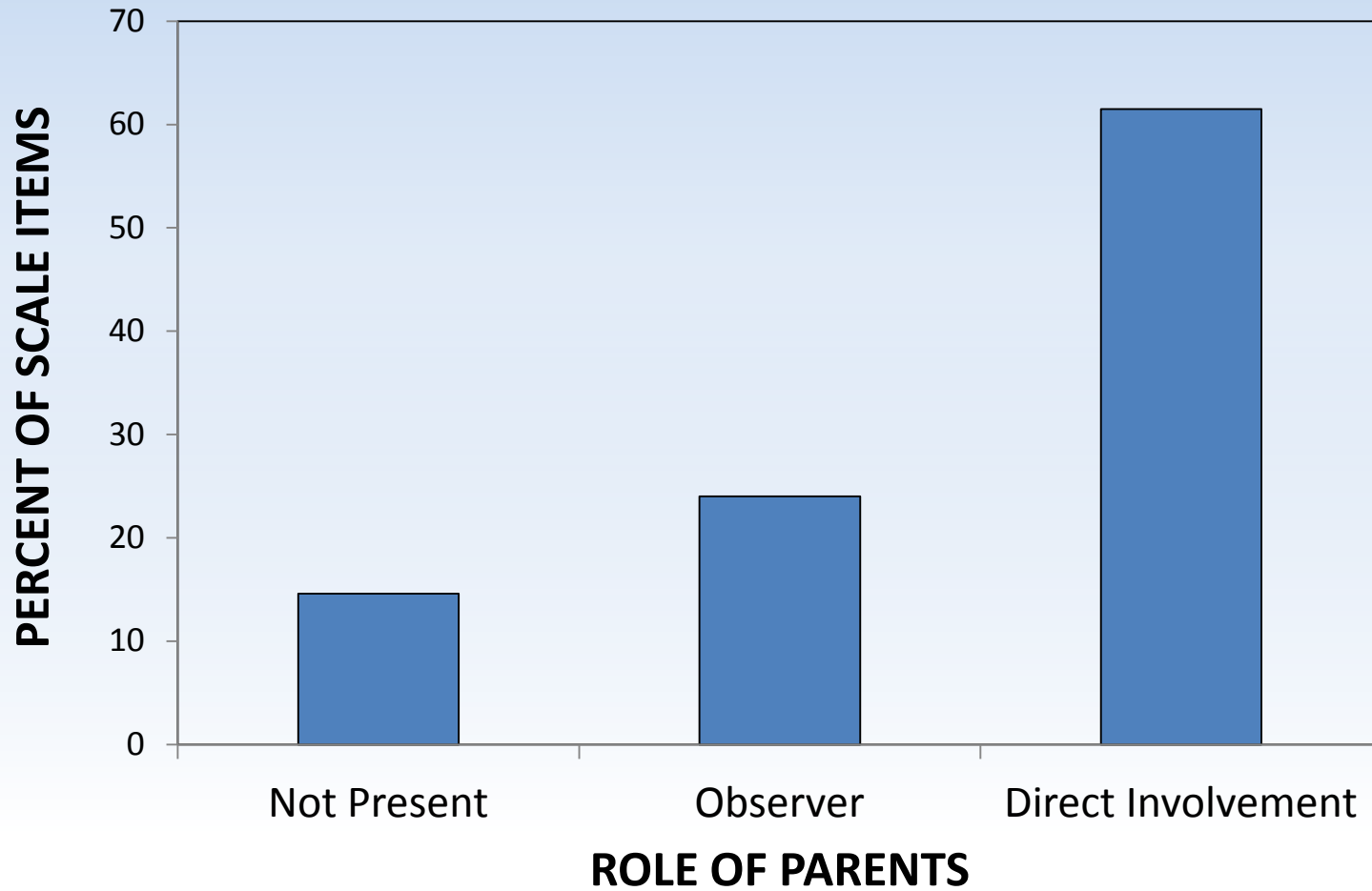
- Campbell and Sawyer provided professional development to 123 early intervention professionals who provided video tapes of their home-visiting practices which were coded and analyzed on a pretest-post test basis
- The professional development focused on changing home-visiting practices from traditional (formal) to participation-based (informal) early intervention practices
- *Natural Environments Rating Scale* was used to measure changes in practitioner and parent roles during home visits

^a Campbell, P. H., & Sawyer, L. B. (2009). Changing early intervention providers' home visiting skills through participation in professional development. *Topics in Early Childhood Special Education*, 28, 219-234.

