

DOCUMENT RESUME

ED 377 638

EC 303 566

TITLE Training Older Siblings To Enhance the Communications of Infants and Toddlers with Down Syndrome. Research & Resources on Special Education, Abstract 17.

INSTITUTION Council for Exceptional Children, Reston, Va.; ERIC Clearinghouse on Handicapped and Gifted Children, Reston, VA. ERIC/OSEP Special Project.

SPONS AGENCY Office of Special Education and Rehabilitative Services (ED), Washington, DC. Div. of Innovation and Development.

PUB DATE Jun 88

CONTRACT RI88062007

NOTE 3p.; For a related document, see ED 294 356.

AVAILABLE FROM ERIC Clearinghouse on Disabilities and Gifted Education, 1920 Association Dr., Dept. K31148, Reston, VA 22091-1589 (Order No. E717, \$1 prepaid).

PUB TYPE Information Analyses - ERIC Clearinghouse Products (071)

EDRS PRICE MF01/PC01 Plus Postage.

DESCRIPTORS *Communication Skills; Cross Age Teaching; *Downs Syndrome; Early Childhood Education; Helping Relationship; Interaction Process Analysis; *Interpersonal Communication; Intervention; Maintenance; Preschool Children; *Sibling Relationship; Skill Development; Toddlers

ABSTRACT

Based on the study titled, "Siblings as Communication Trainers for Prelinguistic Infants with Down Syndrome" by Nancy B. Richard, this research abstract reports on a study of six sibling pairs in which the older siblings were 6 to 8 years old and their younger brothers and sisters, who had Down syndrome, were from 16 to 41 months old. The older siblings were trained to use social communication strategies, in order to support the development of more balanced communication and to give more opportunities for the younger children to initiate communications. Three strategies--"follow the leader," "take turns," and "elaborate"--were used in the context of familiar games. The training increased the contingent responsiveness of the older siblings. They responded more frequently to bids for communication from their younger brothers and sisters and responded immediately, providing contingent feedback or reinforcement. The number of communicative "turns" taken by the younger siblings also increased, and there were more spontaneous comments from them. For all subjects, these increases were maintained at follow up. A survey of parents showed that they perceived a moderate change in the interactive play of their children. (JDD)

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RESEARCH & RESOURCES ON SPECIAL EDUCATION

**ABSTRACT 17
JUNE 1988****TRAINING OLDER
SIBLINGS TO ENHANCE
THE COMMUNICATIONS
OF INFANTS AND
TODDLERS WITH
DOWN SYNDROME**

The first year of life is a critical time when infants practice and refine increasingly complex forms of communication with their caregivers. Infants establish communication through gaze, gesture, and vocalization; feedback is provided through the caregiver's response. The social practice of signaling caregivers and receiving immediate response contributes to future interaction, and the social and cognitive developments that occur during this period establish the basis for the development of language. For infants with Down syndrome, this development is both delayed and different; differences have been observed in temperament, patterns of looking at the environment, gestures, and vocalization. Infants with Down syndrome have less success in eliciting interactions from others, and often their signals are more subtle. They may, therefore, have less opportunity to practice and refine important social and communication skills.

Although many studies of social interaction with handicapped infants have focused on mothers, siblings can also be socialization agents for their younger brothers or sisters. *Siblings as Communication Trainers for Prelinguistic Infants with Down Syndrome* is a study that provided training to older siblings of infants with Down syndrome for two reasons: (a) to increase the siblings' responsiveness and (b) to increase the younger siblings' bids for interaction.

SAMPLE

Six sibling pairs were included in the study. The older siblings were 6 to 8 years old, and their younger brothers and sisters were from 16 to 41 months old. The younger siblings had Down syndrome and no other handicapping condition.

METHOD

The study trained the older siblings to use social communication strategies, a set of interventions designed to support the development of more balanced communication and to give more opportunities for young children to initiate communications. Three strategies—"follow the leader," "take turns," and "elaborate"—were used in the context of familiar games such as playing ball, blowing bubbles, peek-a-boo, containers, and wind-up toys. In turn taking, a turn is defined as any single communicative act (verbal or nonverbal) directed toward another person.

A single subject, multiple baseline design was used, involving three study phases: baseline, intervention (training of older siblings), and follow up. Data were collected by videotaping the subjects in their homes. In the baseline phase, the siblings were provided with a standard set of toys and were taped during unstructured play sessions. Three sets of two sibling pairs each were assigned to data collection periods of 2, 3, and 4 weeks.

For the intervention phase, the older siblings received training in how to use the social communication strategies. First, they were shown videotapes of puppets using the strategies. The six videotapes were 5–10 minutes long, with two tapes describing each strategy. They then received verbal instruction, role playing, and coaching from the researcher. The coaching was given in a 10–20 minute play session with the infant, and 10 minutes of videotape data were collected during the session. Intervention continued for six sessions for each sibling dyad. Three of the sibling pairs received one session per week for 6 weeks, and the other three received two sessions per week for 3 weeks.

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Follow-up data were collected 1 week after the final intervention period and again 3 weeks later. These sessions were exactly like the baseline sessions, and no intervention from the researcher was provided. Again, 10 minutes of videotape data were collected during each session. After the follow-up phase, parents completed a questionnaire about their perceptions of the effects of the training.

RESULTS

Examination of baseline data revealed patterns in the responsiveness of older siblings: five of the six responded to half of the communications of their younger brothers and sisters, and nearly half of their communications consisted of positive responses. In four of the sibling dyads, communication was evenly balanced, with a relatively equal number of turns taken by each of the siblings. However, older siblings showed a low frequency of response when younger siblings initiated communication.

Analysis of the intervention phase data showed that the training increased the contingent responsiveness of the older siblings. They responded more frequently to bids for communication from their younger brothers and sisters, and also responded immediately, providing contingent feedback or reinforcement. The number of communicative "turns" taken by the younger siblings also increased; there were more spontaneous comments from them, and four younger siblings showed increased complexity in the mode of communication they used (gaze, gesture, or vocalization).

For all subjects, these increases were maintained at follow up. The results of the parent questionnaire showed that parents perceived a moderate change in the interactive play of their children.

IMPLICATIONS

The study results show that it is possible to increase opportunities for handicapped infants to practice and refine communication skills by training their older brothers and sisters in social communication strategies. Specific outcomes for younger siblings include increased spontaneous communication, increased responsive communication, and more complexity in the mode of communication used. However, the author cautions that the intervention model used in this study will require further research and modification.

Siblings as Communication Trainers for Prelinguistic Infants with Down Syndrome. 1986. 154 pp. Nancy B. Richard, University of Washington. U.S. Department of Education Grant No. G008530228. Available for \$.82 (microfiche) or \$13.58 (hard copy), plus postage, from ERIC Document Reproduction Service, 3900 Wheeler Avenue, Alexandria, VA 22304 (1-800-227-3742). EC 202 525; ED number is not yet available.

The ERIC/OSEP Special Project on Interagency Information Dissemination is designed to provide information about research in special education, in particular, research funded by the Division of Innovation and Development, Office of Special Education Programs, U.S. Department of Education. This product was developed by the ERIC Clearinghouse on Handicapped and Gifted Children under contract No. RI88062007 with the Office of Special Education Programs, U.S. Department of Education. The content, however, does not necessarily reflect the position of the U.S. Department of Education and no official endorsement of these materials should be inferred.



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