This is to certify that the

dissertation entitled

A COMMUNICATION PROGRAM FOR ENHANCING INTERACTION IN FAMILIES WITH A HEARING IMPAIRED CHILD

presented by

Beth Schoenwald-Oberbeck

has been accepted towards fulfillment
of the requirements for

Ph.D. degree in Educational Psychology

Walter S. Hopkins
Major professor

Date April 29, 1983

A COMMUNICATION PROGRAM FOR ENHANCING INTERACTION IN FAMILIES WITH A HEARING IMPAIRED CHILD

By

Beth Schoenwald-Oberbeck

A DISSERTATION

Submitted to
Michigan State University
in partial fulfillment of the requirements
for the degree of

DOCTOR OF PHILOSOPHY

Department of Counseling and Educational Psychology
and Special Education

1983

ABSTRACT

A COMMUNICATION PROGRAM FOR ENHANCING
INTERACTION IN FAMILIES WITH A HEARING IMPAIRED CHILD

By

Beth Schoenwald Oberbeck

Research on problems associated with the hearing impaired child's socialization processes are reviewed. The influence of communication within the family and it's effects on the hearing impaired child's social development is discussed. A communication program for families with a hearing impaired child (FWHIC) was developed and used with four families. A matched Comparison group participated in loosely structured discussions. The program activities integrated positive communicative dimensions with issues related to this population. The program was derived from the Human Development Program by Bessel (1972).

Videotaped ratings of communication skills, the Moos Family Environment Scale, interviews and written comments were used to measure the programs' effectiveness. Findings indicate that the FWHIC program did have beneficial effects for parents and/or children. Some of the major findings include improved awareness skills, the ability to label feelings and skills, increased perceptions of family cohesiveness, and decreased perceptions of family conflict. The Comparison families participated in loosely structured discussions actually perceived some deterioration in their

perceptions of family environment, and a decrease in their awareness and social interaction skills. A follow up analysis 3-4 weeks after the program indicated several long term effects, although the majority of children and families perceived no changes.

To my family, Gary, Mom, Dad, David, Robin, Marna, Clare, Fritz, Sessue, Neuvo and Beezus; And to the Village School which provided me with the motivation and perception of learning which helped me through all of my doubts about educational institutions.

ACKNOWLEDGMENTS

I would like to thank my advisor Dr. Walter Hapkiewicz for his continuous support and direction, and my committee Dr. Chris Clark, Dr. Vivian Stevenson, and Dr. Gary Stollak for their assistance in making this project possible. In addition thanks are due to Dr. Dave Dalby for his support and assistance in working with the data, Dr. Robert Fernie for his consultation and to Ms. Carol Grubbs for the TLC with which she typed this document. Last but not least I would like to thank Mr.Jay Farman, the Director and Mr. Alan Molmod, the Assistant Director at the Phoenix Day School for the Deaf for their help and cooperation.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

CHAPTER I: INTRODUCTION

Theoretical Framework

It is quite clear that the family plays a critical role in the socialization of the child. The parents' methods of discipline, their attitudes towards their child, and their relationship with each other all have an effect on the child's development. The child's behavior and constitutional predisposition also play an important role in how the family system operates.

Variations in parental behavior have been found to relate in systematic ways to differences in social and cognitive development in their children. Baumrind's research suggests that "authoritative" parenting is most effective in developing a child's competence. Baumrind suggests that "authoritative" parents give their children an opportunity to explore the environment and gain interpersonal competence without the experience of anxiety. A child's anxiety is often associated with restrictive, power assertive discipline practices; or with the complete permissiveness resulting in a child's inexperience in conforming to the demands and needs of others (Baumrind 1967).

Similarly, consistency in child rearing is important in the socialization of the child. Parental conflict and inconsistency are associated with maladjusted behavior in children, particularly in the form of aggression (Glueck & Glueck, 1950; Heatherington, Cox & Cox, 1978; Garmezy, 1975;

McCord, McCord & Zola, 1959; Martin & Heatherington, 1971; Patterson, 1977, 1978).

The parent socializes the child by serving as a model to imitate. Kagan (1964) suggests that the child gains a sense of mastery over the environment by imitating the responses of a warm, competent and powerful parent. Evidence from imitation studies supports this position (Bandura & Huston, 1961; Bandura, Ross & Ross, 1963; Heatherington, 1965; Heatherington & Frankie, 1967; Mischel & Grusec, 1966; Mussen & Parker, 1965).

Husbands and wives serve as a mutual support system for each other. Positive mother-infant interaction has been found when fathers are supportive of mothers (Pederson, 1975; Pederson, Anderson & Cain, 1977; Feiring & Taylor, 1977).

There is a tremendous amount of literature which pertains to how a marriage is affected by the birth of a handicapped child. Frequently, stages or phases are used to describe the process of reacting to and accepting their child's handicap. Anger or blame are emotions often used to describe husband-wife attitudes towards each other, and are often considered coping strategies (Ulrey & Rogers, 1982). High conflict between parents is associated with negative feelings toward children (Pederson et al, 1977).

Problem

Social interaction is necessary for learning appropriate behaviors and values. The transition from an egocentric

perspective to a decentered perspective requires exposure to other's positions and orientations. A hearing impaired child is rarely exposed to enough appropriate role models, or to the quantity and quality of communication necessary for social maturity.

Altshuler, a psychiatrist who works with the hearing impaired population, observed that certain unique personality features were present among deaf persons. His observations were made in a preventative mental health clinic for hearing impaired persons. They often showed a poorly developed ability to understand and care about the feelings of others, and had inadequate insight into the impact of their own behavior on others. They held a generally egocentric view of the world, and their inability to handle tension seemed to be reflected in impulsive behavior and the absence of much thoughtful introspection (Rainer & Altshuler & Kallman 1969). The research of Schlesinger and Meadow (1972), Barker (1953), Mindel and Vernon (1971), all report similar findings regarding the social immaturity of a hearing impaired person.

A study of deaf adolescents conducted by Evans (1975) indicated that ninety percent of the surveyed population of hearing impaired children who have hearing parents have no system of communication other than primitive iconic homemade gestures. The communication barrier for a deaf child is heightened even more when we consider what is "missed" in addition to direct communicative exchanges.

The difficulties faced by parents of hearing impaired children as a result of this barrier might well be expected to cause difficulties in management, play, and discipline. This is confirmed by videotapes of parents and preschool hearing impaired children at play. Parenting practices often fluctuated between overindulgence and excessive demand, indicating the lack of understanding of the dynamics of deafness, [or the child's use of acting-out behaviors as a mode of communication (Schlesinger and Meadow, 1972).] In addition, they found that parents of deaf children are likely to overprotect their deaf children, thus reducing their range of experiences and objects available for manipulation.

As the hearing impaired child's life continues, and language development does not occur normally, family-child communication becomes increasingly frustrating and stressful. The adult-child communication patterns tend to be more didactic and less mutual. The deep semantic aspects of communication tend to be distorted or lost by attention to the surface features of the communication exchange (Liben, 1980, p. 202).

The issue of communication is integrated into almost all the literature on family socialization. Communication is an integral part of discipline, modeling, identification, and mutual support systems within the family. Thus we can assume that improved communication within a family with a hearing impaired child would facilitate remediation of some of the difficulties cited above. We assume that improved

communication would improve the family environment.

There are numerous therapy techniques and educational programs which are aimed at improving one's ability to communicate with others in groups. Group size (Psathas, 1960), group attractiveness (Cartwright and Zanders, 1968) and group expectations (Bradford and Mial, 1963) all contribute to the group's effectiveness.

Current research on communicative competence (Larson, Blacklund, Redmond and Barber, 1978) have demonstrated ways in which communication skills can be measured. Dimensions of communicative competence serve as operational definitions of competence and may be used when testing, measuring and instruction communication strategies (Weiman, 1980). Although different researchers maintain different views on what dimensions of communicative competence are important, Weimann and Blacklund (1980), authors of a comprehensive review, state that there is a surprising degree of consensus on what behaviors constitute competence.

The Human Development Program (HDP) developed by Bessell (1972) and Palomares (1980)is a program which provides opportunities for learning and practicing effective communication skills. It is often referred to as a "high quality communication experience". The HDP learning strategies encourage people to utilize themselves and others as resources for gaining useful ideas and information about experience. The dimensions of communication that Bessell and Palomares use are derived from huge body of theoretical literature

including behavioristic, humanistic and psychoanalytic orientations. Their objectives for the program parallel the various dimensions described in communicative competence models fairly closely.

Purpose

This study attempts to provide an intervention program for families with a hearing impaired child. The program is designed to have a positive effect on family communication and the family environment. The program process will be an adapted version of the Human Development Program. The content, or activities will relate to research on individual and family development in families with a hearing impaired child, in contrast to "normal" families.

There have been relatively few empirical studies conducted with families having a hearing impaired child, although they have been appearing more frequently within the last decade. Most of the literature written on the social development of the hearing impaired child and his family has been descriptive in nature. This study attempts to contribute to the limited amount of empirical literature in this area.

Conceptual Hypotheses

The study will be organized around two conceptual hypotheses: a) Family environment will change following the treatment program; b) Family communication will change

following the treatment program. A pilot study will be conducted prior to the actual research study. This procedure should minimize difficulties with the practical aspects of the program as well as determine that program instructions are clear.

CHAPTER 2: REVIEW OF LITERATURE

The review of literature includes three related topics: 1) Family Socialization Practices; 2) Families with Hearing Impaired Children; 3) Improving Communication. Each topic will be reviewed separately and subsequently tied together in a summary section.

Family Socialization Practices

Socialization is a process whereby an individual acquires behavior patterns, beliefs, standards, and motives, all of which are valued by, and appropriate in, his own cultural group and family. The range of possible characteristics which may become adopted by an individual is enormous; and yet a person ordinarily adopts characteristics and behaviors which are considered appropriate to his own parents.

Baumrind (1967) was concerned with the types of parent-child relationships which enhance a child's competence. Competence was defined as self-reliance, social responsibility, independence, achievement orientation, and vitality. In order to investigate this, a group of 3 and 4 year olds were observed in nursery school and at home, and rated on their levels of competency. Three groups of children were then selected on the basis of their competency ratings: Group One (most competent) were the most mature, content, independent, realistic, self-reliant, self controlled, explorative, affiliative, and self-assertive. Group Two children were rated as

moderately self-reliant and self controlled, but relatively discontented, insecure and apprehensive. Group Three children were the most immature, highly dependent, less self controlled, less self-reliant, and more withdrawn, tending to retreat from novel or stressful experiences.

The child rearing practices of the parents in the 3 groups were investigated with home visits, observations in structured situations, and parental interviews. Four aspects of their rearing practices were evaluated: 1) Control (influencing the child's activities, modifying his expression of behaviors, and promoting internalization of parental standards); 2) Maturity demands (pressures on the child to perform up to his ability level intellectually, socially and emotionally); 3) Clarity of parent-child communication (use of reason to obtain compliance, asking for the child's opinions and feelings); and 4) Parental nurturance (love, caretaking, compassion, praise and pleasure from the child's accomplishments).

Results of Baumrind's study indicate that the parents of the most mature, competent children scored uniformly high on all four dimensions. They were described as warm, communicated well with their children, and at the same time controlled and demanded mature behavior. Baumrind used the label "authoritative" to describe these parents and their methods of interaction. Group Two parents were rated as lower on use of rational control and were more coercive. They were less warm, used their power freely, and did not

encourage their children to express themselves when they disagreed. This type of interaction was described as "authoritarian". Group Three parents were not well organized or effective in running their household. They were lax in their discipline and rewards; they made few demands and paid little attention to training for independence and self-reliance. These parents were labelled "permissive". Further studies by Baumrind confirmed these findings (Baumrind, 1971).

Kagan (1964) suggests that a child gains a sense of mastery over the environment by imitating the responses of a warm, competent and powerful parent. Most theorists agree that identification is a process whereby the child, through imitation, modeling or introjection acquires traits, characteristics and values similar to their parents.

Heatherington and Frankie (1967) investigated the effects of parental dominance, warmth and conflict on imitation of parents by boys and girls. Eighty male and eighty female nursery and kindergarten children and their parents were randomly selected from a small, middle class town in Wisconsin. Parental measures on warmth, hostility, conflict, and dominance were obtained on the Family Interaction Task. The subjects were classified as coming from high conflict homes or coming from low conflict homes.

Each child was observed on an imitation task in which each parent alternately was instructed to play with the child in a specific way. The instructions involved postural, motor

and verbal responses. The child was then observed playing by himself in order to measure imitative behaviors. Results suggest that maternal warmth facilitates imitation of the mother more than paternal warmth facilitates imitation of the father. Parental dominance has more important effects on boys than for girls. Maternal warmth interacts significantly with sex of the subject while paternal warmth facilitates imitation to an equal degree for boys and girls.

It was seen that under high conflict, with both parents low in warmth, there is a significant tendency for boys and girls to imitate the dominant, aggressive parent regardless of the parent's sex. The authors suggest this might be the result of a sense of extreme helplessness on the part of the child. Heatherington and Frankie's results seem to be congruent with those of past studies which have found that parental dominance is important in the identification of boys (Bandura & Huston, 1961; Bandura, Ross & Ross, 1963; Heatherington, 1965; Mischel & Grusec, 1966: Mussen & Parker, 1965).

Punishment, used as a form of disciplinary interaction can have undesirable side effects which limit its usefulness. This may be illustrated in a recent study by Redd, Morris and Martin (1975). Five-year old children were asked to complete a sorting task with three different types of adults. One adult behaved positively, smiled, and made positive comments while the child performed the task. A second adult used mild verbal reprimands whenever the child deviated from the task. A third adult was present but made no comments

while the child completed the task.

