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AN INVESTIGATION OF THE COMMUNICATION STRATEGIES USED BY
MOTHERS OF HEARING-IMPAIRED CHILDREN

Independent Study

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For Reference

Not to be taken from this room

INTRODUCTION

Language development in the normal child has received considerable attention during the past decade. The results of research involving a small group of children cannot be used to establish steps of language development through which all children must pass. However, a few assumptions are generally accepted: 1) Comprehension of language precedes expression in the young child, 2) The young child learns language through repeated stimulation from those around him.

Study of the normal course of language development becomes important in dealing with a child who has not developed language naturally. Children with significant hearing impairments must learn language through altered input and feedback channels. Since hearing-impaired children learn oral language, it is valuable to study the teaching techniques used with such children.

Erber and Greer (1972) examined the strategies* used by teachers in communicating with primary and upper-level deaf children (ages 8 to 16 years). They found that teachers generally draw from four categories of strategies to insure that a specific message is understood. Teachers tend to choose strategies on the basis of their educational background, their past success in the use of particular strategies, and the characteristics of the children in their class (e.g., age, intelligence, hearing level, etc.).

Mothers generally bear the responsibility for early language stimulation in the preschool-age child. It is reasonable to expect

* A strategy refers to a pattern of behavior intended to overcome a communication failure.

that mothers, also, use strategies which can be classified according to type and frequency of occurrence, and which may be related to characteristics of the specific child.

This study investigated some aspects of mothers' communication to their hearing impaired children:

- 1) The content of mothers' communication to their children: the types of strategies used and the frequencies among mothers
- 2) The mothers' approach to a communication task, and the variables which influence that approach
- 3) The patterns of successive strategies used when a communication attempt failed, and the relation between such strategies
- 4) The number of attempts a mother made until the child responded, or she gave up
- 5) The variables which may affect the choice of strategies; such as the characteristics of the children (hearing level, age, intelligence, receptive language skills) and/or the length of time the mother/child pairs had participated in the Parent-Infant Program at Central Institute for the Deaf.

The results may be useful to those who counsel parents about communication with their deaf children.

METHOD

Subjects

The subjects observed in this study were twenty-four hearing-impaired children and their mothers, participants in the Parent-Infant Program at Central Institute for the Deaf (CID). Videotapes of these mother/child pairs, filmed during their sessions in the CID demonstration house, were used for analysis. The length of time the pairs had been enrolled in the program varied from zero to twenty-nine months, with an average length of 9.7 months. The child-

ren ranged in age from 22 months to 55 months, with an average age of 38.7 months, and all were of normal intelligence. All but four of the children had severe or profound hearing losses.

Videotape Sequences

Videotapes of initial cookie-making sessions were viewed (filmed in February and March of 1972). These sessions consisted of the preparation for and process of making cookies from ready-to-slice cookie rolls. This activity was observed because of its unfamiliarity as a lesson project and its incorporation of behavior which could be easily observed and recorded. Each mother/child pair was engaged in the same activity in each tape, making these tapes suitable for comparison and analysis.

Transcription

Ten mother/child pairs were initially studied to determine the general types of communication strategies that mothers use. The strategies of all 24 mothers then were recorded as to type. These categories and their subgroups are shown in Table 1. The language that mothers used for each communication attempt was also recorded, but not analyzed as part of this study.

Procedure

The range of strategies employed by mothers was determined in a pilot study using ten mother/child pairs. A coding system was then established, similar to Table 2, through which the 24 mother/child interactions were transcribed. The tasks recorded for analysis were

those in which the pairs engaged in preparing to make cookies. All required physical responses by the children and direct communication by the mothers. The tasks required four types of messages:

- 1) Open _____, 2) Close _____, 3) Get _____, and
- 4) Put _____ on the table.

The transcriptions were then studied and specific data compiled for analysis. Those tasks which were relayed by verbalization plus doing the task or by just doing the task were not included in the analysis. Also, those tasks which were successfully communicated on the first attempt were omitted (they did not require use of strategies by the mothers).

