

## Evidence-Based Early Language Intervention: Caregiver Verbal Responsivity Training



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## Components of Effective Early Intervention Services

- Design and delivery of services must be *family centered* and *strengths-based*
- Services must be provided within *natural environments*
- Programs should be *inclusive* (available to children who are developing typically, those who are at developmental risk, and those who demonstrate developmental delays)
- The *quality of relationship* is central to learning at all levels (programs must recognize the importance of the relationship between provider and family, family and child, and provider and child)
- *Developmentally appropriate* intervention strategies must be employed.

## Early Language Intervention

- We know that it is effective
  - ✓ Evidence for group and individual contexts led by a therapist
  - ✓ Evidence across a variety of communication and language goals
  - ✓ Evidence for the effectiveness of varying techniques (e.g., milieu, focused stimulation, interactive modeling, etc)
  - ✓ Emerging evidence for effectiveness of parent-focused interventions
- The comparative efficacy evidence base much weaker
  - ✓ How do we know what approach to select?
  - ✓ Are some more effective than others?

## Experimental Procedures

- Children were randomly assigned to one of three intervention conditions:
  - ✓ Caregiver responsivity training (caregiver trained to provide intervention in natural activities and routines)
  - ✓ Toddler group led by SLP (SLP provided intervention in the context of natural activities and routines in a group setting)
  - ✓ Toddler group + caregiver responsivity training
- All children received a total of 240 minutes of intervention time per week for a total of 16 weeks
- Initial training lexicon of 10 words were individually selected for each child in accord with their interests and their phonological repertoire, when children met criteria for a word a new word was added to keep the intervention targets constantly at 10 words.

## Caregiver Verbal Responsivity Training (CVRT)

- Caregivers were trained to facilitate their children's early language skills
- Home visits (2x monthly)
- Parent training in groups (2x monthly)
- Activities implemented by parent in home – 180 min week
- Total Weekly Intervention time = 240 minutes, 180 in parent-implemented activities, 60 minutes parent training either in home or in a group
- Caregivers tracked their children's production of target words on a weekly basis and were asked to model each word at least 20 times during the week.

## Direct Lexical Training in Toddler Groups (DLT)

- Children's early language skills are facilitated by an SLP in a group setting through direct lexical intervention relying upon interactive modeling and contextually embedded "requests" for language targets
- Center based (2x weekly – 2 hr. session each time)
- Total Weekly Intervention time = 240 minutes
- Children were provided with 10 models for each target word for each session for a total of 20 models per week per word
- Children's production of target words was tracked each week and parent were asked to track their child's target word productions at home as well.

## CVRT + DLT (Combination Intervention)

- Center-based (1x weekly group – 2 hours)
- Parent Training in groups (3 x monthly)
- Parent Training at Home based (1 x monthly)
- Activities implemented by parent in home = 60 min weekly
- Total Weekly Intervention Time = 240 minutes
- Ten models per word were provided during each weekly group session and parents were asked to track their child's target word productions and provide at least 10 models across the week for each target word

## Criteria for Acquisition of Target Words

### Caregiver Report

- Parents were given a list of their child's target words to monitor use over the following 7 day time period
- Parents checked the frequency of word use and describe the activity/setting in which their children used the words
- A word was considered acquired when used the word was used at least 3 times in two different activities or routines

### Treatment Data

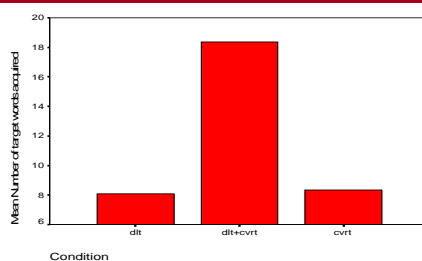
- Children's word use was noted during each playgroup session
- Words were regarded as acquired when used spontaneously in at least two different contexts during two of four successive playgroup sessions