Results indicated that the punitive adult was most effective in keeping the children on task; however, the children tended to prefer the positive and neutral adults. The children always chose the positive adult when asked who they preferred to work a little more with; and similarly avoided the punitive adult as a partner. Thus, while punishment may have been effective it had undesirable side effects. Parents who use punishment may also be inadvertently providing an aggressive model for the child (Bandura, 1967; Hetherington & Parke. 1979).

A large body of research mostly done in the 1950s and 1960s focused upon correlations between types of discipline and moral indices such as feeling guilty over violating a moral norm, or resisting temptation. Hoffman reviewed the literature (1977) in this area and summarized the results. Moral internalization is fostered by: 1) the parent's frequent use of inductive disciplinary techniques which emphasize harmful consequences of the child's behavior for others; and 2) the parent's frequent expression of affection outside the disciplinary encounter.

We use the term "democratic parent" to describe the parent who is warm, accepting, encouraging of autonomy, and low in intrusive psychological control (Kagan, 1962; McCord, McCord & Zola,1969; Hetherington & Parke, 1979). This type of child-rearing has been more recently described as " authoritative " parenting and is currently the popular stereotype of the most positive child-

rearing techniques. The child of such parents is likely to be seen as outgoing, independent, friendly, creative and lacking in hostility. Thus the democratic parent is apt to socialize his children in such a way as to incorporate the appropriate behavior patterns, beliefs, standards and motives which are appropriate in their cultural group and family.

Families With Hearing Impaired Children

Many experts in the field of hearing impairments such as Mindel, Jabaley, Furth, Liben, Levine and Altshuler have described what it must be like to be born with the major sensory deficit of an auditory impairment. Edna Levine, the author of The Psychology of Deafness, describes what normal hearing children experience as infants. In so doing she implies some of what must be lacking for the hearing impaired infant:

> "Because he can hear himself, he realizes that he can give the world a self created product in his own vocal utterances. Consciously produced vocalizations are among the earliest creations the baby can give or withhold." (Levine, 1960, p. 22).

The result of a communication deficit and its effects on a hearing impaired individual's social development has been discussed and studied by many researchers. Furth suggests that some of the results may be positive:

> "They are not handed down a rigid tradition of verbal mores .... Just as a deaf child must invent their first conventional signs for communication, they also invent social norms for playing and living together. This setting creates a social and affective independence, a sense of relying on themselves ...." (Furth, 1973, p. 44-45).

Unfortunately there is also evidence to the contrary. For example, between 1955 and 1963 Altshuler and a group of mental health professionals operated a pilot clinic for the purpose of diagnosis, treatment and preventative health care for the deaf population. His observation of the social development of hearing impaired individuals was quite different than that suggested by Furth. During the course of the project, he noted the following personality features as being present among deaf persons: 1) Poorly developed ability to understand and care about the feelings of others; 2) Inadequate insight into the impact of their own behaviors; 3) An egocentric view of the world; 4) Inability to handle tension, resulting in impulsive behavior (Rainer & Altshuler, 1966).

Schlesinger and Meadow did a survey designed to identify deaf children at a state residential school who were considered by their teachers or dormitory counselors to be emotionally disturbed and in need of treatment. The questions used were in the same format as those used previously in a mental health survey conducted in Los Angeles, thus providing a comparative base.

Results of the survey showed that of the 516 students in the school, 11.6 percent were considered to be severely disturbed and in need of psychiatric treatment; and 19.6% were considered to have behavioral problems which resulted in disproportionate demands on the teachers' and counselors' time. In contrast, 2.4 % of unimpaired students in Los

Angeles county were considered to be severely disturbed: and 7.3% were described as in need of extra time from teachers. This survey indicated that deaf students showed behavioral problems 3-5 times larger than for other children in the county. Several other studies investigating the prevalence of behavior problems among deaf children have shown similar results (Schien, 1975; Vernon, 1969; Freeman, et al, 1975; Schlesinger & Meadow, 1972).

Tests with the Vineland Social Maturity Scale consistently reveal that deaf persons are less mature than hearing persons (Barker, 1953; Doll, 1965; Streng & Kirk, 1938; Avery, 1948; Burchard & Mylebust, 1942; Schlesinger and Meadow, 1972). Similar results have been found using Rorschach testing as well as other projective instruments (Levine, 1956 ; Rainer & Altshuler, 1966).

Exactly when and how do these maladaptive social behaviors develop? Obviously there is not one answer to this question. For example, there are physiological problems in which high fevers accompany a disease, such as meningitis, or incompatible blood types in parents, or Rubella (Vernon, 1969; Mindel & Vernon, 1971). However, the interaction of psychological and physiological factors often described as minimal brain dysfunction or hyperkinesis is not fully understood. The personality characteristics reflecting social immaturity described above could be the result of a variety of causative factors and thus one must take precaution in ascribing the label or diagnosis of brain damage to these

children.

Some researchers have investigated the cognitive aspects of development to search for answers. Nass (1964) suggests that young deaf children have less adequate reasoning abilities than hearing children. He found that 8-10 year old hearing impaired children gave more primitive explanations than did hearing children on more complex questions; e.g., "How does snow come?" "How is it that stars shine?"

However, a different explanation has been offered by Liben for this phenonnmenon. She suggests that it is equally plausible that Nass's findings simply result from inadequate information obtained by the children. Many of the complex questions are precisely the types of questions normally asked during the incessant "whys" of early childhood. The hearing impaired child often does not have the communication skills needed to ask these questions, nor to comprehend the explanations when they are given (Liben, 1978, p. 205).

Edna Levine explains the cause for the hearing impaired child's immaturity in a similar fashion:

> "The pupil's need for life enlightenment begin to outstrip the store of language he is so painstakingly learning. There comes a time when he needs to know more of the customs and taboos of society, more of the reasons and motives of human behavior, the why and how of emotions, more of moral and ethical values. But the problem is how to get such information across to him when he has not yet mastered enough language for understanding and explanations. And so a lag arises between what the deaf pupil does know and has experienced and what he should know and ought to have experienced for his age. It is this lag that forms the core of the handicap of

deafness. Language impoverishment is its kernel. (Levine, 1956, p. 11).

Schlesinger and Meadow (1960), Mindel and Vernon (1971) agree that the core problem which causes social immaturity lies in the absence of gratifying reciprocal communication within the family during the deaf child's early years. They suggest that a major reason for these problems stems from the fact that most deaf children (89%) are born to hearing parents who have no previous knowledge about or experience with profound congenital deafness.

The Family

The concept of the family as a system is helpful for understanding the impact of having a handicapped child on members of the family. When a handicapped child is born or when the handicap is discovered, severe stress may be experienced by family members (Pederson, Anderson & Cain, 1977; Hetherington & Parke 1979). How a family copes with these stresses affects the child's development as well as the functioning of the family unit.

Ulrey & Rogers (1982) describe clinically how a marraige is affected by the birth of a handicapped child. Anger and blame are emotions often used to describe husband-wife attitudes towards each other, and are considered coping strategies:

> "This kind of strategy may threaten the marital relationship because one spouse harbors negative feelings toward the other. One parent may blame

> the other for their child's handicap. Blame may be expressed as, "If only you hadn't drank during your pregnancy." "I didn't want another baby, only you did," and so on.... Conversely, the marital relationship may also be threatened if one spouse feels guilty about perhaps causing the handicap, internalizes the blame and withdraws from the other" (Ulrey & Rogers, 1982).

Although parental reactions vary tremendously with regards to their handicapped child, it is important to note that their ability to support one another will have an important influence on child rearing (Pederson, 1975). Thus if their negative reactions are not resolved, the conflict between parents is likely to be associated with negative feelings towards the child as well (Pederson, et al, 1977).

Changes in lifestyle necessitated by demands of a handicapped child can also be a source of disruption in the patterns of relating that the parents had established. These disruptions cause additional stress within the family. Studies have shown consistently that divorce and marital difficulties are much more frequent among parents of handicapped children than among parents of nonhandicapped children (Heatherington & Parke, 1979).

Communication is necessary for the socialization of a child within the family. Most parents of a hearing impaired child know almost nothing of the multitude of difficulties faced by a hearing impaired child.

> "Until the reality of deafness is known, parents and child cannot cope constructively. Consequently, there is a huge discrepancy between parents' expectations and the child's achievements, which creates intense frustration for them both. The frustration leads to an underlying stress and

> anger for which parents have no constructive outlets. As a result, they begin to avoid interacting with the child, and he begins to avoid interacting with them. Further attempts at child-parent communication becomes so stressful and frustrating that both the child and the parents understandably want to escape. Thus, the deaf child is often isolated in his own home, losing the emotional and educational benefits he needs and should get from close parental contact. The parents, in turn, lose the satisfaction of child-raising that they have a right to expect" (Vernon, 1974, p. 97).

Vernon points out that the deaf child cannot respond as readily to the interaction which is initiated by his parents. Similarly the child does not receive the gratification he needs from his efforts to communicate. In order to study these communication patterns, Schlesinger and Meadow (1972) did an investigation of parent-child interaction which is discussed in depth in the chapter entitled, "Developmental Process in Deaf Preschool Children: Communicative Competence and Socialization", 1972.

Forty preschool deaf children and their parents were subjects in the study. The children were enrolled in 8 preschool programs for the deaf in the San Francisco Bay area. They all met the following criteria: 1) Hearing level no better than an 80 decible average (in the speech range 500-1000-2000 cycles per second) in the better ear; 2) Between 2½ and 4 years of age; 3) Onset of deafness no later than 12 months; 4) Caucasions with English as their primary language; 5) No additional handicaps; 6) No twins; 7) No children with deaf parents. A control group of 20

hearing children of hearing parents matched for age and sex were selected from local nursery schools in San Francisco.

Twenty minute videotaped "scenarios" of semistructured mother-child play sessions were collected for each pair of subjects. A set of rating scales were developed including ten dimensions of the mother's behavior, ten dimensions of the children's behavior, four dimensions descriptive of the children's attributes exclusively related to deafness, and four dimensions of the reciprocal mother-child interaction. A manual was written which defined these dimensions. Raters were trained to rate the dimensions and interjudge reliability ranged from .90 to .65, with a mean of .83.

In addition to taped interviews with the parents, the California Psychological Inventory (Gough, 1957) and several different measures of the child's communicative competence were also obtained (Mecham Language Development Scale, 1958; information from mothers; and teacher's ratings of expressive communication, receptive communication, speech and lipreading).

The results obtained indicated that mothers of hearing children received more positive ratings for all nine of the dimensions, which implied a positive or negative evaluation. Six of these dimensions were found to be significantly different: permissiveness, nonintrusiveness, nondidactic behavior, creativity, flexibility, and approval of the child. No significant differences were found between the two groups for: enjoyment of the child, effectiveness in achieving his

cooperation, and the degree to which the mothers seemed to be relaxed and comfortable in the studio situation.

It is interesting to note that although all 40 of the children were considered severely to profoundly deaf, their receptive and expressive communication skills varied greatly. This could be explained by several factors: 1) Time of diagnosis followed by earlier or later use of hearing aids; 2) Difficulties with audiological testing; 3) Differences in training to utilize residual hearing: 4) Lip reading efficiency which may vary with stress ; 5) The variation or range of sound frequencies to which children could respond; 6) The parents' and teachers' use of sign-language and finger spelling to provide an avenue of communication.

The children were divided into high and low groups on the basis of the index of communicative competence. When the child's level of communicative competence was controlled, the mothers of hearing children continued to be rated significantly higher than mothers of either the "high" or "low" groups of deaf children in the dimensions of: flexibility, nondidatic behavior, nonintrusiveness, and approval of the child. Mothers of more competent deaf children ranked second and mothers of less competent deaf children ranked lowest, but rated higher on "permissive" behavior than mothers of more competent deaf children.

During the interaction sequence, hearing children were rated higher on all five dimensions including: compliance vs. resistance; creativity vs. lack of imagination; enjoyment

of interaction with mothers; absence of apparent enjoyment; buoyancy, happiness vs. apparent sadness, unhappiness; and pride in mastery vs. absence of pride in accomplishments.

Examination of the intercorrelations between ratings for mothers and children revealed that the child's curiosity, creativity and independence were not particularly related to the mother's behavior, whereas the child's enjoyment of the interaction with his mother is significantly related to each dimension of positively defined behavior on the part of the mother.

A comparison of the child-rearing responses during the interviews revealed some interesting differences between parents of hearing children and parents of hearing impaired children. Responses to questions regarding "socialization for safety" indicated that mothers of deaf children utilize some other method in addition to verbal warnings, such as visual/tactile methods, in a greater proportion than do mothers of hearing children. Almost two-thirds of the mothers with hearing impaired children vs. one-quarter of the mothers with hearing children used control of the environment to protect their children. The authors note that it is difficult to separate necessary protectiveness from unnecessary overcontrol when a child suffers a profound hearing loss.

Responses to questions regarding punitive methods of socialization revealed that almost 3 times as many mothers of deaf children felt comfortable using physical punishment than did mothers of hearing children. Some of the mothers

of hearing impaired children stated that spanking was the only thing the deaf child understands. Five percent of the mothers with deaf children and twenty-five percent of the mothers with hearing children reported never spanking their child. In addition, mothers with deaf children more frequently reported spanking the subject child less than his siblings and they were less likely to report variations in spanking dependent upon the age of the child vs. mothers of hearing children.

In summary, mothers of deaf children behaved radically different than mothers of hearing children. This was particularly true when the deaf children were poor communicators. The mothers were seen as inflexible, controlling, didactic, intrusive and disapproving. The deaf children with fewer communication skills appeared less happy, enjoyed interaction less, were less compliant, less creative and showed less pride in mastery than their deaf peers or hearing peers. The child-rearing practices of mothers with hearing impaired children included more supervision of the child in order to protect him from accidents, a narrower range of disciplinary techniques, and feelings of frustration regarding communication with their child. The authors note that:

> "The data comparing behavior of mothers and children when deafness is present and not present would seem to provide powerful support for the notion that children's capabilities and behavior exert tremendous influence on the interactional style exhibited by the mother. This effect is both reciprocal and cumulative, with communicative deficit leaving its mark on every major area of child-rearing practices, and on the expressive and instrumental styles of

> both mothers and children" (Schlesinger & Meadow, p. 110).