In studying the transcriptions, special emphasis was given to determining if a pattern of strategies attempted to improve a communication effectiveness. A particular pattern of strategies was judged to decrease in complexity if a successive strategy potentially made the message easier to understand. A model pattern might be:

- 1) verbalizing the message, 2) verbalizing the message with an accompanying gesture, 3) verbalizing the message and helping the child do the task.

Table 1:

Types of Communication Strategies Used by Mothers of Hearing Impaired Children

1. <u>Verbalization only</u>	"We need a knife."
Verbal Negative	"No, that's a spoon. That's not a knife."
2. <u>Verbalization with accompanying gesture</u>	
eg. pointing looking	
clarifying the situation (intelling child to open a drawer, mother walks over to the drawer)	
<u>Verbal negative with gesture</u>	"That's not a knife." (nod)
3. <u>Verbalization with help</u>	"Put the knife on the table." M takes C'S hand & put on table
4. <u>Verbalization while doing the task</u>	
5. <u>Gesture only</u>	M points to the drawer
6. <u>Doing task without verbalization</u>	

Table 2. Coding System Used for Tape Transcriptions: sample data for one task.

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Mother

1

Initial	Verbalization Only	Verbal Negative	Verbalization + gesture	Verbal Neg. + gesture	Verbalization + Helping	Gestures Only	Verbalization + Doing	Doing Only
<i>We need a knife</i>			X					
<i>lets get a knife.</i>	X							
<i>We need a knife.</i>	X							
<i>We need a knife.</i>			X					
<i>We need a knife.</i>	X							
<i>We need a knife.</i>			X					
<i>We need a knife.</i>		<i>Thats a spoon. Thats not a knife, a spoon.</i>						
<i>Set a knife.</i>	X							
			X					
							X	

- mother has not established the situation (eg. she is not at the knife drawer)

Table 2.

RESULTS

Mothers' communication to their hearing-impaired children seems to draw from six categories of strategies. These strategies are: 1) verbalization only, 2) verbalization with an accompanying gesture, 3) verbalization while helping the child, 4) verbalization while doing the task, 5) gesture only, and 6) doing the task without verbalization. The strategy used most often was verbalization only. Gesture only was used the least.

Most tasks were initially approached with verbalization only (62% of the tasks). Verbalization with an accompanying gesture was used in 36.2% of the tasks (See Table 3). The only variable found to be significantly related to the initial approach was the length of time the mother/child pair had participated in the Parent-Infant Program. The longer the pair was involved in the program, the more likely the mother was to use verbalization only as an initial approach (See Table 4).

It was assumed that specific patterns would be used by the mothers to bring about comprehension. However, no general patterns of strategies emerged. The choice of successive strategies appeared to be random. Also, successive strategies did not seem to decrease in complexity. In 51% of the tasks the same strategy was used at least three times in succession. When the strategy was changed, it resulted in increased complexity in 36% of the tasks (See Table 3).

The number of communication attempts mothers used before the task was done varied considerably. A range of from one to fourteen attempts was found, with an average of 3.86 attempts. It was antic-

ipated that the number of attempts would be related to characteristics of the children. Hearing level did relate to this. The greater the hearing loss, the fewer times mothers attempted communication. This was the only variable related to number of attempts (See Table 4).

Communication was judged successful when the child completed the task. A comparison of the tasks completed by the mothers (24%) and those completed by the children (72%) is recorded in Table 3. The percent of tasks completed by the children was positively related to their age (See Table 4). In only 4% of the tasks did mothers put their children through the act when previous communication attempts failed. A difference in strategies immediately preceding task completion in both groups (child and mother completion) was anticipated. Verbalization alone was the preceding strategy in 67.2% of the tasks completed by the mothers, as compared with only 43.2% of the tasks completed by the children. Verbalization with an accompanying gesture most often elicited a response from the children (See Table 3).

Further study of the tasks completed by the children revealed a positive relationship between the receptive language skills of the children and the probability of response to verbalization only. Children with more receptive language (as judged by teachers in the Parent-Infant Program) were most likely to respond to verbalization only (See Table 4). Children with low receptive scores generally responded to verbalization with an accompanying gesture.

Table 3.