## Participant Characteristics

Measure	DLT (n=29)	DLT+CVRT (n=26)	CVRT (n=27)
Age (mo)	26.20 (3.3.5)	24.23 (4.14)	24.59 (3.83)
Words at Baseline	11.14 (9.57)	14.19 (11.23)	13.46 (12.67)
Reynell-Receptive	73.79 (15.53)	72.91 (19.21)	77.85 (17.50)
Reynell-Expressive	64.62 (4.88)	64.34 (15.35)	64.62 (3.47)
BDI - Cognitive	80.86 (17.20)	81.73 (18.20)	83.33 (16.71)

All formal test data expressed as a Standard Score, SD are in parentheses

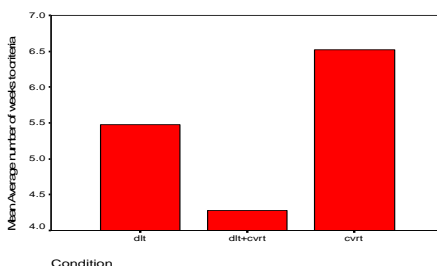
## Target Words Learned in each Condition



## Target Words Acquired x Condition

Group	M	SD	Range
DLT	8.10	9.81	0-37
DLT + CVRT	18.34	14.20	3-74
CVRT	8.33	9.64	0-41

## Average Weeks to Criteria Across Conditions



## Average Weeks to Criterion x Condition

Group	M	SD	Range
DLT	5.47	3.19	0-14.30
DLT + CVRT	4.28	1.57	1.82-8.00
CVRT	6.51	2.66	2-13.00

## Conclusions

- Children learned in all conditions, but acquired new words most rapidly (twice the rate) in the condition that included a combination of parent training and SLP-led group intervention
- The broadened contextual exposure was likely responsible for the differential learning rates
- Early language interventions will maximize effectiveness if they include a focus on natural activities and routines within the home as well as a group setting.

## Caregiver Training Program Overview

- **Component One: Sensitivity Training**
  - ✓ Facilitate identification of communication behavior and identification of opportunities for communication
- **Component Two: Contingency Training**
  - ✓ Increase timely and contextually-related responses to targeted child behavior
- **Component Three: Consistency Training**
  - ✓ Self-monitoring; use of cues and prompts for elicitation of more complex behavior

## Agenda for group and individual meetings [example handout.doc](#)

Caregiver Verbal Responsivity Training Agenda  
Play Group and Parent Classes

<b>Sensitivity: Tuning In To Opportunities for Language Learning</b>	
Session 1	Group meeting: Overview and Introduction: Teaching Your Child Words
Session 2	Group meeting: Opportunities for Teaching Words
Session 3	Group meeting: Using Daily Activities to Teach Language Skills
Session 4	Individual meetings in your home
Session 5	Group meeting: Encouraging Words
Session 6	Group meeting: Strategies for Encouraging Words during Play
<b>Contingency: Responding to Children's Communications</b>	
Session 7	Group meeting: Caregiver's Talk to Children
Session 8	Individual meetings in your home
Session 9	Group meeting: Imitation, Interpretation and Expansion
Session 10	Group meeting: Responding to Our Child's Communications
Session 11	Group meeting: Options for Responding
Session 12	Individual meetings in your home
<b>Consistency: Self Monitoring Skills and Encouraging More Complex Language</b>	
Session 13	Group meeting: Strategies to Further Enhance Children's Language Skills
Session 14	Group meeting: Identifying More Complex Communication and Language Behavior
Session 15	Individual meetings: Review Progress and Plan Future Goals

## Structure of parent meetings

- About 4-6 caregivers per group
- Began by reviewing target word logs for each child and select new words if needed
- Introduced topic for session with parent handout
- Viewed videotaped segments illustrating the strategies targeted that session
- Facilitated discussion of strategies
- Wrote intervention plan to be implemented during the following week

## Target Word Logs

- **Criteria for selecting target words**
  - ✓ Start with words that are names for objects that the child likes
  - ✓ Pick words that occur often at home
  - ✓ Start with words that contain sounds and syllable shapes that the child can produce
  - ✓ As the child learns a word, pick a new word to replace the one that has been learned
- **Example "Possible Target Words"**
- **Target word log** used by parents to monitor acquisition of words