Although it is important for parents to reinforce what happens in school, too much focus on providing formal instruction can interfere with normal parenting functions. Levine sees parents assuming the "teacher role" quite early:

> "After they learn that he is deaf, they often tend to look upon him as an organ of speech that must be made to talk as soom as possible. They still do not see the child himself. It is his disability that fills the foreground of their thoughts" (Levine, 1956, p.9).

Schlesinger and Meadow confirm Levine's description with the results of their study on parent-child interaction. Videotapes of hearing impaired children and their mothers reveals that many mothers use potentially playful situations as opportunities for language instruction. These "teaching" situations are often encouraged by the child's teacher or speech therapist. For example, a mother may withold a snack until the child speaks or signs the word for the desired food (Schlesinger & Meadow, 1972).

It is interesting to note that between deaf children and their deaf parents, the quantity and quality of interaction is greater than between deaf children and their hearing parents. The quantity and quality of interaction is greater because they share sign language as a mode of interaction. The Office of Demographic Studies at Gallaudet College did an annual survey of hearing impaired children and youth. Of the 18,748 children in the sample, only 5% were reported having emotional/behavioral problems when both

parents are deaf, and 9.2% when one or both parents were hearing parents (ODS, 1975). The use of early manual communication has been repeatedly shown to positively effect achievement and IQ scores as well (Brill, 1960; Vernon and Koh, 1970, 1971; Quigley and Frisina, 1961).

Although hearing children often complain of being unable to communicate with their parents, hearing impaired adolescents often have no method (literally) with which to interact with their hearing parents. Data collected by Evans (1975) indicated that ninety percent of the hearing impaired children who have hearing parents have no system of communication. These communication barriers continue throughout adolescence. In his survey 49% reported poor communication with their parents; 37% said their parents had difficulty explaining their recent experiences to them; 41% reported difficulty telling their parents of their recent experiences. Similarly a survey conducted by Schlesinger and Meadow showed that of the 34 deaf families who had children enrolled in California School for the Deaf (Berkeley) in 1966, 33 reported they had used manual communication with their children from infancy on, vs. none of the 34 hearing families, who made no early use of manual communication.

Siblings in a family with a hearing impaired child may also feel the effects of various adjustments that must be made. Patricia Schwirian studied the presence of a preschool hearing impaired child on his older siblings. Older normal siblings were found to have greater childcare

responsibilities and lower levels of social activities than their counterparts, in addition, the older the sibling was, the more his responsibilities, independence, and social activity level increased. However, the effects found were minimal and Schwirian suggests that social impairment of the hearing impaired child would increase with age and become more difficult for the family in later years (Schwirian, 1976).

Much of the difficulty experienced by families with a hearing impaired child points to a weakened communication system between the child and others in his environment. This communication breakdown is seen time and time again throughout the literature. There seems to be no doubt that improving communication within the family would assist in facilitating a healthier socialization process.

Improving Communication

There are numerous therapy techniques and educational programs which are aimed at improving one's ability to communicate with others. These programs range in focus from a complete academic orientation to psychoanalytic therapy. The concept of group experience is a recent phenomenon that has become more popular and widespread in its uses. Within the category of experiential groups falls T-groups, encounter groups, sensitivity groups, Gestalt groups and a host of other groups.

There has been some research which focuses upon

variables which effect all of these groups including group size, attractiveness of group, and expectations of the group. Psathas' (1960) review of the literature on group size indicated that with increased group size, members experience less direct involvement and participation. As the group gets larger, instead of interacting with each other, the members tend to direct their communications to the highest-ranking initiator, who in turn responds to them as a group rather than as individuals.

From their review of the research Cartwright and Zanders (1968) conclude that a group is attractive when:

> "1) Its members are valued and accepted (Dittes, 1959); 2) Its members are similar (Newcomb, 1953); 3) It is small enough to enable members to communicate and relate effectively (Porter & Lawler, 1965); 4) It provides opportunities for social life and close personal associations (Hagstrom & Selvin, 1965); 5) It provides at least two of these three sources of satisfaction: personal attraction, task attraction (attractive goals), and prestige from membership (Back, 1951)." (Ohlsen, 1977, p. 61).

A group must agree to its expectations on the following topics:

> 1) It knows why it exists; 2) Its members have established an atmosphere in which its work can be done; 3) Its members realize how decisions are made; 4) Each member is encouraged to make his own unique contributions; 5) Its members have learned how to request, accept, and give help; 6) Its members have learned how to diagnose problems and improve its functioning; and 7) Its members have learned to cope with conflict. (Bradford and Mial, 1963, p. 64; -Ohlsen).

How can we determine whether an intervention program

actually effects the group members ability to communicate effectively? Current theory and research in communicative competence focuses upon this issue:

> "Communication competence, unlike linguistic competence, involves awareness of the transactions that occur between people. Competence in this perspective is tied to actual performance of the language in social situations" (Allen and Brown, 1976).

Larson, Backlund, Redmond and Barber (1978) all have similar definitions of communicative competence: "The ability of an individual to demonstrate knowledge of the appropriate communicative behavior in a given situation". The behavioral view of competence, in contrast to the cognitive view, not only seeks an idealized set of rules, it focuses on a repertoire of skills appropriate to a variety of relationships and contests. The main implication for theory and research is that an analysis of communicative behavior should lead to inferences about underlying knowledge structure and the evaluation of the appropriateness and effectiveness of various skills in specific contests. The dimensions of communicative competence serve as operational definitions of competence and may be used for testing, measurement and instructional strategies (Weimann, 1980).

The choice of the dimensions of communicative competence are important. By labeling a behavioral dimension, the researcher, educator, or theorist is saying that variations in behavior with regard to a dimension is crucial to one's judgements of communicative competence. Conceptions of communicative competence are provided by many sources.

Weinstein (1969) lists the following skills when he discussed interpersonal competence:

> "Skills at establishing and maintaining desired identities both for one's self and for others, is pivotal in being interpersonally competent. This skill is dependent in turn on three variables. First, the individual must be able to correctly predict the impact that various lines of action will have on others' difinition of the situation. This is what is meant by empathy if we strip the concept of its affective overtones. Second, the individual must posses the intrapersonal resources to be capable of employing effective tactics in situations where they are appropriate." (p. 757-758)

Wang, Rose and Maxwell (1963) describe similar dimensions of communicative competence:

> "Differences found in young children's verbal communication skills are attributed to more than just differences in such linguistic qualities as syntactic structure, vocabulary and intelligibility. The differences in communication skills are strongly influenced by such factors as the child's ability to take the listener's role, his ability to order and classify relevant information, the nature and amount of feedback information supplied by the listener, and the appropriateness of the response of the speaker to feedback" (p. 1).

Wiemann and Backlund (1980), authors of a comprehensive review of communicative competence note that as a concept it is still in its developmental stages:

> "Many dimensions of competence have been proposed, discovered, and/or named; these spring from various types of research efforts. A review of this work illustrates both the diversity of thinking in the area and a suprising degree of empirical consensus on what behaviors constitute communicative competence" (p. 193).

In 1967 the newly formed Human Development Training Institute developed the Human Development Program (HDP) and the magic circle process. One might call the HDP's three

objectives (awareness, social interaction, and mastery) dimensions of communicative competence. The three-fold HDP theory covers the concepts of awareness, social interaction and mastery (Bessel, 1972). The program's learning strategies are experimental and engage both emotional and intellectual involvement. HDP learning strategies encourage people to utilize themselves and others as resources for gaining useful ideas and information about experience. At the same time the strategies provide opportunities for practicing effective communication skills. It is often referred to as a "high quality communication experience".

The dimensions Bessel and Palomares chose were derived from a huge body of theoretical literature. Specifically they selected a number of theorists from the behavioristic, humanistic, and psychoanalytic orientations to develop their program. However, their objectives parallel the various dimensions described in the communicative competence models fairly closely.

The Human Development Program is chosen as the intervention model for this study for several reasons:
1) Previous training by an official HDP trainer in Manhasset, Long Island: 2) Previous experience using this program with children of all ages at Phoenix Day Schood for the Deaf; 3) Its focus on being a "quality communication experience", which is relevent to this study; 4) A review of research which indicated its relatively more frequent use with hearing impaired children than other programs of its type.

A brief description of the HDP sessions is necessary in order to understand the studies which use this program. The program consists of seven curriculum books, one for each elementary school grade. The leader and the circle members sit together and discuss issues suggested in the activity guides. There are certain ground rules set for the discussion process which promote "quality communication". The activities are designed so that the "what", or content, and the "how", or process, are both in keeping with the objectives.

Josephine Newton, a social worker, used the HDP in the Florida School for the Deaf and Blind in 1975. The rationale for her project stemmed from her belief that using the HDP with deaf children would assist them in making changes in their self-concept and relationship with others. Thirty-six residential schools for the deaf were canvassed to find out whether a program of this type was used. Thirty-six responses were returned and no school indicated that they had a program of this type in progress.

There were 9 students in the study, 7 girls and 2 boys; four were 8 years of age, and five were 9 years of age. The program was used for one year. Observations were made by the school social worker, the teacher involved, and the children involved. The social worker saw the program as interesting and challenging, and notes: "They are beginning to show pleasure when someone reflects what they have been saying correctly. It's like they are thinking, 'Wow, people really do care and know what I'm saying'."

The primary problem noted was the limited vocabulary, particularly around words used to express feelings and emotions. A continuous log of descriptions such as this one were kept throughout the year.

The teacher kept a similar log of descriptions which basically stated that she saw "carry over" into the classroom. She noted for example that the students were beginning to do less interrupting of each other, and the children reminded each other of the circle rules and expected them to be just as valid in the classroom.

It is evident that the Newton study lacks rigorous research techniques. There was no comparison group, no standardized measures and no rating of behaviors. Some reference to this effect was made at the end of the article. The author suggested that the program be further investigated the following year and concluded by saying:

> "I am convinced more than ever now, that processes that are being used to assist hearing students grow and have new experiences in the affective domain can and should be used with those who have physical disabilities".

At the Montreal Oral School for the Deaf, Sheila Becker a psychologist, utilized an adaptation of the HDP (1978). A group of nine 14 year old hearing impaired children met weekly for six months. Each pupil in this group was mainstreamed in the public schools as much as possible, with tutorial support. The pupils met during lunchtime. Rather than discussing things in a circle, the pupils sat around a

blackboard and their feelings and ideas were written down on a blackboard, thus combining cognitive and affective development. Again, the program was not followed systematically; however, the teachers and "other professionals involved" noted the following results: The pupils were able to 1) express affective themes; 2) appreciate individual differences; 3) listen to their peers' contributions for both content and feeling; and 4) look for similarities of theme or need expressed by group members. They concluded by saying: "There seems to be no apparent reason why the techniques proposed could not be modified for use with all hearing impaired school aged children" (Becker, 1980).

In 1979-80 the writer implemented an adapted version of the HDP with the students at Phoenix Day School for the Deaf. Although no formal results of the program's effects were assessed, the writer found the program to be meaningful and useful. The children appeared to develop better listening skills and the ability to communicate events or feelings on a personal level. The teachers involved were enthusiastic and eager to participate, thus carrying on the program themselves after they became confortable.

This study is an attempt to provide scientific evidence for an intervention program for families with a hearing impaired child. The program is expected to have a positive effect on family communication and family environment. The program's process will be an adapted version of the HDP. The content, or activities will be related to research on the

individual and family development mentioned above and delineated in the description of the program's content.

Summary of Literature Review

Current research on socialization and child-rearing indicate that "authoritative" or democratic parenting is most effective. Positive child-rearing facilitates independence, warmth, social responsibility, assertiveness and creativity. In order to facilitate the development of these characteristics, a parent must be warm, democratic, communicate clearly, demand mature behavior, and maintain consistent behavior.

Physical punishment, total permissiveness and intrusive control are ineffective child-rearing practices. An effective parent must explain his reasons for his punitive behavior as often and consistently as possible.

The limited amount of research on the child-rearing practices of parents with a hearing impaired child indicate that they have more difficulty using authoritative or democratic rearing techniques. Studies of parent-child interaction for this population have shown that parents are often over-controlling, or at the other expreme overly permissive, avoiding frequent interaction with the child. The core problem with regards to interaction between a parent and his deaf child stems from a breakdown in communication. Both the child's lack of communicative competence and the parent's lack of any formal system of communication contribute

this breakdown.

The hearing impaired child has been frequently described and measured as being socially immature, egocentric, impulsive and unable to handle tension. These characteristics are similar to what Baumrind describes as less competent children with either authoritarian or permissive parents.

Families with a hearing impaired child would benefit from an improved communication system. An improved system could improve the family envirorment, and perhaps alter some of the negative child-rearing practices such as frequent spankings and a lack of disciplinary explanations. Better communication would facilitate the sharing of ideas, reasons, information, feelings, questions, and concepts.

The Human Development Program (HDP) emphasizes quality communication, and regulates the group process with the use of various ground rules. This program has been used with hearing impaired children in school settings. It is one of the programs used frequently with handicapped children. However, very little empirical research has been conducted using this program with the hearing impaired.

This study will attempt to implement the HDP in family settings. In chapter three, the procedures for developing an adapted version of the program will be discussed. The design and procedures for the program's implementation and an evaluation of the program's effectiveness will also be explained.

CHAPTER 3: DESIGN OF THE STUDY

Sample

Fourteen families with one hearing impaired child age 11-14 attending Phoenix Day School for the Deaf (P.D.S.D.) volunteered for the study during the 1982 Fall registration period. (Appendix A included a recent demographic survey of the student population at P.D.S.D.). From this sample 4 families had to be eliminated: Two children were diagnosed to have severe learning disabilities, 1 family had no home or work phone, and 1 family lived beyond a reasonable traveling distance. Two of the remaining ten families were included in a pilot study; 8 families were included in the formal study.