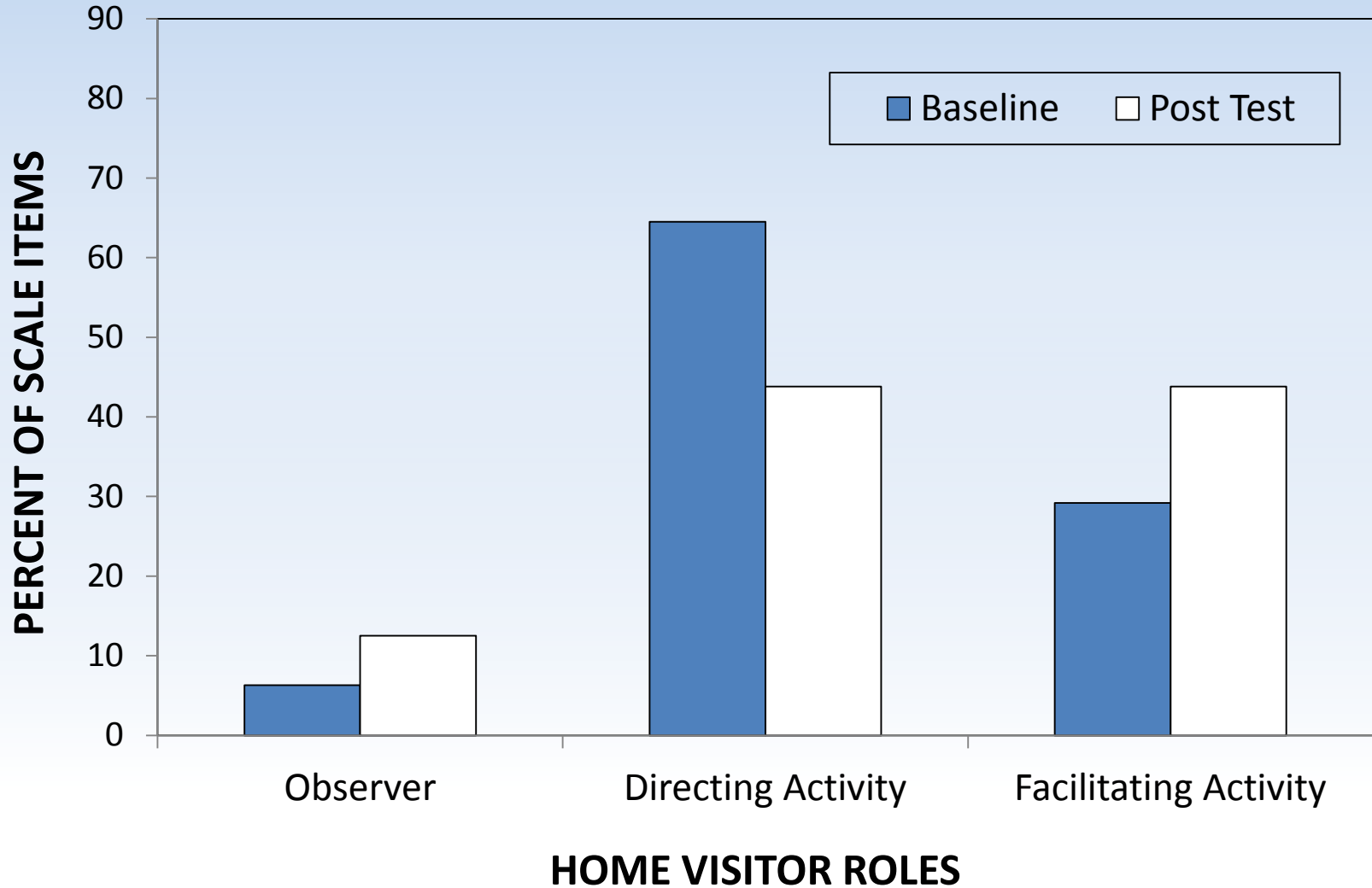
Practitioner Baseline Practices



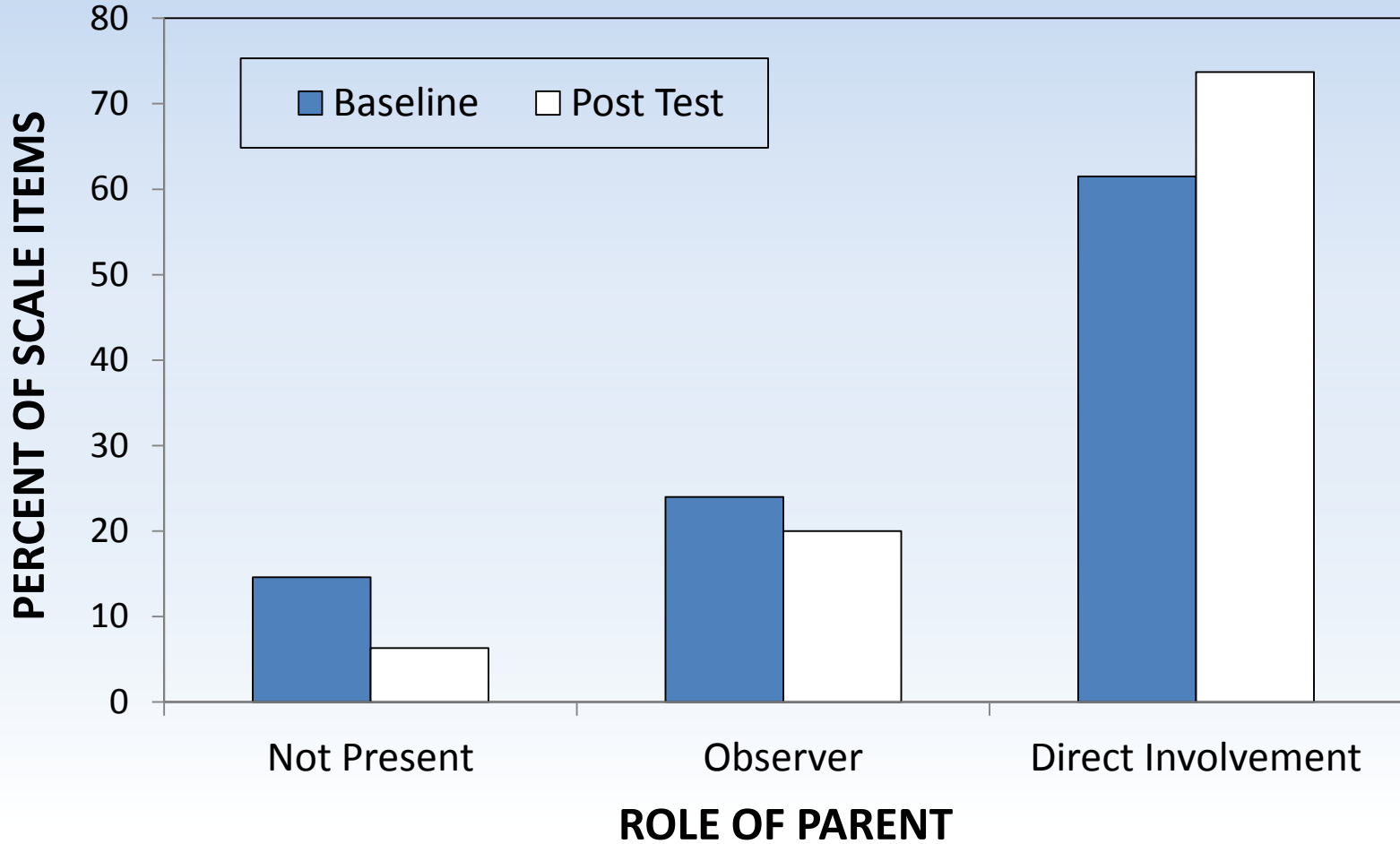
Parent Baseline Ratings



Ratings of Practitioner Practices



Ratings of Parent Practices



Informal vs. Formal Early Childhood Intervention

Purpose:

Compare the relative effectiveness of informal (interest-based everyday learning) vs. formal (adult-directed) early intervention

Study Participants:

50 infants, toddlers, and preschoolers in six States

Outcome Measure:

Developmental Observation Checklist Scales (Language, Cognitive, Motor, Social)