## Development of Interaction Plans

- Identify routine
- Determine steps in the routine
- Determine opportunities for communication relative to each of the identified steps
- Specify response options with respect to identified opportunities

## Example Interaction Plan

INTERACTION PLAN		
Child: <u>Tierra</u> Partner: <u>Dad</u> Activity: <u>Washing Dishes</u> Setting: <u>Kitchen</u>		
Target words: <u>water, soap, bubbles, cup, pan, dad, chair, in, stop, wash</u>		
Steps of Routine	Props Needed	Opportunities for target words and partner response options
<ol style="list-style-type: none"> <li>1. Dad and child are ready to wash dishes</li> <li>2. Dad helps Tierra put soap and water in the sink</li> <li>3. Tierra begins to wash the dishes</li> <li>4. Dad helps Tierra wash the dishes. Dishes are washed, rinsed and put in dish rack</li> </ol>	Dishwashing items and items representing target words: Water Soap Bubbles Cup Pan Dad Chair	<p>While preparing the sink, wait for Tierra to indicate the need for a <u>chair</u>, label and help with the <u>chair</u>.</p> <p>Turn the <u>water</u> on, label <u>water</u> in the sink. Put the <u>soap</u> in. Label and talk about the <u>soap</u> going in the sink. Label and describe <u>bubbles</u> appearing. Use the target words in phrases like: "Dad, get <u>soap</u> in," "Water off," "Lots of <u>bubbles</u>," "Bubbles everywhere"</p> <p>Place the items to be washed near the sink. Wait for Tierra to indicate or say which item she wants to wash. Give her choices like: "<u>Pan</u>, or <u>cup</u>". Talk about washing each with <u>soap</u> and <u>bubbles</u> in the <u>water</u>.</p> <p>Wash items. Label each item. Discuss rinsing in more <u>water</u>. Wash in the <u>water</u> with the <u>bubbles</u>. Comment on "no <u>bubbles</u>" in the <u>water</u>. Make other comments like: "<u>Cup</u> and <u>pan</u> are all clean". "We are done with the <u>water</u>." "Bye bye <u>bubbles</u>". Tierra is all done washing the <u>cup</u> and <u>pan</u>". "Dad and Tierra are all done".</p>

## Format for Home Visits/Observations

- Caregiver selects activity which should be one in which s/he typically interacts with the child
- SLP serves as participant and observer (watch and wonder)
  - ✓ What is the capacity?
  - ✓ What questions do I have?
- SLP comments (facilitate)
  - ✓ Focus on strengths
  - ✓ Talking through the child
  - ✓ Identify successes
- Tierra's home visit

## Sensitivity: Tuning in to Opportunities for Language Learning

- Facilitate caregiver's ability to identify communication behavior and identify opportunities for communication during daily routines
- Encouraged caregiver's use of natural cues and prompts to elicit communication behavior
- Provided handouts to teach parents how to write an intervention plan
- Used videotaped interactions to illustrate how everyday activities can provide many opportunities to teach words

## Creating Communication Opportunities

- Examine routine activities and identify points at which a need for communication exists, or could exist
  - ✓ Situations in which a child must do something in order to obtain a desired item or activity
  - ✓ Situations in which a child must do something in order to focus a partner's attention on a desired object or activity
- Respond to child initiations whenever possible, even if the meaning or "intent" is unclear
- Create options for expression of a diversity of communication functions
- Establish routines with clearly differentiated steps; after a routine is well established introduce new items or vary the sequence of events

## Natural Use of Cues and Prompts

- With regard to a child's focus, provide models of targeted behavior that include appropriate verbal behavior
- Conversational prompts, or elicitation procedures may be used when provided with respect to the child's focus of attention
  - ✓ Request for nonverbal behavior ("You want something over there, can you show me?"; "Can you stack the blocks?")
  - ✓ Request for verbal behavior ("You want the ball, can you say ball?")
- Avoid prompts/elicitation procedures that would result in a directive to shift the child's attention
- Example session

## Analysis of Communication Opportunities

Briefly describe the nature of activity.