The eight families were matched as closely as possible on:

1. Age of child at onset of deafness.
2. IQ.
3. SES.
4. Age of child.
5. Method of communication used in the home (total communication or oral communication.)

The 4 pairs of families were then randomly assigned to the experimental or comparison group.

Six of the 8 families included two parents (married), and two of the families included mothers but no fathers. Siblings were invited to participate during the study and offer comments and questions but no formal measures were made for them. Five of the 8 hearing impaired children were congenitally deaf, 2 of the children became deaf at

22 months and 1 at 18 months. There were 3 children age 11 years, two age 13 years, and one age 14 years. All of the families were classified as middle class with the exception of one low-middle class family.

All of the families reported using Total Communication in the home. Each child had a severe-to-profound hearing loss and IQ scores within the average range, with the exception of 1 child who scored slightly below the average range. There were 4 male and 4 female children.

Design

	Pre-test		Post-test	
E	X1	X2	X1	X2
	X3	X4	X3	X4
C	X5	X6	X5	X6
	X7	X8	X7	X8

Figure 1: A Visual Diagram of the Research

X1-X8 = Families
E = Experimental group using program
C = Comparison group

Conceptual Hypotheses

Due to the small number of subjects, no statistical hypothesis was investigated. The results will be reported descriptively with the inclusion of graphic representations.

However, the study was organized around two conceptual hypotheses: A) Family environment will change following the treatment program; B) Family communication will change following the treatment program.

Experimental Treatment

An altered version of HDP (see procedures) was used as the treatment in the study. It was used for 10 nights in the families' homes. In order to verify that the treatment was being used, a phone interview was conducted every third night with each family. During each session a form was used to check off: 1) The session number; 2) The day and time of session; 3) Any additional comments the family chose to make. A more indepth interview was obtained from each family member at the end of the program along with the formal measures being used.

A comparison group, matched for the aforementioned characteristics was asked to spend time for 6 or 10 nights discussing a neutral topic while following loosely structured directions. Appendix E includes the list of 10 neutral topics and directions chosen for the program. Interviews were conducted just as they were in the experimental group. The comparison group was asked to participate in these discussions in order to control for the possible confounding variables of spending time with family on a regularly scheduled basis.

Measures

All of the families in both groups took the same pre-test and post-test. Two different measures were included: A) The Family Environment Scale (FES); B) Rating of video taped discussions.

A. Family Environment Scale (FES) - the FES developed by Moos (1974) was used in order to detect any change which may have occured after completing the program. Table 1, (p. 40) describes the subscales included in the instrument. As you can see, some of the subscales are more applicable to studying a family communication program than are others. Subscale number 8, "Moral-Religious Emphasis" was least relevant. However, the Moos' FES was deemed, or, selected as the most appropriate standardized measure available for this study.

The FES long form (Form R) was standardized on 285 families which were described as "normative" i.e., a fairly evenly distributed number of siblings, upper, middle, and lower classes (although more upper and middle classes). Table 2 (p. 41) shows the subscale internal consistencies, the average item to subscale correlations and eight week individual test-retest reliabilities for Form R. A family incongruence score was also obtained. The score assesses the extent to which the family members disagree about their family climate. These scores were obtained for each pair of family members. The average of these incongruence scores yields a family incongruence score.

TABLE 1

Family Environment Scale Subscale Descriptions

		Relationship Dimensions
1.	Cohesion	The extent to which family members are concerned and committed to the family and the degree to which family members are helpful and supportive of each other.
2.	Expressiveness	The extent to which family members are allowed and encouraged to act openly and to express their feelings directly.
3.	Conflict	The extent to which the open expression of anger and aggression and generally conflictual interactions are characteristic of the family.
		Personal Growth Dimensions
4.	Independence	The extent to which family members are encouraged to be assertive, self-sufficient, to make their own decisions and to think things out for themselves.
5.	Achievement Orientation	The extent to which different types of activities (i.e., school and work) are cast into an achievement oriented or competitive framework.
6.	Intellectual-Cultural Orientation	The extent to which family is concerned about political, social, intellectral and cultural activities.
7.	Active Recreational Orientation	The extent to which the family participates actively in various kinds of recreational and sporting activities.
8.	Moral-Religious Emphasis	The extent to which the family actively discusses and emphasizes ethical and religious issues and values.
		System Maintenance Dimensions
9.	Organization	Measures how important order and organization is in the family in terms of structuring the family activities, financial planning, and explicitness and clarity in regards to family rules and responsibilities.
10.	Control	Assesses the extent to which the family is organized in a hierarchical manner, and the rigidity of family rules and procedures and the extent to which family members order each other around.

TABLE 2

Internal Consistencies, Average Item-Subscale Correlations and Test-Retest Reliabilities for FES Form R Subscales

Subscales	Internal Consistency (N=814)	Average Item-Subscale Correlation (N=814)	Eight Week Test-Retest Reliability (N=47)
Cohesion	.78	.58	.86
Expressiveness	.71	.48	.73
Conflict	.75	.56	.85
Independence	.64	.45	.68
Achievement Orientation	.65	.49	.74
Intellectual-Cultural Orientation	.78	.54	.82
Active Recreational Orientation	.68	.48	.77
Moral-Religious Emphasis	.79	.55	.80
Organization	.78	.52	.76
Control	.70	.51	.77

In this study the 40 item short form (Form S) was used for convenience purposes. Preliminary data (Moos', 1974) indicated that the use of Form S results in a family profile which is highly similar to that obtained using Form R (at least for relatively large families). A family profile and incongruence score was obtained before and after the program. A follow up testing session was administered one month later to note any further effects. A profile obtained only for the hearing impaired child will be reported in order to obtain additional information which may reveal important findings.

It should be noted that the FES was administered individually and manually to the hearing impaired child. Thus, the lack of standardization procedures and the necessity to

translate complex words into simpler ones must be considered when analyzing the results. This administration difficulty is not uncommon when testing hearing impaired individuals (Schoenwald, 1980; Zlezula, 1982).

B. Ratings of Video Taped Discussions - A group discussion in the home, using the ground rules (process rules for discussion during program) was rated for the frequency of 3 different communicative dimensions. These dimensions were 1) Awareness; 2) Mastery; 3) Social Interaction; the 3 objectives of the HDP. These objectives are operationally defined below:

> Awareness - the ability to repeat what another has said.
> Mastery - the ability to label ones feelings or skills.
> Social Interaction - the ability to follow the ground rules including: attending to the speaker, no interruptions, and no put downs.

Appendix F includes examples of these objectives and their ratings.

It is important to note that the ground rules suggest that each person take a turn in making a statement as well as a turn reflecting another person's statement. Thus, the measures were able to be made systematically if the rules were followed. The only change made in the ground rules, made during the ratings, was in rule number four (see section on rule alterations).

One observer was present to tape the discussions and 2 trained raters rated each tape. Patterson (1975) observed families at home while being videotaped and noted that although obtrusive, they habituated quickly to the presence of

an observer.

Specifically, 3 pre-test group discussions and 3 post-test group discussions were rated for every family in each group. Results are reported in the form of a bar graph which diagrams the frequency of the 3 dimensions for each family member and for the family as a whole unit.

Procedure

The procedure section is divided into the following categories: A) The Creation of the Experimental Treatment Program; B) The Pilot Study; C) Sequence of Contacts with the Family; and D) Summary of the Procedures.

A. The Creation of the Experimental Treatment Program - the name of the program is Families With A Hearing Impaired Child (FWHIC). The program was presented in book form. It was used with families in their home and without direct guidance from a professional. However, clear directions were included, and an initial discussion with the program director was conducted previous to the program's commencement.

The book was written at the 3rd-4th grade reading level. Barlow, Fulton and Peplow (1971) assessed reading comprehension skills in 157 deaf adolescents (14-21) and found a mean equivalence score ranging from 4.5 to 6.1. The program's level was assessed with the Graph for Estimating Readibility, by Edward Fry, Rutgers University Reading Center, New Jersey. Original illustrations were prepared by the program director. They were used to enhance understanding of the activity, and

for enjoyment.

The objectives described in the HDP program were incorporated into the FWHIC. They included:

Awareness - Accurate perception, understanding and insight; i.e., to know what one is actually seeing, hearing, thinking, feeling, and doing. (An example of a topic in the HDP which focuses on this issue is: "Something that makes me feel good.")

Social Interaction - Interacting with others to fulfill basic interpersonal needs. (An example of a topic in the HDP which focuses on this issue is: "Cooperation, approval and disapproval.")

Mastery - A feeling of efficacy demonstrated by the knowledge of one's own feelings, or the ability to feel adequate about one's skills and feelings; i.e., to gain control over one's surroundings. (An example of an HDP topic that focuses on this issue is: "I did it myself.")

The ground rules or process of HDP was used in an adapted form for the FWHIC. The rules of the HDP are listed below:

1. Bring yourself to the circle and nothing else. (This is required in order to eliminate distractions.)
2. Everyone gets a turn to share, including the leader. (This is to assure everyone of a turn to speak and establishes equality among members.)

3. You can skip your turn if you wish. (Privacy is to be respected. If one doesn't choose to respond, just their presence is accepted.)
4. Listen to the person who is sharing. (The circle members listen without making evaluative statements.)
5. The time is shared equally. (This prevents only one person dominating the circle, and prevents restlessness.)
6. There are no interruptions, probing, put-downs, or gossip. (This provides safety for the circle members. Unacceptable behaviors may be discussed prior to the Magic Circle and periodically thereafter.)
7. Stay in your space. (This prevents distractions.)

The leader's role was adopted from the HDP program with some adaptions. The leader for HDP is generally a teacher or school counselor. In the FWHIC, parents each took the role as leader and group member. If there were two parents in the family, they alternated as leader for each successive activity presented in the book. (Prior to the commencement of the program a professional educator, psychologist, school psychologist or counselor should clarify to the parents the program instructions and objectives. Appendix C includes suggestions for what the professional might say.)

The leader's role was to explain and enforce the ground

rules. After the rules had been explained, the leader was asked to provide a 1 to 2 minute elaboration of the topic to be discussed. Then the circle discussion began with volunteers. If the members were hesitant, the leader was instructed to begin by discussing his/her thoughts. The leader was instructed to perform a dual role of both leader and participant.

In the HDP program, when the discussion has been completed, the leader may suggest a summary of the discussion. Members restate what other members have discussed, thus everyone who spoke has been given feedback and has been reviewed by another member.

Lastly, a cognitive summary is conducted. This phase allows members to reflect on learning gained from the session. The leader encourages members to consider the similarities and differences found regarding the topic discussed. The leader thanks the members for participating and may add a word about the next topic to be discussed.

Alterations in the HDP for the FWHIC.

As previously mentioned, the FWHIC process included the same ground rules and procedures used for the HDP with several alterations. The alterations were made in hopes that they would be more easily adapted by a hearing impaired child and his/her family. The ground rules and procedures were explained in printed form at the beginning of the book for the program leaders; the objectives of the program were

also included in simple terms.

The original ground rules and their alterations are listed below. (Note that only the rules selected for alteration are included.)

Rule 3 - "You can skip your turn if you wish."

Alteration - Although skipping a turn was still permitted, he/she was to be asked a second time, after others had taken their turn. (This was to assure that the content and process was shared and experienced if at all possible; and because of the relatively small number of participants involved within each family.)

Rule 4 - "Listen to the person who is sharing."

Alteration - This rule was crucial. Accurate communication was an important aspect of the program. A member was asked to repeat or rephrase what another member had said each time a turn was completed. If that member could not repeat or rephrase the response, the original speaker was asked to offer his/her response again. (This step was included during the testing sessions in order to measure listening abilities, for "Awareness"). This was to be done "tactfully", as the response may have had to be given several times for the hearing impaired child before the process was completed. This is normally done in the HDP program only at the end during the review session. This alteration was most beneficial when the program was conducted at Phoenix Day School for the Deaf. Initially the

children were unable to repeat or rephrase what others had said. This may have been due to poor listening, comprehension difficulties, or expressive difficulties. However, they appeared to improve significantly with more experience. Rainer and Altshuler (1966) also note that in their group sessions the hearing impaired persons directed all their attention to the leader and did not communicate well with other members.

Rule 5 - "The time is equally shared."

Alteration - Time was not an important issue. As long as attention continued each member was instructed to take as much time as needed. This was due to the small number in the groups, and the potential need for one person to express more on a given topic.

Rule 7 - "Stay in your own space."

Alteration - This did not seem relevant in a home environment, although some semblance of a circle in which all members face each other was suggested.

In addition to these rule alterations, added emphasis in the procedure was placed on the summary review. Due to the poor, abstract reasoning abilities of the hearing impaired children documented in the literature review, it was considered important that the similarities and differences regarding what was said be brought to attention by the leaders. Thus, at least in the beginning, the leaders were to take this responsibility completely.

The rules or processes were followed during each session activity. The leaders were asked to remind the family of the rules before each session began. The family was instructed to follow the rules in order to meet the objectives of the program.

The activities or content of the program differed from that of HDP. The activities were focused upon issues which have been documented or described in the literature review. Due to the nature of the literature, which is frequently descriptive, a one-to-one correspondence between issue, or research finding, and activity could not be made. However, an attempt was made to directly and/or indirectly include issues which have been portrayed as reasons for individual or family difficulties. These issues were the basis for each of the activities and are enumerated below.

In addition, FWHIC activities were approached in a more formal structure vs. the HDP which is based soley on discussion. Thus, lists, photographs, and games were included as part of the book. This was done for the following reasons: 1) Due to the language difficulties experienced by the hearing impaired learner, activities based soley on verbal interaction may be less valuable. 2) Due to the lack of formal training as facilitators, the additional structure was hoped to aid the parents with their role as leader. 3) Due to the difficulties experienced when trying to manually or orally communicate in families with hearing impaired children, a written program was developed to facilitate

clarity of the issues.