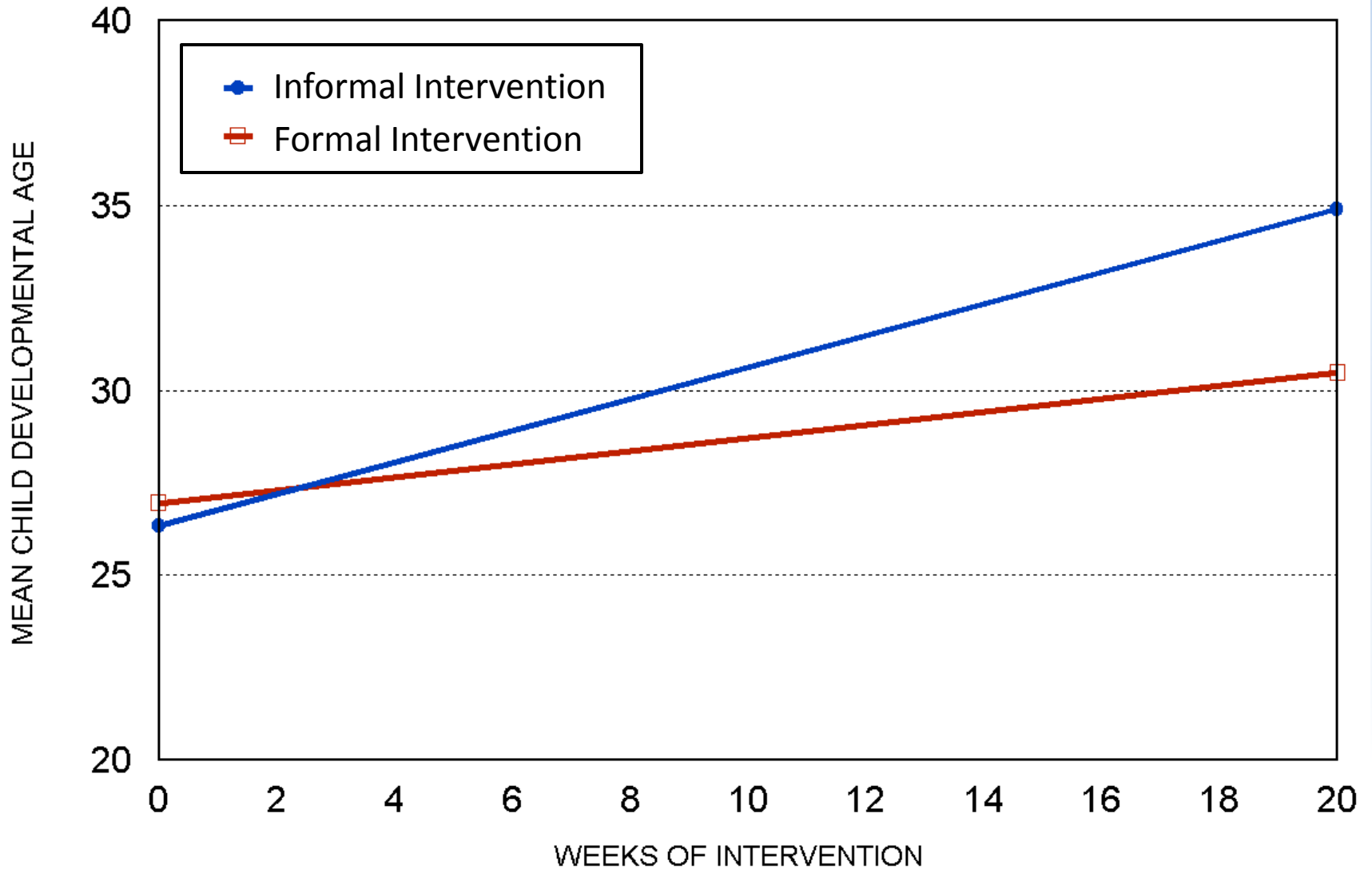
Methodology:

Linear growth curve modeling of changes in child developmental progress

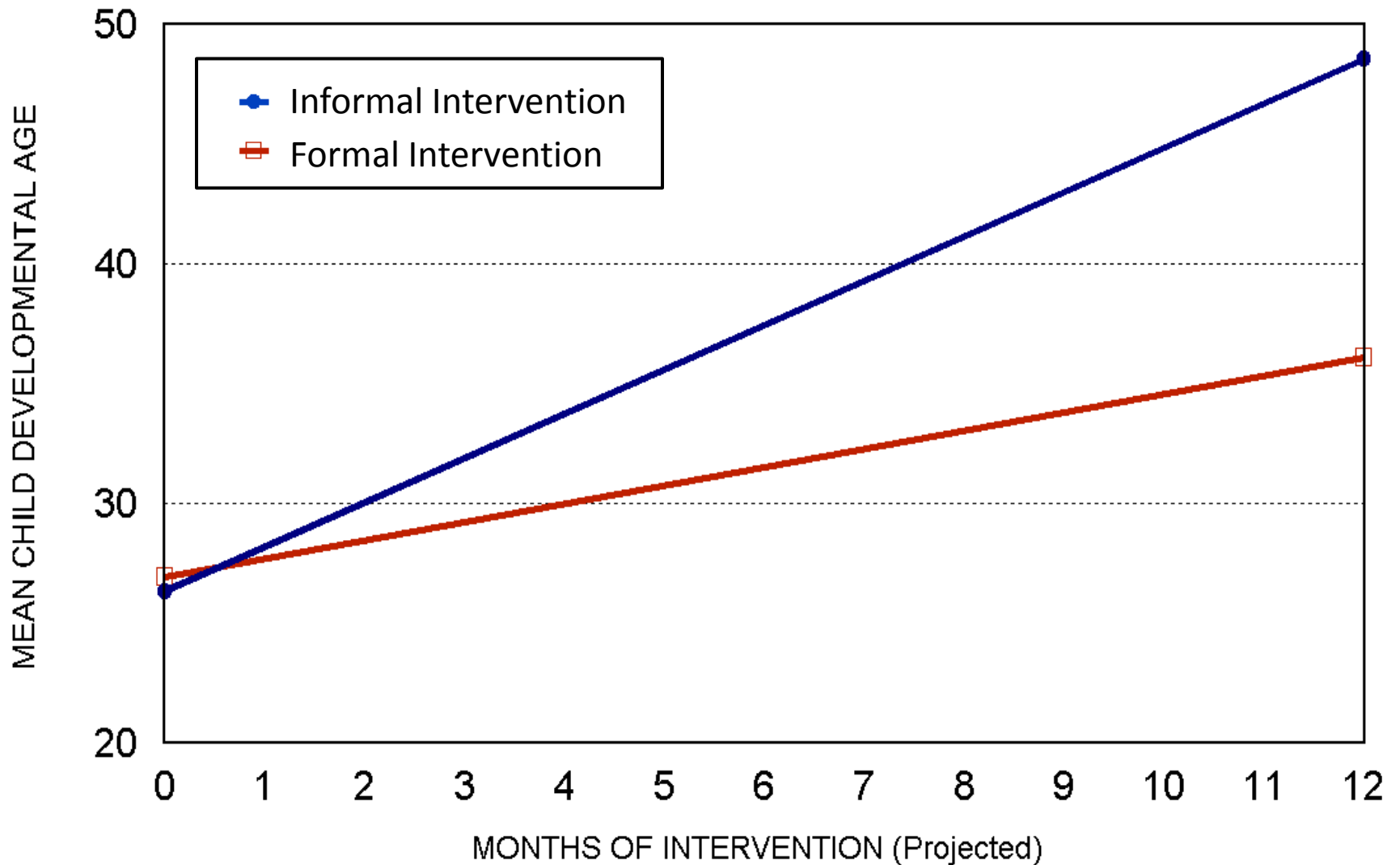
Dunst, C. J., Bruder, M. B., Trivette, C. M., Hamby, D., Raab, M., & McLean, M. (2001). Characteristics and consequences of everyday natural learning opportunities. *Topics in Early Child Special Education*, 21, 68-92.

Dunst, C. J., Trivette, C. M., & Cutspec, P. A. (2007). *An evidence-based approach to documenting the characteristics and consequences of early intervention practices* (Winterberry Research Perspectives Vol. 1, No. 2). Asheville, NC: Winterberry Press.

Relative Effectiveness of Two Contrasting Approaches to Natural Environment Intervention Practices



Projected Benefits of Two Contrasting Approaches to Natural Environment Intervention Practices



Caregiver Confidence and Competence Associated with the Use of Caregiver-Mediated Intervention Practices^a

Purpose:

Determine the extent to which the use of caregiver-mediated everyday child learning was associated with improvements in caregiver skills, competence, and confidence

Study Participants:

Three mothers and one grandmother of preschool-aged children with disabilities or developmental delays

Outcomes:

Measures of parenting behavior (skills) and parenting self-efficacy beliefs (confidence and competence)

Methodology:

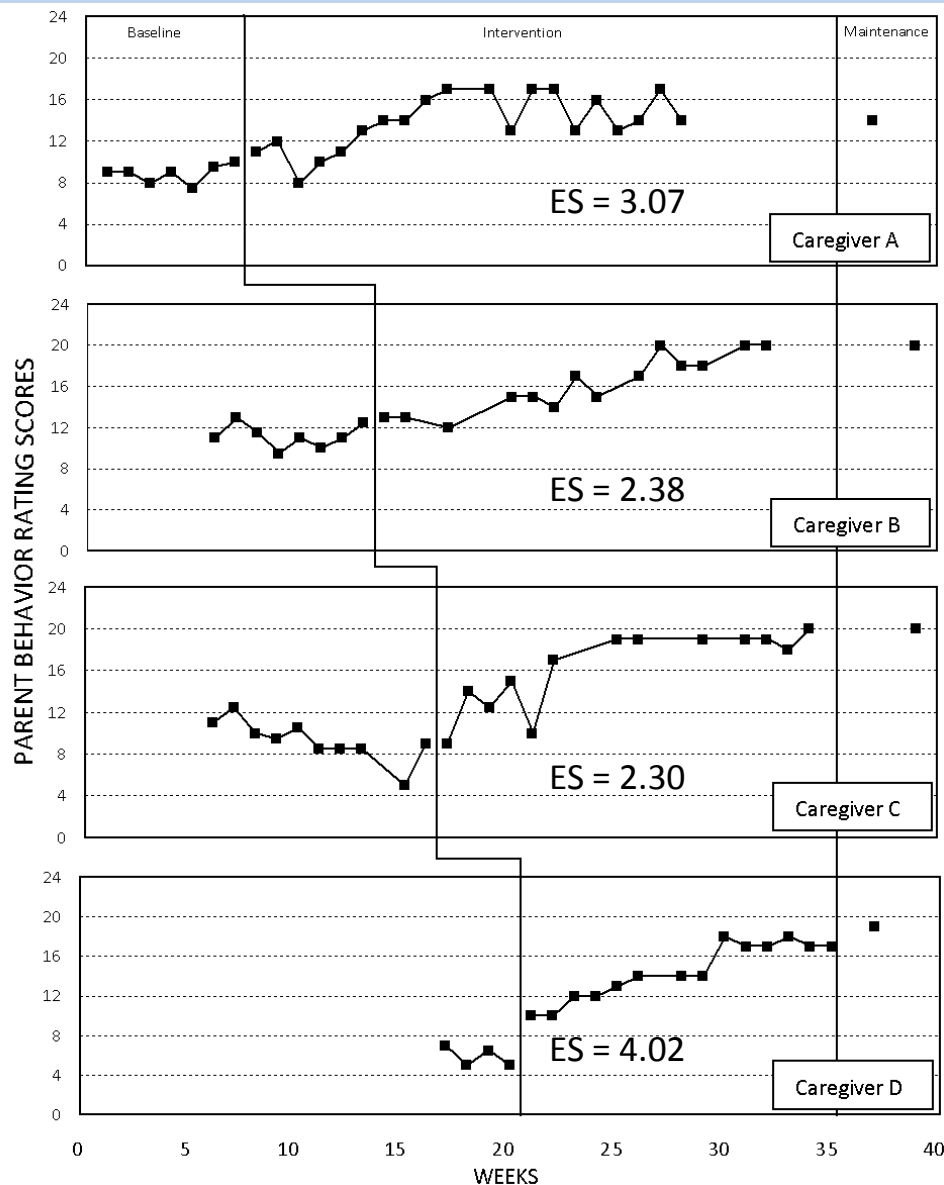
Multiple baseline design across study participants

^a Swanson, J., Raab, M., & Dunst, C. J. (2011). Strengthening family capacity to provide young children everyday natural learning opportunities. *Journal of Early Childhood Research*, 9(1), 66-80.

Caregiver-Mediated Early Intervention Practices

- Study participants used child interest-based everyday activities as sources of child learning opportunities where the participants supported and encouraged child learning in the activities using responsive teaching procedures.
- Participants identified their children's interests, the everyday activities that were sources of interest-based learning opportunities, and the responsive caregiver behavior used to engage and sustain child engagement in interest-based everyday child learning.
- An early childhood practitioner used capacity-building parenting experiences and opportunities to support and encourage the caregivers' use of the natural environment practices.

