Parent Processes that Support School Readiness
Investigators

1 Susan H. Landry, Ph.D., PI
2 Karen E. Smith, Ph.D., Co-PI
1 Paul R. Swank, Ph.D., Co-PI

1 University of Texas-Houston, Health Science Center
2 University of Texas Medical Branch at Galveston

NICHD HD25128 & HD36099
National Picture:

Large numbers of children:

- enter kindergarten without necessary skills to succeed
  - social-emotional,
  - cognitive, language,
  - early literacy, math

- are from low economic backgrounds
Neuroscience Advances in Brain Development:

- Critical nature of development in the early years
- Role of child’s environment
Parent:

- Critical source of stimulation for the young child
How Parents and Teachers Help Young Children Learn

Early Reading and Mathematics Development

Zone of Proximal Development

- Child's Independent Learning
- Level with Teacher Scaffolding
Key Aspects of Responsiveness Across Theoretical Frameworks

- Contingent responding
  (3 term chain of events)
- Emotional/affective support
  (e.g. warmth, positive affect)
- Support for children’s focus of attention
  (maintaining and building on children’s attentional interests)
- Rich stimulation
  (e.g. language of input)
Is Early Childhood a Sensitive Period for Responsive Stimulation?
Sensitive Periods

• At some developmental stages the child is more receptive to environmental influence than at other stages

Plasticity

• Flexibility of the young brain for developing network of associations from learning experiences
Double Jeopardy

• Findings of a longitudinal study of the relations between:

- Biological risk preterm vs. term
  • high & low medical risk
- Environmental factors
  • poor vs good parenting
Patterns of Responsiveness & Growth in Cognitive Skills: 6 months through 4 years

- High-stable
- Inconsistent
- Low-stable
Patterns of Responsiveness & Growth in Cognitive and Social skills:
6 months through 8 years

- High-stable
- Inconsistent
- Low-stable
Responsive Parenting:

Can caregivers be supported to learn the 4 key aspects?

If so, what is the most optimal time for intervention?
Impact of Maternal Responsiveness: An experimental study

- Play & Learning Strategies (PALS)
  - PALS I = infancy; PALS II = toddler/preschooler

- Developmental information (DAS) - DAS I = infancy; DAS II = toddler/preschool
  - Assessment of developmental progression
  - Information of development
  - No information on how to help child develop
  - 10 to 12 sessions for each age period

- 10 to 12 sessions for each age period
Four Intervention Conditions

• Parents with Pals I and Pals II
• Parents with Pals I and Das II
• Parents with Das I and Pals II
• Parents with Das I and Das II
PALS
(Playing and Learning Strategies)

- Identify child signals
- Respond contingently
- Use sensitivity behaviors
- Maintain interests and attentional focus
- Provide rich stimulation about topic, toy or activity (labeling, scaffolding)
- Avoid restricting behavior
PALS
(Playing and Learning Strategies)

- **Intervention format:**
  - Short videotapes of similar types of mothers demonstrating behaviors with their infants.
  - Discussion of behaviors throughout videotape between facilitator and mother.
  - Mothers videotaped trying concept with their infants.
  - Review of videotaped mother-infant interactions with mothers critiquing how infants responded to their interactive behaviors.
### Participants

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<th>DEV-A (n = 135)</th>
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Parenting Behaviors: When to Best Support With Intervention
Change in Parenting Behaviors
Across Infancy - gains from pre to post

$d = .31$
Change in Parenting Behaviors
Across Infancy - gains from pre to post

% Maintaining at Post - Test

Maintaining Children’s Interests / Focus of Attention

DAS I  PALS I

d = .34
Change in Parenting Behaviors Across Toddler/Preschool - gains from pre to post

LS Means at Post - Test

DAS II  PALS II

Verbal Scaffolding

\[ d = .36 \]
Change in Parenting Behaviors
Need for Intervention across both developmental periods—gains from pre to post

$\textit{LS Means at Post - Test}$

$d = .46$

Contingent Responsiveness
Child Outcomes: When to Best Support With Intervention
Intervention Effects on Child Social Skills – growth across pre to follow-up

$d = .32$
Intervention Effects on Child Language Skills – gains from pre to post

LS Means at Post - Test

Use of Words

DAS II  PALS II  $d = .37$
Intervention Effects on Child Social Skills - gains from pre to post

LS Means at Post-Test

 Cooperation

DAS II  PALS II

\[ d = .30 \]
Intervention Effects on Child Standardized Language Scores (Preschool Language Scale) - growth across pre to follow-up

\[ d = 0.28 \]
Maternal Behaviors
Mediating Intervention Effect on PreSchool Language Scores

Maternal predictors:
• Language Scaffolding
• Contingent responsiveness
Influences on Parenting

Parents’

• beliefs about childrearing
• own childrearing history
• perception of their role
• psychological well-being
• social support
Informing Policy & Practice Decisions

- Facilitate parenting behaviors known to support school readiness
- Use adult learning approaches
- Attend to factors beyond behaviors (e.g. social support)
- Tailor program to meet needs of specific families (multi-faceted vs. single focus)
• www.childrenslearninginstitute.org