Ten activities were chosen for the program. Each activity was to take one evening. Each activity was presented on a separate page and included one illustration. The activities which were selected and the issues and themes described in the program are listed below:

Page of Program	Issue being addressed
1 (Introduction)	Identifying the presence of the hearing impaired child and accepting that he/she experiences things differently.
2	This activity involves watching T.V. without sound. The focus is upon what it is like to see and hear, and to better understand the T.V. experience of a hearing impaired child.
3	This activity involves making a list of things that make sounds. It is a continuation of activity 2, using more examples of things we normally hear and take for granted.
4	This activity involves talking about why we feel proud of ourselves. The purpose is to communicate affective feelings about oneself to other family members. Communicating this kind of information may be a new experience for many families.
5	This activity involves communicating a sentence without systematic language. This brings awareness of the difficulties encountered by the hearing impaired child when making an exchange with someone who cannot sign or make themselves clear; and the frustrations involved with trying to communicate

		with someone who doesn't understand.
6		This activity involves talking about a relative who had an important experience. The focus is on the importance of communicating personal family events and the possible misinterpretations that are commonly made by the hearing impaired family member.
7		This activity involves talking about what you do during a working day. The purpose is to inform other family members about what one's daily responsibilities and experiences are like.
8		This activity involves sharing an experience with all but one family member. The focus is upon what it feels like to be isolated from a group due to the inability to hear what is being said by others.
9		This activity involves talking about how one worries about other family members. The focus is upon how family members may worry and become overprotective. It may point out how this differs for the hearing impaired member.
10	(Summary-Conclusion)	This last activity is a summary of what has been learned and/or experienced, and a suggestion to develop new activities on your own.

Appendix D includes a black and white copy of the FWHIC Program. The original book is printed on color pages, and is spiral bound.

B. The Pilot Study - In order to maximize the practical aspects of the procedure, as well as to determine if the

program instructions were clear, a pilot study was conducted. Two families were used. One was considered to be highly cooperative; the other was considered to be uncooperative. Alterations were made according to the information obtained during the pilot study. The alterations which were made were in regards to scheduling activity sessions. The amount of time (10 days for 10 sessions) was found to be too short. Thus, 2-3 weeks were allotted for the program's completion. The sequence of meetings with the family (described below) were found to be successful during the pilot program and thus were used during the course of the study.

C. Sequence of Meetings With the Families -

Meeting Number One:

The first meeting consisted of meeting the family, explaining the procedures to be used during the study, administering the FES, and obtaining consent forms. The families were not assigned to an experimental or comparison group until the second meeting. The FES was administered with total communication to the hearing impaired child and given to the parents to complete by themselves. A second meeting was scheduled at this time.

Meeting Number Two:

The second meeting consisted of taping the family during their discussion of three topics while using the ground rules. Appendix B includes the topics used when taping the family. The families were then randomly assigned to a group and directed as to how to use their respective programs. In

addition, the scheduling of times for convenient phone interviews were discussed and decided upon and the instructions for record keeping during the program were explained.

Meeting Number Three:

This meeting took place after the family had completed their program. A second videotape was made of the family during their discussion of three topics while using the ground rules. The FES was administered again in the same manner as previously described, and interviews were conducted. A meeting was scheduled for the final follow-up FES testing.

Meeting Number Four:

This meeting consisted of administering the final FES measure. In addition, those families who did not belong to the experimantal group were offered the experimental treatment, that is the FWHIC Program. Lastly, the families were thanked for their participation and cooperation and they were informed that the results would be made available to them upon the completion of the study if requested.

D. Summary of the Procedures -

The experimental and comparison groups were matched as closely as possible on their entering characteristics and randomly assigned to either the experimental (E) group or the comparison (C) group. The experimental group participated in the adapted version of the HDP. Adaptions were based on the specific needs of this population as previously

described. The FES and video tapings were used for both groups prior to and following the experimental and comparison treatments. The FES was administered one month after the completion of the program, for follow up purposes. Comparisons are presented visually in profiles and histograms and summarized. The interviews provide feedback and identify specific activities which may have been more useful than others.

CHAPTER 4: ANALYSIS OF RESULTS

Introduction

The conceptual hypotheses which were analyzed were: A) Family environment will change following the treatment program: B) Family communication will change following the treatment program. The families were investigated in matched pairs. The experimental families are presented in the figures by a number with an "A" beside it (1A-4A), and the compairson families will have a corresponding number without an "A" beside it (1-4). Each group was investigated to determine which, if any, outstanding changes occurred in the video measures, which measures communication skills, and the Family Environment Scale (FES), which measures family environment. (Appendix F includes a copy of the FES).

The 'Case Study' section reviews each family's results including excerpts from their comments and interviews (Appendix G includes the written comments in their entirety). In this section a discussion of each family pair is included and focuses on the major contrasts observed and recorded. Lastly a summary of the results were analyzed in order to determine any overall patterns in the findings.

Interrater reliability for the videotapes was very high ($r = .99$). When a disagreement occured with regards to an individual score, the second raters score was used in order to eliminate any possible biases.

Family Incongruence scores are reported in raw score

form. This is due to the lack of standardized scores available for the short form of this measure used in the study. It is important to consider the dependency among measures of communication when considering the results. Each individual member of the family affects another member's score. For example, if one member has a very high Mastery score, he or she is giving another member an opportunity to have a similarly high Awareness score; i.e., the more a person says, the more another person has available to repeat.

The same dependency must be considered when observing the scores of the FES for the family unit. The family score could remain the same from pre- to post-testing, whereas each member's score could have changed. This is due to the fact that the family unit scores are an average of all the family members' responses. The changes could be complimentary, whereby no total changes were visible without a closer look at the various influences from each member. The figures that follow include the communication skill graphs (pre-post) and the FES profiles (pre-post and follow-up) for each family in the study.

Case Study of Each Family and Comparison Family

Experimental Family 1A (Single Parent Family): Ratings of Family Communication Skills

As can be seen in Figure 1, the family unit increased their Awareness Skills by 20 points; decreased their Mastery Skills by 5 points, and showed no change in their Social

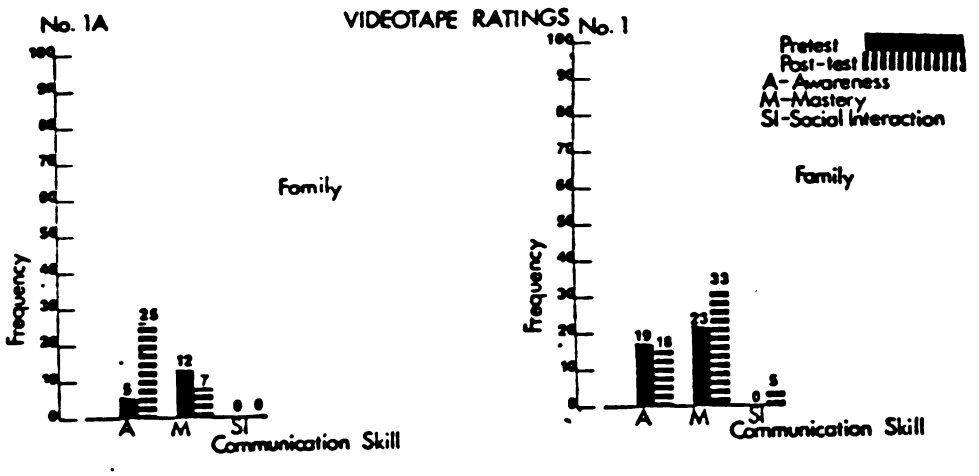


Figure 1: Communication skills of Family Units 1A and 1

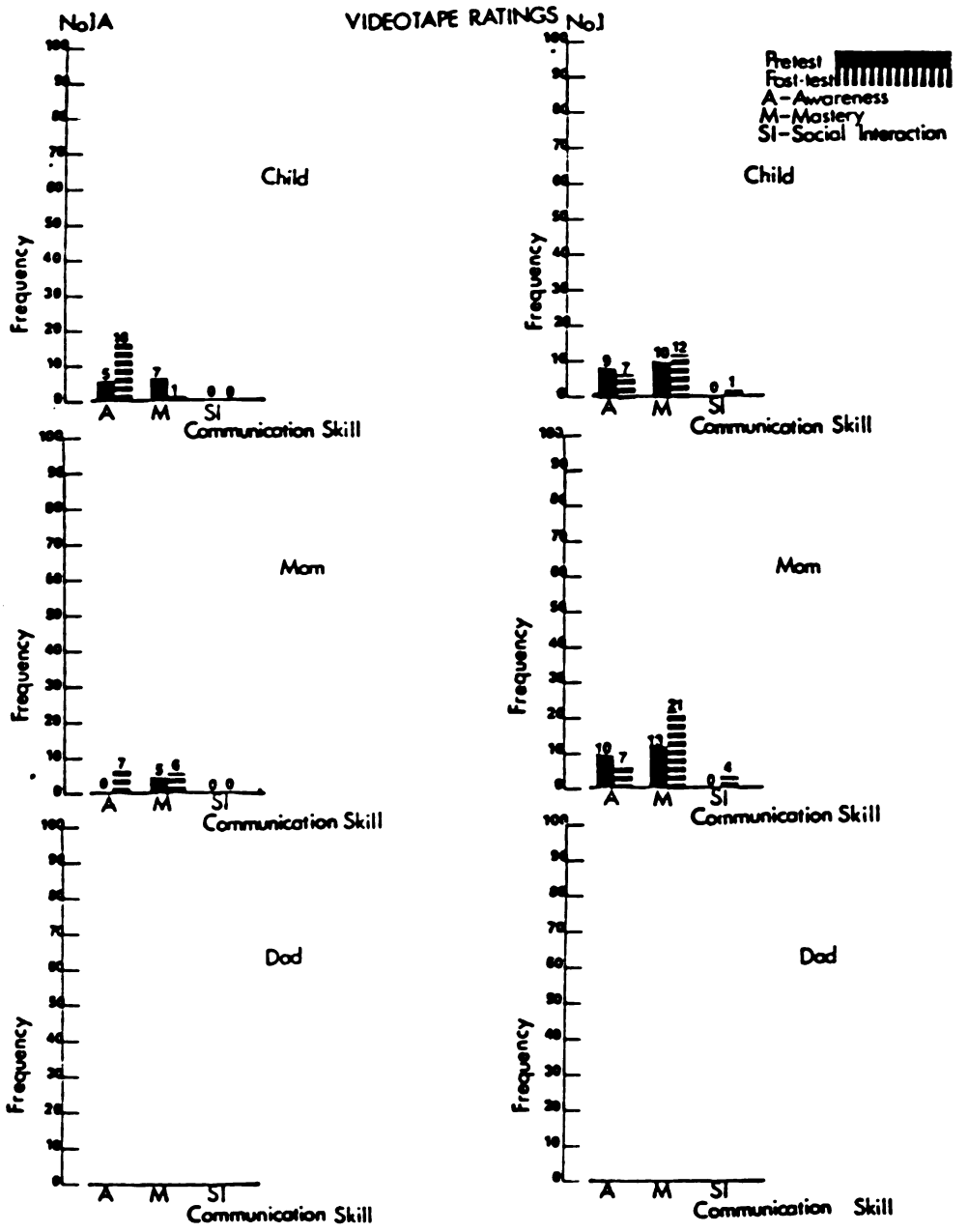


Figure 2: Communication Skills for Experimental and Comparison Family Members in Units 1A and 1