1. How many opportunities did your child have to communicate during this activity?

Many  
 Many but need more  
 A few  
 Hardly any  
 None

2. How many opportunities did your child have to use the target words during this activity?

Many  
 Many but need more  
 A few  
 Hardly any  
 None

3. How many models of the target words were you able to provide?

Many  
 Many but need more  
 A few  
 Hardly any  
 None

4. Did your child usually communicate when an opportunity was available? Yes/No. Please explain.

5. Is it possible to increase the number of opportunities to communicate?

6. How could you change this activity to provide more opportunities for target word use?

## Contingency: Responding to children's communications

- Goal is to increase caregiver responses to child's communications
- Focus is on how the language that the caregiver uses can promote the child's communication
- Promote caregiver's use of enhancing responses
- Decrease use of limiting responses

## Enhancing Caregiver Responses

- Comply with the perceived or intended meaning, when appropriate, given the goal of the activity (e.g., giving a child a desired item, focusing attention on a novel event)
- Acknowledge meaning when compliance is not possible
- Request clarification when the meaning is unknown, and cannot be inferred or guessed from the context
- **Example** of enhancing responses

## Limiting Caregiver Responses

- **Leading Response:** Caregiver does not follow the child's focus of attention
  - ✓ Redirect to previous object or activity
  - ✓ Introduces a new object or activity
- Non-Interactive or Unrelated Responses
  - ✓ Joint focus is not established and there is no observable change in partner behavior as a function of child behavior
  - ✓ Caregiver "watches" child but makes no attempt to interact
  - ✓ Caregiver produces a unrelated response (e.g., averts gaze, talks to another adult or child)

## Responsivity Analysis

RESPONSIVITY ANALYSIS

Name \_\_\_\_\_ Activity \_\_\_\_\_ Date \_\_\_\_\_

1. Try to let my child choose the activity or object when we are together.

Never  
 Often  
 Occasionally

2. I consistently give verbal labels for actions and objects within my child's view.

Never  
 Often  
 Occasionally

3. I use the target words that my child is hearing at least 5 times during the interaction.

Never  
 Often  
 Occasionally

4. I usually respond to my child's communication by inferring, interpreting, and expanding on what he/she intended.

Never  
 Often  
 Occasionally

5. I continue conversations with my child by asking questions and comments about the objects and activities that he/she is interested in.

Never  
 Often  
 Occasionally

## Consistency: Self-monitoring Skills and More Complex Language

- Identification of the "next step" in language learning
- Write **new interaction plan** targeting more complex language
- Increase caregiver's self-monitoring skills by reviewing videotape made of caregiver while interacting with the child in a previously new activity
- Caregiver asked to identify child's communications and:
  - ✓ Evaluate his/her responsivity with reference to that behavior
  - ✓ Identify ways in which a natural cue or prompt may be used to elicit more complex behavior
- Plan future support as needed

## Considerations for Caregiver Verbal Responsivity Training

- Select specific target behavior
- Include caregivers in data collection
- Focus of strengths
- Use videotapes if possible as tool to identify strengths and capacities with the families
- Be creative in your scheduling

## Toddler Group

- Based on developmentally appropriate practices while addressing the interests and needs of individual children.
- The environment, activities, and interactions must be based upon children's individual developmental levels and interests.
- Clinician-directed activities should be limited with the major emphasis placed on opportunities for child-initiated play, active exploration, and making choices.
- Opportunities to practice "old skills" and acquire "new skills" should be provided within the context of children's interactions with materials, activities, peers, and adults.

## Toddler Group Curriculum

- Play-based curriculum provides the most effective and enjoyable way for children to learn.
- Children learn best when they are actively engaged, when they are involved in "hands-on" experiences, and when activities are pleasurable to them.

## Play Group Curriculum and Activities

- Individualized group instruction is provided to meet overall developmental objectives and specific individual objectives that are identified for each child.
- Typical play group
  - ✓ Free play time while children arrive
  - ✓ Opening activity that includes songs and fingerplays
  - ✓ Exploration of Interest Areas
    - sensory center
    - art exploration
    - housekeeping area
    - book corner
    - motor/tumbling area
    - manipulatives/table top toys
  - ✓ Outdoor play
  - ✓ Closing songs

## Guidelines for Group-Based Language Intervention

- Follow the child's lead
- Establish joint attention
- Create opportunities for communication
- Model words and phrases
- Use sound play and mand models to encourage word productions and phonological development



## Group Dynamics



- Children 18 months to 3 years of age
- Children, who are developing typically, those who are at developmental risk, and those who demonstrate some developmental delays.
- Maximum of 8 toddlers in a group.