Table 3. Communicative Behavior in Mothers of Hearing Impaired Children

Initial Communication Attempt	%	First Strategy after Failure	%
Verbalization Only	62.0	Same as Initial	66.0
Verbalization + Gesture	36.2	Different than Initial	34.0
Gesture Only	0.9	a) Reduced Complexity	64.0
Verbalization + Help	0.9	b) Increased Complexity	36.0

Task Completion	%	Verbalization Only Before Task Completion	%
by children	72.0	by children	43.2
by mothers	24.0	by mothers	67.6
by both together	4.0		

Average Number of Strategies Used = 3.86

Same Strategy Used at least 3 times in succession = 51% of tasks

Table 4. Communicative Behavior as Related to Characteristics of the Children

	Time in the Program	Hearing Level	Age	Intell- igence	Receptive Language
Initial Attempt as Verbalization Only	.3898	—	—	—	—
Average Number of Attempts	—	-.3665	—	—	—
% of tasks children completed	—	—	.4447	—	—
Verbalization Only as Strategy Preceding Task Completion	—	—	—	—	.4328

DISCUSSION AND CONCLUSIONS

The results indicate that mothers of hearing-impaired children may be unaware of what constitutes effective communication. Patterns of strategies chosen when communication attempts failed seemed to be random, inconsistent, and lacking in purpose.

The majority of mothers approached communication tasks with verbalization only. This tendency increased with continued enrollment in the Parent-Infant Program at CID and might, therefore, be a direct result of the counseling received in this program. When this initial attempt failed mothers did not seem to know how to increase the likelihood of comprehension. Most mothers chose to repeat the same strategy, and of those who changed approaches, many chose strategies of increased complexity. Choice of strategies did not seem to be dependent upon the child involved, his previous response, or a conscious need to simplify the task.

A mother's persistence also seemed random, the number of attempts being related to hearing loss only. Mothers of children with severe hearing losses may have experienced more successful communication interactions in the past than mothers of profoundly deaf children. Thus, they may be more willing to persist in relaying a message. But although these mothers may make more attempts, their choice of strategies appears unsystematic. The number of attempts was not related to the types of strategies used. A more methodical choice of strategies might have reduced the number of attempts and affected a more positive communication setting. The observations revealed

an increased lack of interest by the children with the repetition of ineffective strategies.

It seems that these mothers may have misinterpreted the purpose of verbalization. They appeared to employ verbalization alone as the communication goal in *itself*. If successful communication is the goal, then mothers need to analyze the effectiveness of this approach in each situation. Few mothers seem to consider associating language with helping their child complete a task. This might be a more effective approach than pure verbalization and should be recognized.

The age of the child was positively related to his frequency of task completion. With increased age a child may be better able to "read" situations because of more experience with kitchen activities of this type. Also, he may be more attuned to his mother's communication techniques. This correlation cannot be attributed to an increase in receptive language skills or time spent in the Parent-Infant Program because these variables were not related in this sample of children.

Verbalization with an accompanying gesture was found to be the most successful strategy in eliciting responses from the children. Its success, in comparison to verbalization only, was related to the receptive language skills of the children. Thus, it seems that mothers with very young hearing-impaired children should realize the probability of communication failure when verbalization alone is used. The addition of a gesture might make the interaction more rewarding for both mother and child. (When mothers did the tasks

themselves they generally did so after an attempt of verbalization only. No intermediary strategy was tried.)

In a study of this type, it is difficult to objectively record all the data. Every aspect of an observation cannot be recorded. The coding system used in this study was not as effective as that used in the study by Erber and Greer (1972). All behavior recorded under each classification of strategies was not equal. A mother who sets up a situation (e.g., standing next to the door she wants opened) and verbalizes "Open the door" is doing something different than the mother who verbalizes the same message from across the room. The complexity of the tasks are different, yet they are coded under the same heading. Besides ability to structure the situation, mothers differed in their abilities to get their child's attention, and in their expectations*. For example, one mother would say "Get the knife" and expect her child to understand. Another mother would say the same thing with seemingly little faith in its reception. This observable behavior is difficult to record and poses problems in a study of this nature.