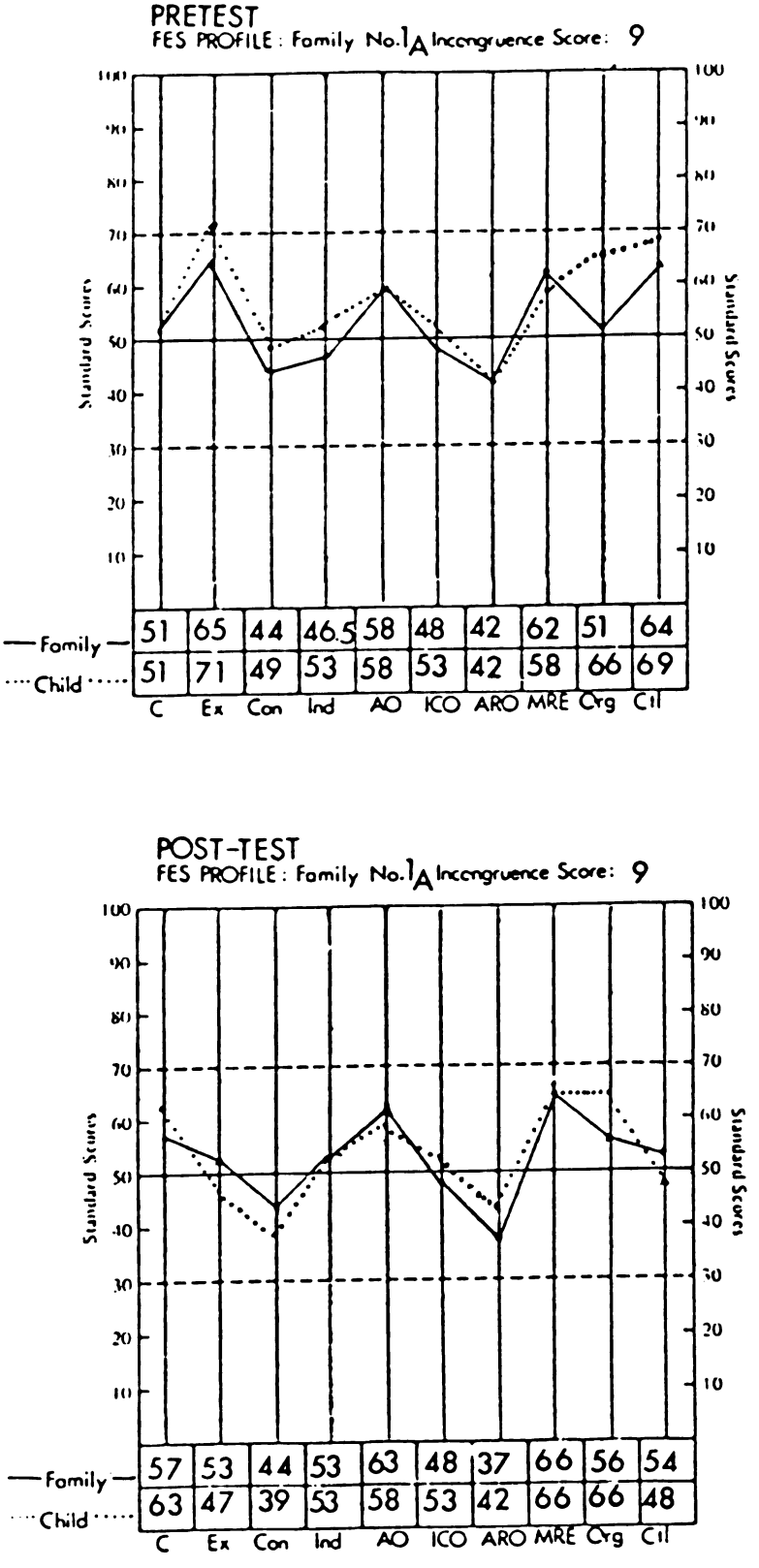


Figure 3: Pre-Post Test Profiles for Experimental Family 1A

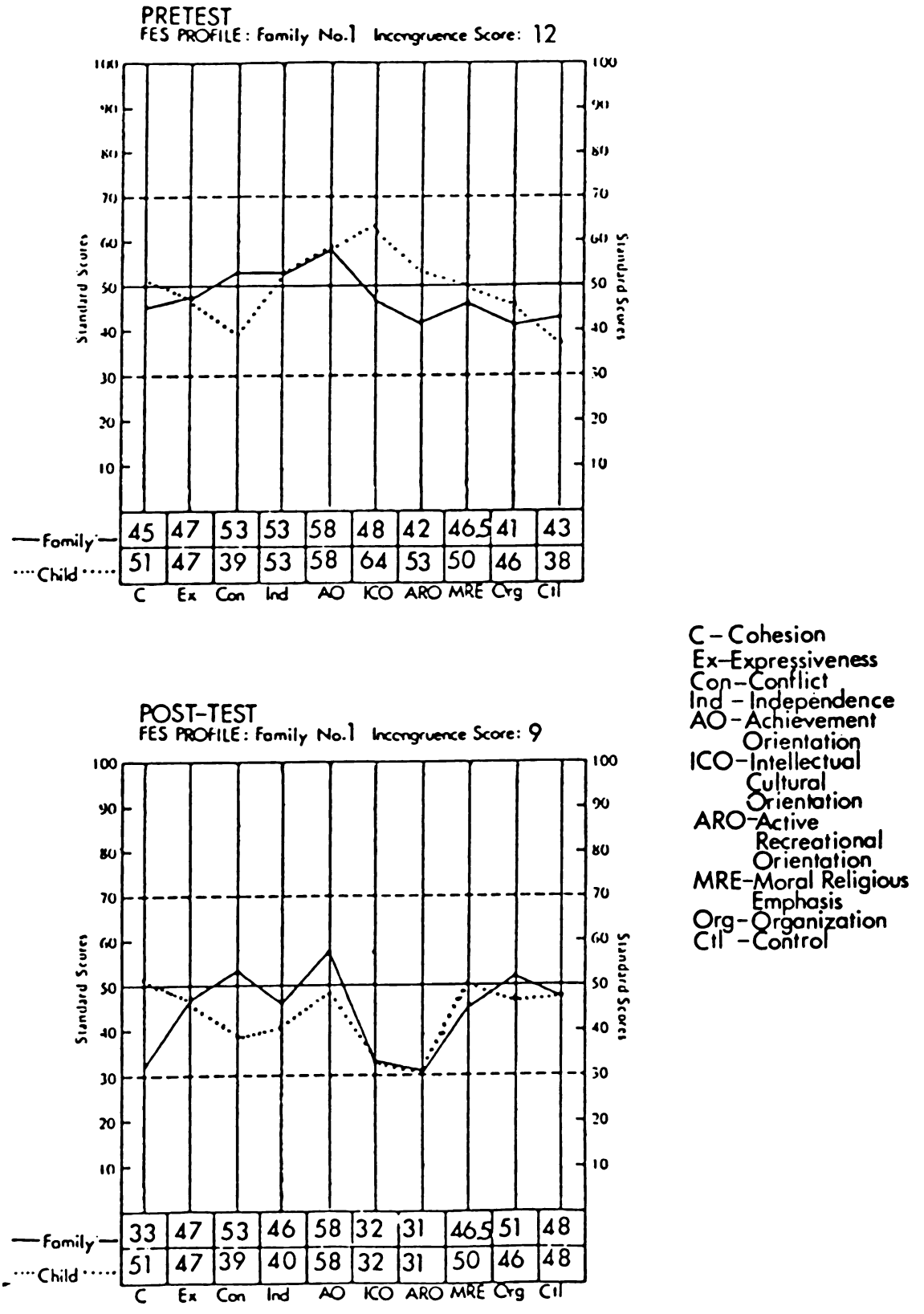


Figure 4: Pre-Post Test FES Profiles for Comparison Family 1

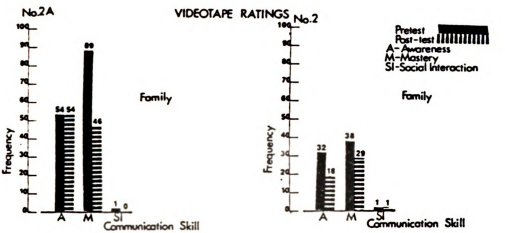


Figure 5: Communication Skills of Family Units 2A and 2

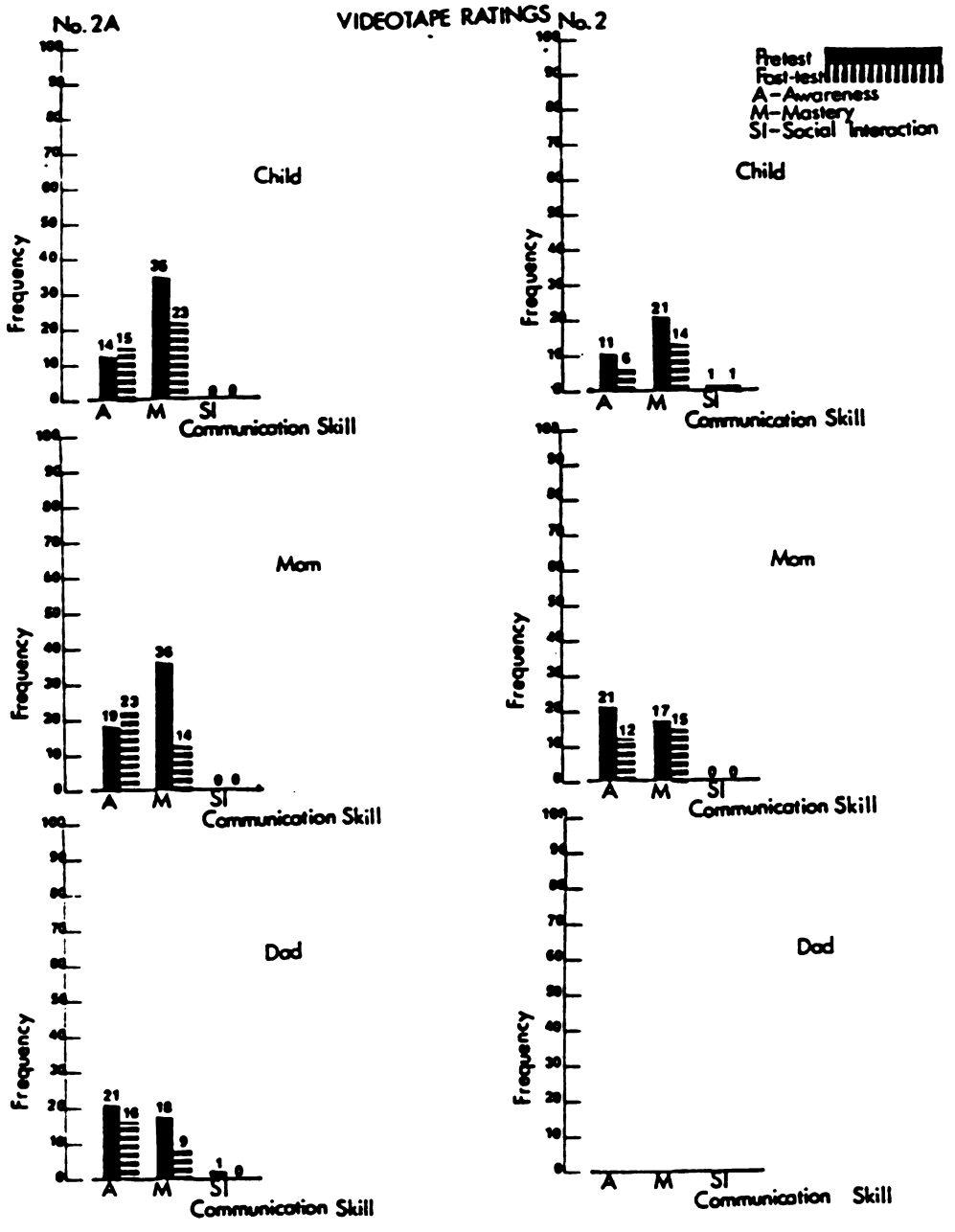


Figure 6: Communication Skills for Experimental and Comparison Family Members in Units 2A and 2

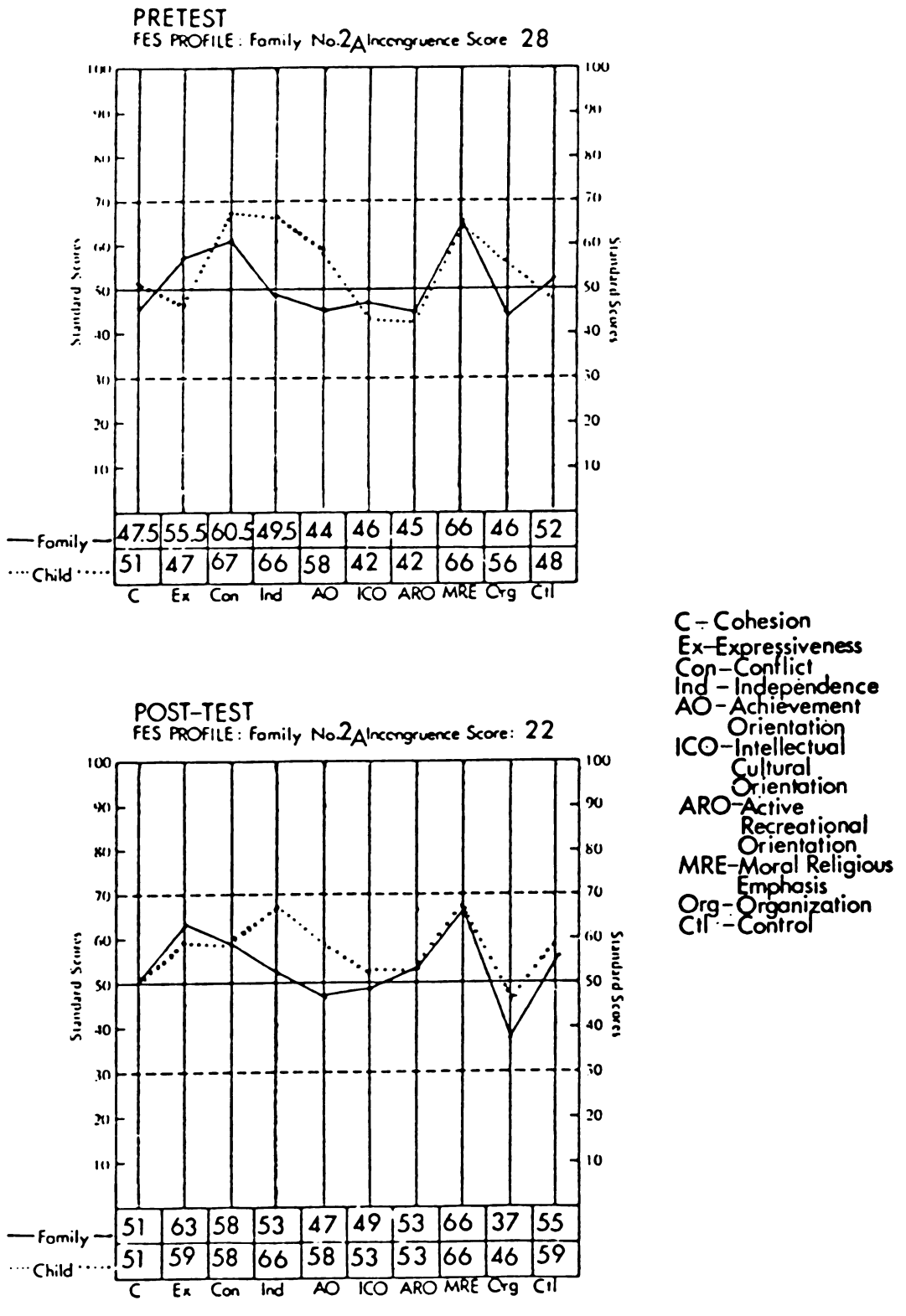
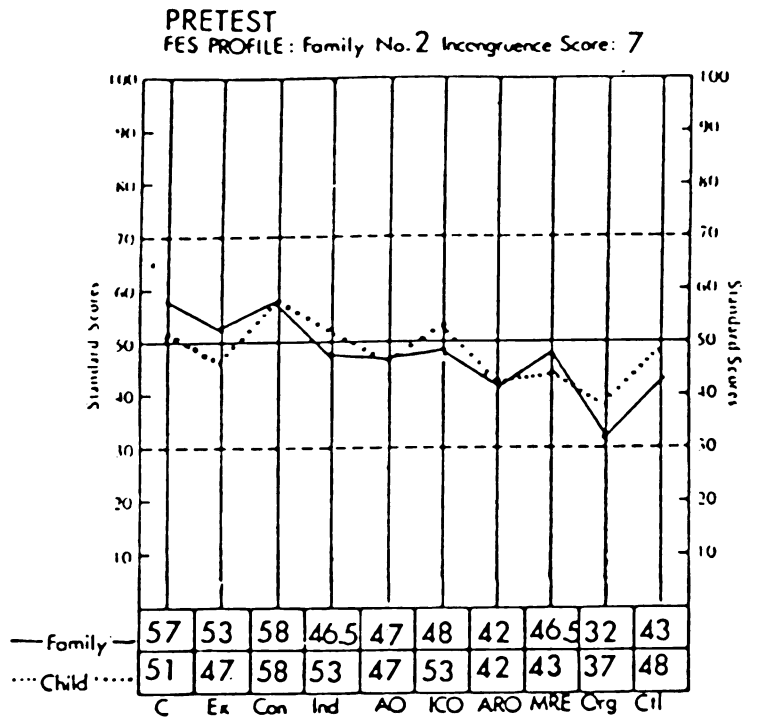
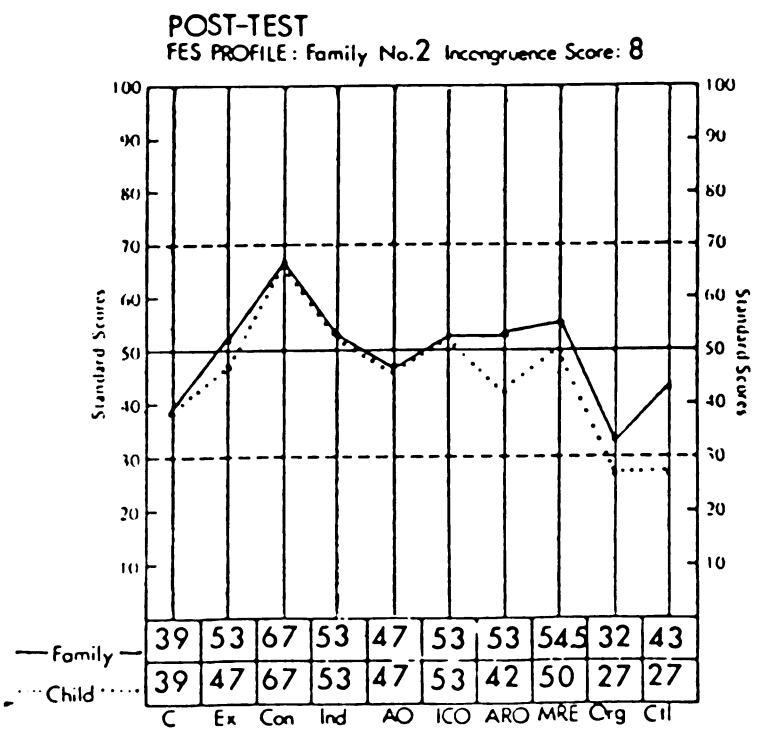