## Toddlers: Special Considerations I

- Toddlers are discovering their independence and vacillate between needing to be near an adult and independent exploration
  - ✓ Encourage parents to participate in play group when possible
  - ✓ Provide opportunities for toddlers to act independently
  - ✓ Toddlers are free to choose activities and are not required to participate in activities at specific times Allow alternative outcomes (you can wear shoes to bed)
- Toddlers are learning to share
  - ✓ Provide plenty of toys; at least two of each type of toy
  - ✓ Use songs, chants, or rhymes to signal turns
  - ✓ Create activities that are more successful with interaction (rocking boats; playing catch; painting large murals)

## Toddlers: Special Considerations II

- Toddlers are not ready for preschool circles
  - ✓ Include opening and closing song times.
  - ✓ Sing simple repetitive songs and repeat songs several times
  - ✓ Use lots of prompts, puppets and musical instruments
  - ✓ Carpet squares, benches and laps can provide boundaries for wandering toddlers
  - ✓ Book reading is most successful in small groups when initiated by toddlers
- Toddlers don't wait and are hard to gather together
  - ✓ Be prepared (have all snacks and supplies for activities gathered before play group begins)
  - ✓ Bring "the mountain to Mohammed" - start the activity where the children are located
  - ✓ Generate interest by beginning the activity yourself



## Toddlers: Special Considerations III

- Toddlers need consistent routines
  - ✓ Routines provide the structure for language intervention
  - ✓ Opportunities for communication are created by varying familiar routines, not by withholding desired objects
- Toddlers explore with energy
  - ✓ Provide an area with mats, therapy balls and equipment to climb and tumble
  - ✓ Language learning can be facilitated through movement
- Toddlers need special considerations for nurturing social-emotional development
  - ✓ Provide support through gentle guidance
  - ✓ Be flexible and responsive to individual temperaments
  - ✓ Build strong relationships with families through home visits

## Sensory Area

- Allows children to explore a variety of sensations. The sensory table is filled on different weeks with water, sand, cornmeal or another substance. A variety of objects are available (funnels, shovels, nesting cups, etc.) to encourage children to experience these different sensations in order to promote development of cognitive and fine motor skills.



## Art Area

- Provides children with an opportunity to use paints, crayons, glue, markers and other materials.
- Art activities at this young age are sensory experiences and the "process" rather than the "product" is the focus.



## Dramatic Play Area

- Kitchen/baby doll areas allow children to develop important play skills. Children at this age are beginning to engage in imitative play,
- Includes imitation of adult tasks, especially caretaking and housekeeping tasks.
- Develops an understanding of simple functional relationships (e.g., spoon in bowl or mouth, blanket on doll) and symbolic representations (e.g., using blocks as food for the baby).
- Exposure to these play sequences helps children development important cognitive skills so necessary for language acquisition.





## Literacy Area

- Provides children with an opportunity to explore a variety of books as a solitary or as a shared activity.
- Books are changed based on the theme for that week. Book sharing allows an opportunity to introduce nursery rhymes and encourages children to identify pictures in books.
- Adults read books to children whenever a child shows an interest in a book.



## Manipulative Area

- Provide opportunities for children to explore and learn about their world in order to develop important cognitive and fine motor skills.
- Activities include play dough, blocks, simple puzzles, nesting toys, pegboards and other toys that develop these skills in young children.



## Gross Motor Area

- Provides children with a place to practice newly acquired physical skills.
- Pushing and pulling toys or carrying objects from place to place.
- An area of the classroom is set up with mats, bolsters, large therapy balls etc. to encourage gross motor development.
- Our outdoor playground offers a variety of equipment for expanding movement skills.





For further information,  
please visit our web site.



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