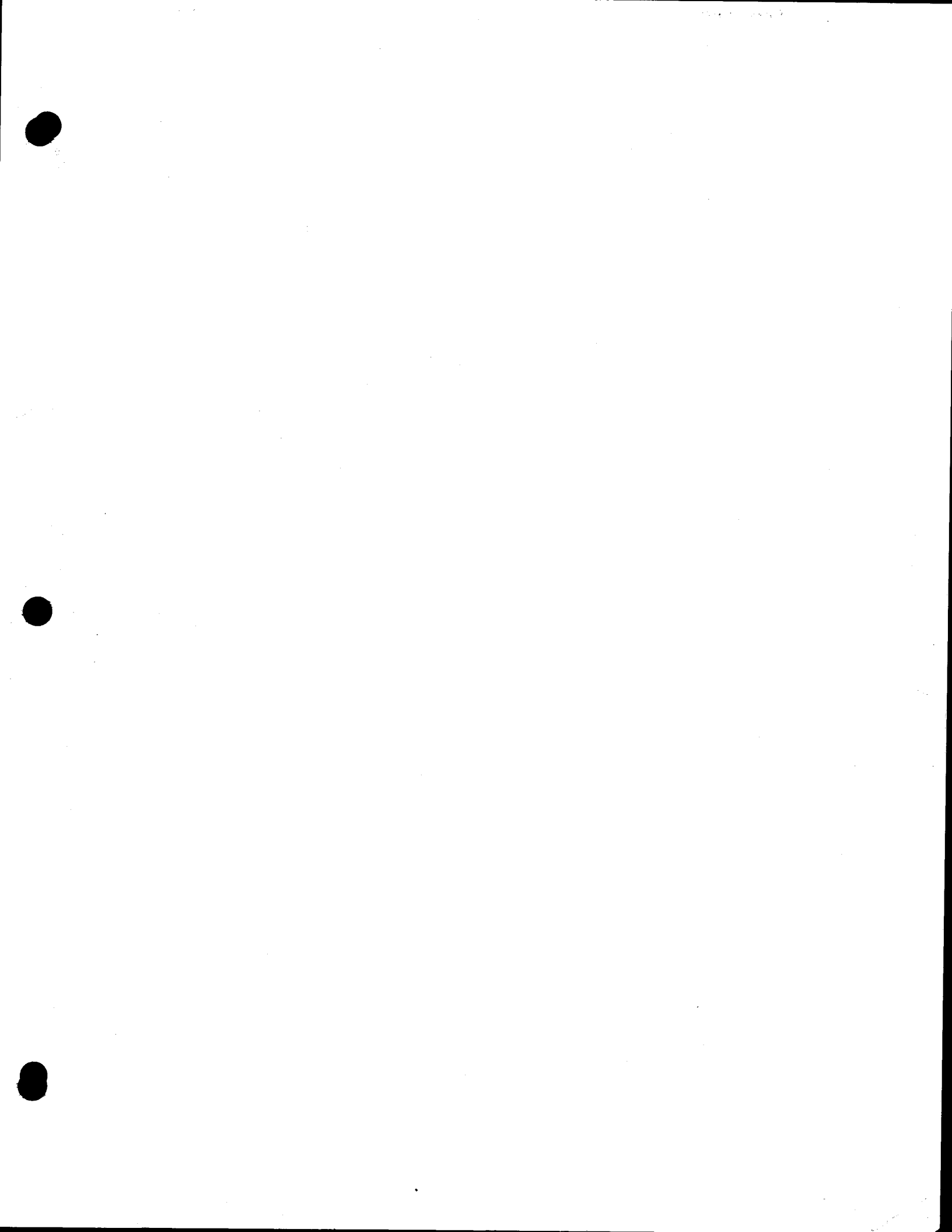
* Expectations refer to how much was really expected of the children.

SUMMARY

It is important that mothers receive proper counseling as to the strategies which affect successful communication with their hearing-impaired children. The results of this study indicate that these mothers are in need of specific guidance for improving their communicative behavior. They need to develop means by which to structure their environment and choose strategies which most effectively communicate their messages.

At present, the communication techniques used by mothers of hearing-impaired children seem random. The mothers appear to have assimilated a philosophy of verbalization, but do not know what to do when this verbalization fails. Perhaps parent educators could suggest alternative strategies and emphasize the need to consider the individual child.

It is hoped that this study will serve as a foundation for further research on effective strategies for communication with hearing-impaired children.



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