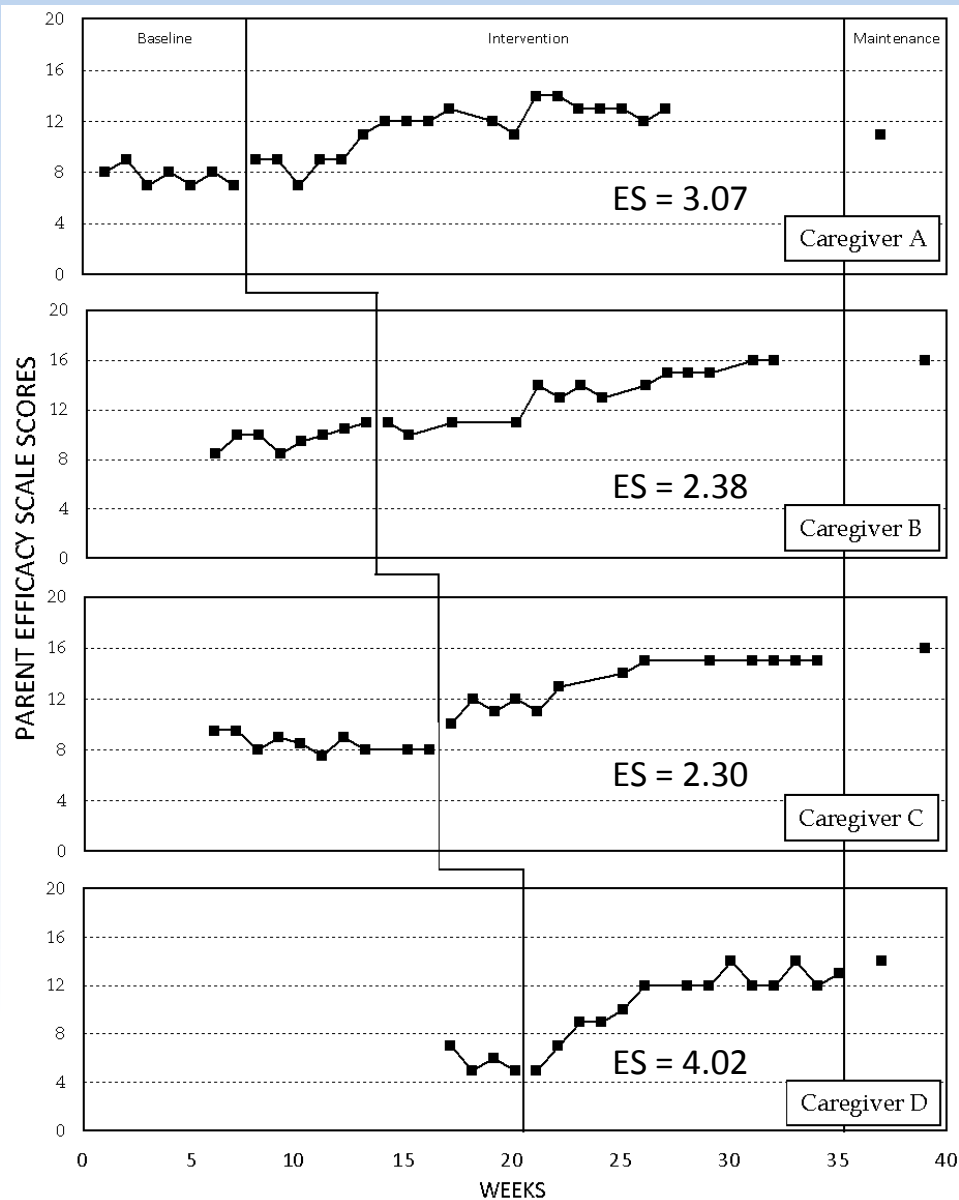
Parenting Skills



Adoption and use of everyday activities as sources of interest-based child learning opportunities strengthened and promoted parents skills in using the natural learning environment practices

(NOTE. ES = Estimated Cohen's *d* effect size)

Parenting Confidence and Competence



Findings also showed that promoting caregivers' use of everyday activities as sources of interest-based child learning opportunities had the effect of strengthening parenting competence and confidence

(NOTE. ES = Estimated Cohen's *d* effect size)

Why Is Everyday Learning Warranted as Early Intervention with Young Children with Disabilities or Delays?

Comparative analyses of informal vs. formal early intervention practices indicate that everyday learning opportunities afford young children with disabilities or delays considerably more “instructional episodes and learning opportunities” compared to more traditional types of professionally-provided or prescribed early intervention.

- Mahoney and MacDonald (2007) estimated that caregiver-child interactions that occur just one hour a day seven days a week would include **220,000** learning opportunities each year compared to 30 minutes of once-per-week therapy sessions that would provide a child just **7,500** learning opportunities each year.
- McWilliam (2000) estimated that promoting child skill acquisition in the context of everyday routines would provide a child considerably more learning opportunities per episode compared to once-a-week therapy or educational intervention sessions.