Figure 7: Pre-Post Profiles for Experimental Family 2A





C – Cohesion
Ex–Expressiveness
Con–Conflict
Ind – Independence
AO – Achievement Orientation
ICO – Intellectual Cultural Orientation
ARO – Active Recreational Orientation
MRE – Moral Religious Emphasis
Org – Organization
Ctl – Control

Figure 8: Pre-Post Test Profiles for Comparison Family 2

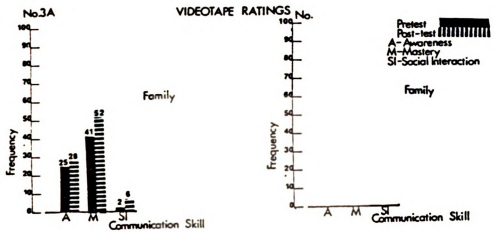


Figure 9: Communication Skills of Family Unit 3A

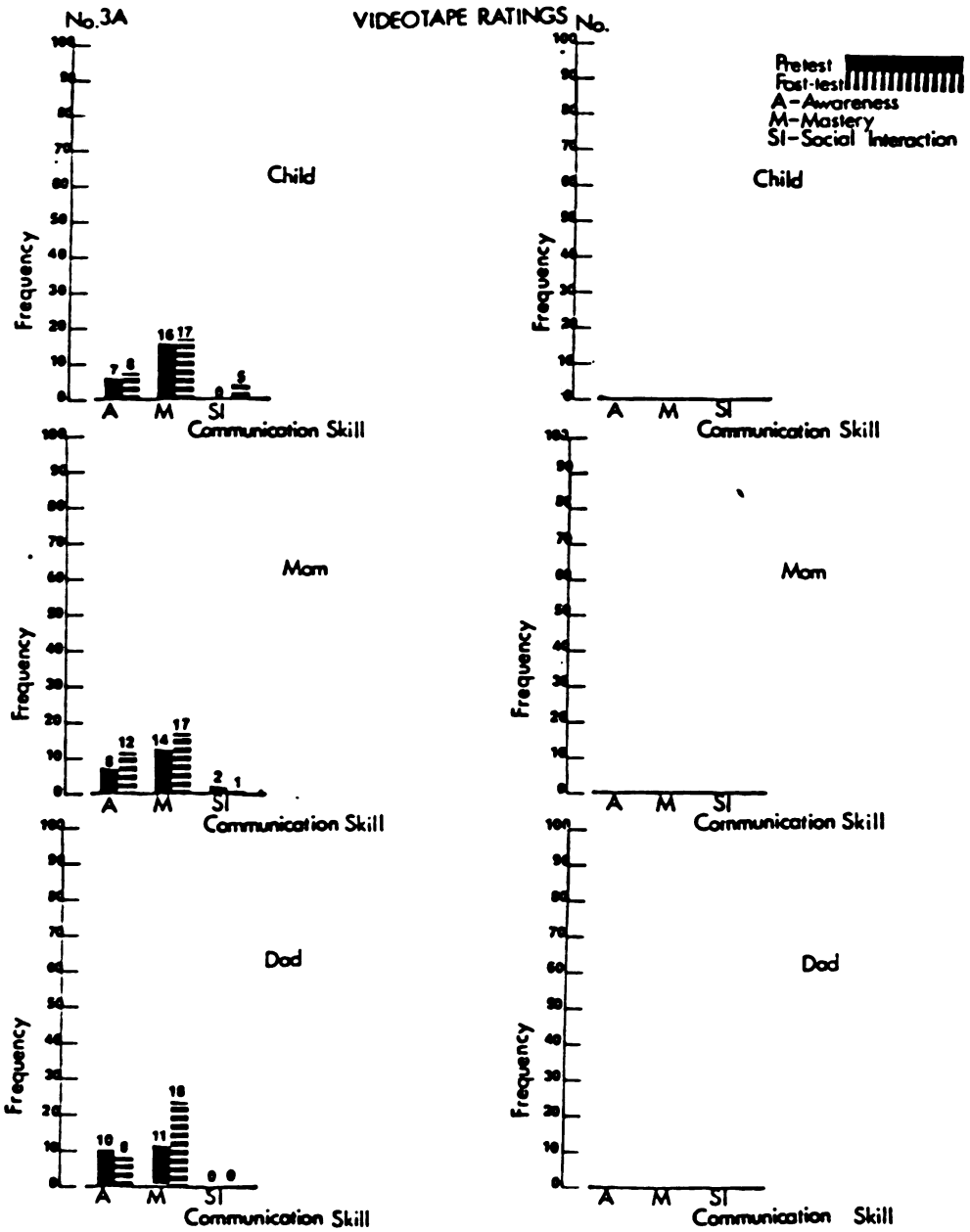


Figure 10: Communication Skills for Experimental Family Members in Unit 3A

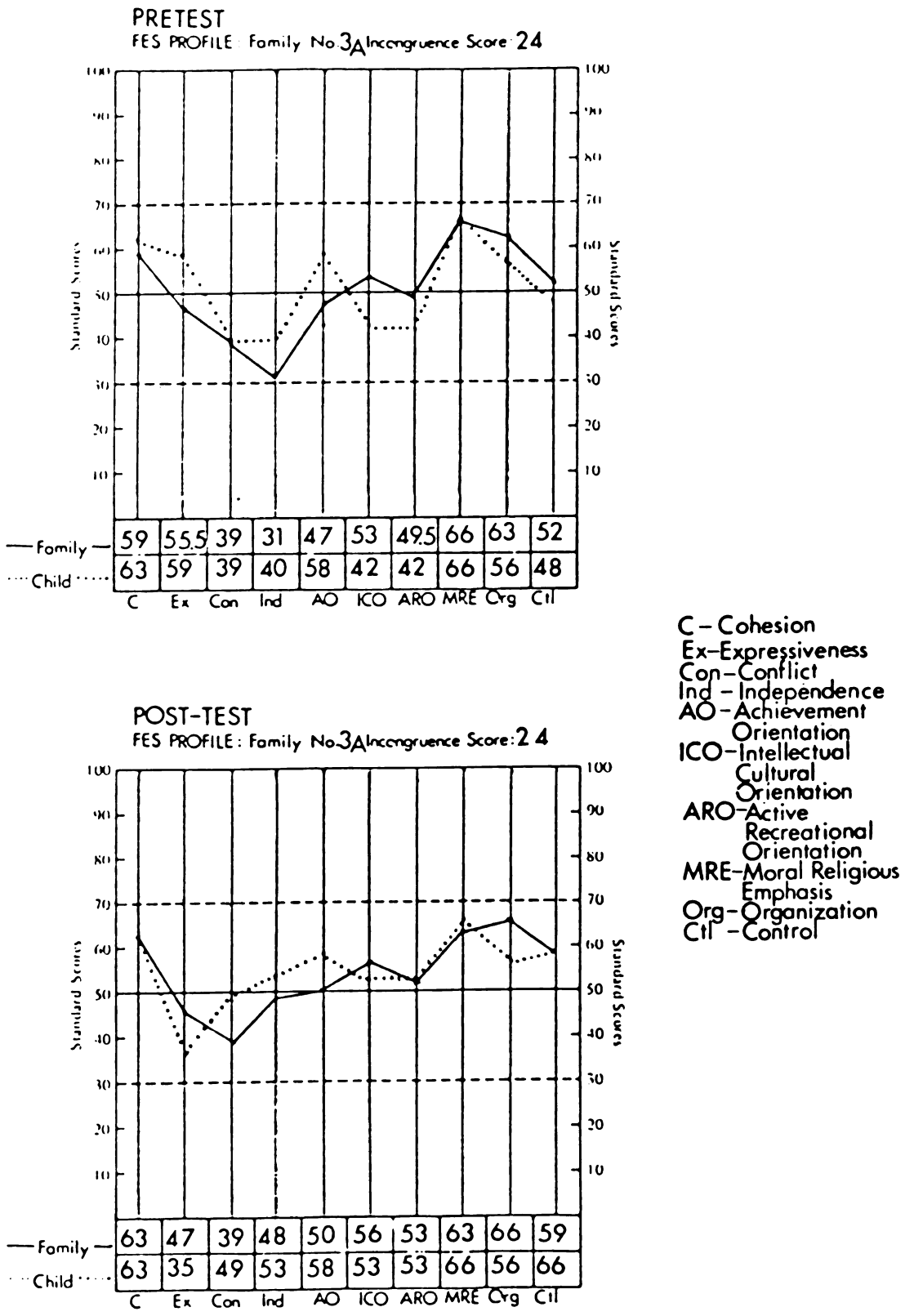


Figure 11: Pre-Post Test Profiles for Experimental Family 3A

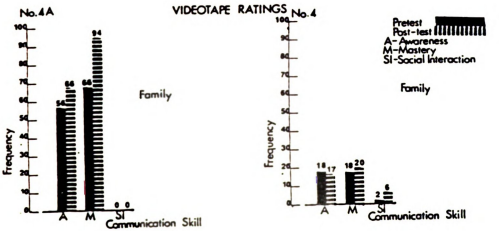


Figure 12: Communication Skills of Family Units 4A and 4

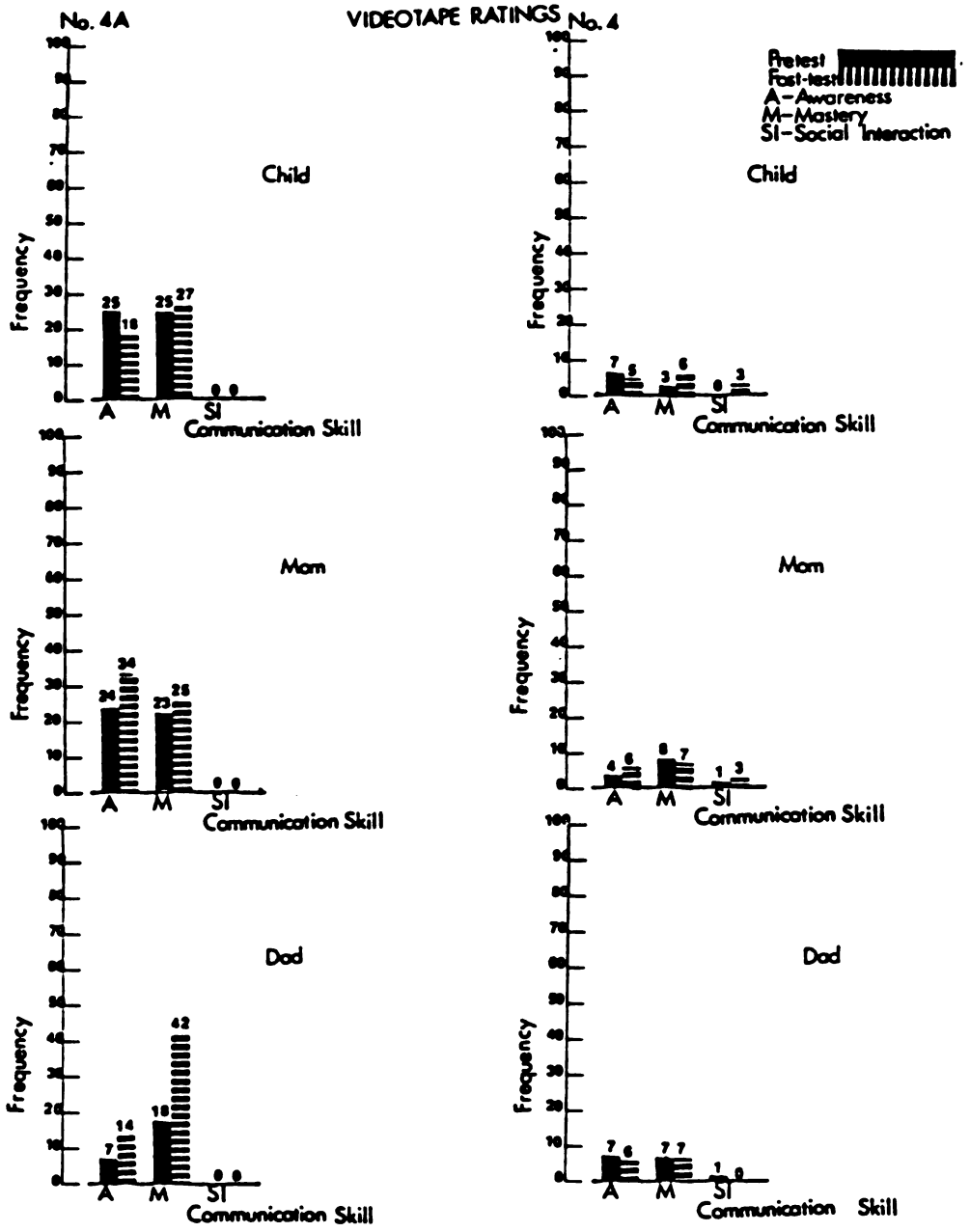


Figure 13: Communication Skills for Experimental and Comparison Family Members in Units 4A and 4

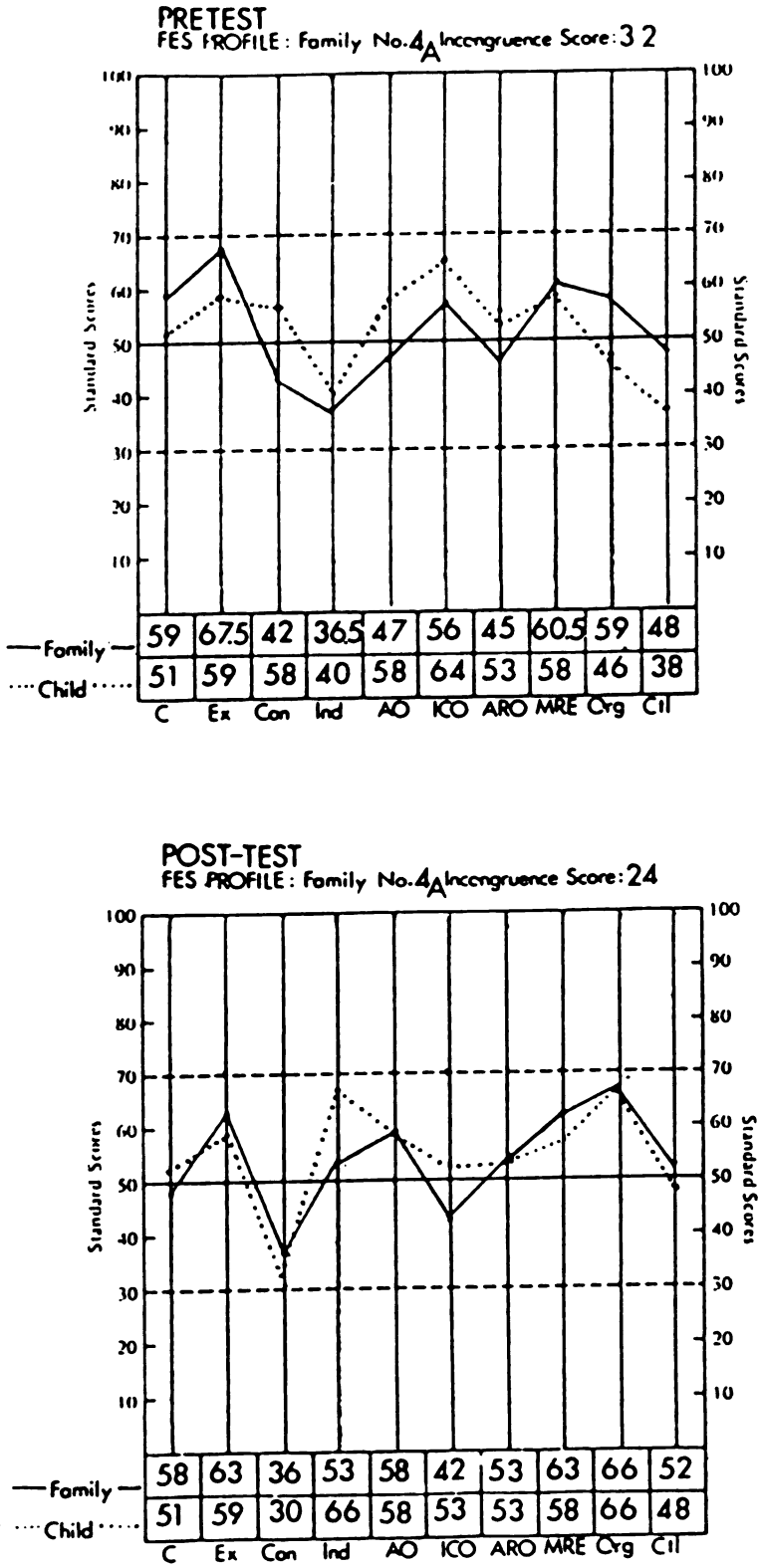


Figure 14: Pre-Post Test Profiles for Experimental Family 4A

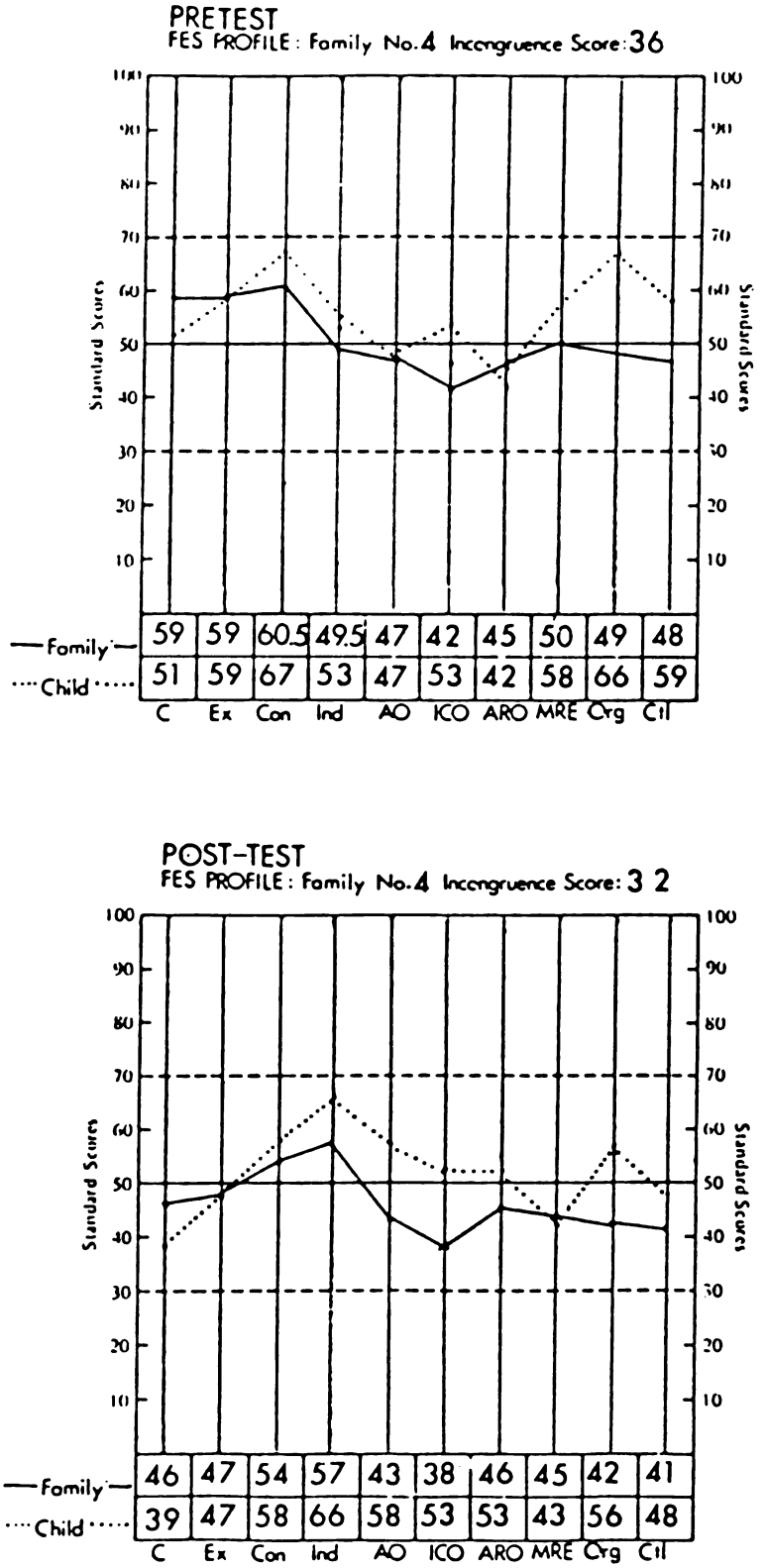


Figure 15: Pre-Post Test Profiles for Comparison Family 4

Interaction Skills. A closer look (Fig. 2) reveals that the child influenced both of these scores more than did his mother. The child increased his Awareness score by 13 points, the mother by 7 points. The child decreased his Mastery score by 6 points; the mother increasing by 1 point.

Both raters noted that the mother took no turns repeating a statement (Awareness) during the pre-test, and only one turn for 'Awareness' during the post-test (vs. the expected 3 turns). Thus the leader was unable to master the directions, reducing the effectiveness of the program. The raters also noted that although sign language was reported to be used in the family prior to the commencement of the program, there was no sign language being used. The family members often did not appear to understand what the child was saying, which may also account for the mother's low 'Awareness' score.

The child appeared to be sick and the mother asleep, just prior to the post test taping session. Thus, this session may have been a poor demonstration of the communication skills being measured.

No. 1A Parent's Written Comments for the Sessions

Throughout the sessions, the mother described how much she took for granted. For example, she made the following comment with regards to activity No. 8 (one person is assigned to be the outsider): "It was a little hard for _____ (Hearing Impaired Child) to understand. I realize that I

