Preterm Language Outcomes and Maternal Responsiveness

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Introduction

- Infants born preterm display a range of developmental delays depending on when they are born, their weight, and other natural or complicating causes as a result of their early birth.
- According to the social interactionist model, caregiver responsiveness and child engagement are crucial to the development of language (Tamis-LeMonda, 2001).
- Caregiver responsiveness benefits the development of language in typically developing toddlers and preschoolers, as well as premature infants (Tamis-LeMonda, 2001; Barlow, 2011; Yoder, M.S., et al., 2010).

Purpose

- To describe the maternal responsiveness behaviors displayed by mothers and their 1-15-month-old children who were born preterm during play.
- To evaluate whether there was a relation between the maternal responsiveness variables and child language abilities.

Specific Research Questions

1. What are the responsiveness characteristics of the mother-child interaction and children's language abilities?
2. Are there associations between maternal responsiveness characteristics and the child's language abilities?

Methods

- The sample included 1513 infants born < 1500 grams and prior to 34 weeks' gestation. Infants were enrolled in a larger study of the NTrainer which provides synthetic patterned orocutaneous stimulation to increase sucking for babies while in the NICU. The NTrainer was audio- and video-taped.
- Maternal Responsiveness was evaluated in two ways.
  1. The mother and child were given a standard set of toys and the mother was asked to play with the child.
  2. The mother-child interaction was audio-taped.

Table 1: Characteristics of the Sample

- Birthweight: 1513.09 ± 433.01, range 770-1841
- Corrected age in months: 13.1 ± 2.02, range 9-15
- Other diagnoses: Status at birth
- Language: REEL-3 Language Ability 109.9 ± 13.4, range 81-123
- Receptive subtest: REEL-3 Receptive subtest 99 ± 10.95, range 83-115

Summary

- The NTrainer was successfully used to increase sucking for babies while in the NICU.
- Maternal responsiveness was evaluated in two ways: 1. The mother-child interaction was audio-taped. 2. Coding the language sample transcribed from the audio-tape of the mother-child interaction using the CARE Scale.

Table 2: Table 2: Characteristics of Mother-Child Interaction

- Language: REEL-3 Language Ability 109.9 ± 13.4, range 81-123
- Receptive subtest: REEL-3 Receptive subtest 99 ± 10.95, range 83-115

Results

- The most responsive characteristic was in the area of Observing/Listening, followed by Prosody and Touch/Proximity.

Table 3: Table 3: Characteristics of Mother-Child Interaction

- Observing/Listening: 1. The mother was always watching her child as she played. 2. The mother waited expectantly for the child to play. 3. The mother encouraged the child to use sign or gesture. 4. The mother introduces different toys nonverbally. 5. The mother uses short sentences (1-3 words in length).

Conclusions

- Together the analyses indicated several responsive interaction behaviors on the part of the mothers that may be related to the infants' motor development

References


Acknowledgments

- Supported by grants NIH MH 0036011-12 (Baltimore), NIH F30 DC008780, the Sutherland Family Endowment, and the University of Kansas General Research Fund. The authors express gratitude to Jessie Wang, Pradha Ayyar for computer engineering support, Alina Smith, Alvin Gray, Jennifer Vorick, Margaret Thompson, Carol Allcorn for assistance with data collection and analysis, Angela Miller for statistical analysis, Chris Loomis for his visual graphic poster preparation, as well as the many wonderful families who participated in this project.
- To download the presentation please visit the Communication Neuroscience Laboratories website: http://www.cnl.ksu.edu/pretermproject