Mahoney, G., & MacDonald, J. (2007). *Autism and developmental delays in young children: The responsive teaching curriculum for parents and professionals*. Austin, TX: PRO-ED.

McWilliam, R. A. (2000). It's only natural ... to have early intervention in the environments where it's needed. In S. Sandall & M. Ostrosky (Eds.), *Natural Environments and Inclusion (Young Exceptional Children Monograph Series No. 2)* (pp. 17-26). Longmont, CO: Sopris West.

Case Studies of Young Children's Participation and Learning in Everyday Family and Community Activities

- Families of children with or without disabilities were visited on 6 occasions over a 5- to 6-month period of time to identify either the family or community activities that “made up” each child’s life.
- The case studies were conducted with families in Alaska, California, Connecticut, Hawaii, New Mexico, New York, North Carolina, and Wisconsin. Children and families were selected as participants based on different background characteristics.
- Observations, interviews, artifactual evidence (e.g., photographs, physical objects) and other information were used to identify the children’s everyday activities.
- Parents or other primary caregivers were then asked to describe for each activity whether the child learned or engaged in context-specific functional behavior in the settings.

Number of Case Study Participants

Child Condition	Family Activities	Community Activities
Children with Disabilities	57	58
Children without Disabilities	46	45

Distribution of the Children's Ages

Child Age (months)	Children with Disabilities		Children without Disabilities	
	Family Activity	Community Activity	Family Activity	Community Activity
0 – 12	8	4	5	9
13 – 24	8	13	9	11
25 – 36	13	14	11	5
37 – 48	9	10	8	4
49 – 60	13	8	9	11
61 – 72	6	9	4	5

Children's Diagnoses and Etiologies^a

Typically developing	91
Developmentally at-risk	19
Motor impairments	19
Language impairments	15
Developmental delays	11
Autism spectrum disorders	9
Chromosomal abberations	9
Medically-related disabilities	9
Sensory impairments	8
Multiple disabilities	8
Intellectual disabilities	4
Cranial disorders	4

^a All the children with identified disabilities or developmental delays were enrolled in U.S. Department of Education, Individuals with Disabilities Education Act Early Intervention or Preschool Special Education Programs.

Distributions of Family Ethnicity

Family Ethnicity	Family Activity	Community Activity
African American	19	17
Asian American	11	8
Caucasian/White	22	27
Latino or Hispanic	25	23
Middle Eastern	7	2
Native American/Inuit	12	18
Native Hawaiian/Pacific Islander	7	8

Case Study Findings

Everyday Family Activity Case Study Results

Measures	Family Activity Samples	
	Children with Disabilities	Children without Disabilities
<i>Number of Activity Setting Locations</i>		
Mean	31.05	27.98
Standard Deviation	17.58	11.12
Range	7-98	13-64
<i>Number of Child Learning Opportunities</i>		
Mean	100.40	102.33
Standard Deviation	46.22	28.92
Range	36-262	39-205

Everyday Community Activity Case Study Results

Measures	Community Activity Samples	
	Children with Disabilities	Children without Disabilities
<i>Number of Activity Setting Locations</i>		
Mean	30.59	32.91
Standard Deviation	12.98	10.91
Range	13-75	13-67
<i>Number of Child Learning Opportunities</i>		
Mean	70.21	86.49
Standard Deviation	31.64	32.31
Range	23-154	33-177

Implications for Early Intervention

I conclude with a number of questions that might provide guidance with regard to using everyday activities as both early intervention and sources of learning opportunities for infants and toddlers with disabilities:

- When are informal (everyday child learning) and formal (traditional therapeutic or educational) early intervention with infants and toddlers with disabilities warranted? And why?
- There is no reason to believe that informal early intervention cannot be used as an alternative to formal early intervention with a large number of infants and toddlers with disabilities. Which children with which conditions and life circumstances might benefit from everyday learning?
- Which families with which kinds of cultural and personal beliefs and values are likely to view informal early intervention as appropriate? And why?
- Assuming that informal early intervention proves more effective than or as effective as formal early intervention, what is the future of formal or more traditional early intervention?

Answers to these as well as other questions will likely shape and influence how early intervention is practiced with infants and toddlers with disabilities.

PowerPoint Presentation is available at:

www.puckett.org