myself take a lot for granted. It did make you wonder and it does show how a hearing impaired person feels in not knowing." She also noted that 'game' numbers 2,5 and 9 were the most enjoyable. The hearing impaired child was reported to have found Rule No. 4 (repetition rule) most difficult, and the sibling found Rule No. 6 (no interruptions, probing, etc.) to be most difficult.

Interview with Family No. 1A

The comments above were repeated and confirmed during the family interview. In addition, the mother expressed her impatience at trying to listen and explain things to her child. She noted: "I learned-caught myself turning off and being impatient. We talked about it during the program. Before I use to talk with him like _____ (sibling), and now I know it only goes over his head."

When asked whether she would recommend this program to other families, she replied positively and stated: "We still do each take a turn when talking, but we don't do the repeating thing."

Family Environment Scale No. 1A

As can be seen in Figure 3, the pre-post test profiles reveal similar patterns to those of the video ratings. The child decreased his score (2.4. s.d.) on the 'Expressiveness' test, indicating a decreased perception of the extent to which his family acts openly and directly expresses their

feelings. In addition, he decreased his score (2.1 s.d.) on the 'Control' subtest, indicating a decreased perception of the extent to which the family is hierarchically organized, the rigidity of rules and the extent to which the family is ordered around.

The family Incongruence score did not change from pre- to post-testing which suggests no overall difference in their level of disagreement.

Matched Comparison Family No. 1 (Two Parent Family)

Ratings of Family Communication Skills

Although this was a two parent family, the father unexpectedly declined to participate, stating that he hadn't been photographed in 16 years and wasn't about to start then.

As can be seen in Figure 1, the family unit showed virtually no change in 'Awareness' skills, losing 1 point; increased in 'Mastery' skills by 10 points, and increased in their 'Social Interaction' skills by 5 points. A closer look (Fig. 2) reveals that the mother influenced these changes more than did her child. She interrupted 4 times during the post-test and added a majority of the points (8) to the 'Mastery' score. Both raters noted that the discussions were brief on both occassions.

No. 1 Parent's Written Comments of the Sessions

The mother's comments about the sessions related to

specific information they had discussed vs. any reactions to the process or content. For example, she noted that when they discussed 'what they do when they are sick' she wrote: "_____ (Hearing Impaired Child) watches T.V. or plays with the girl next door." One exception to this type of commenting was in regards to a spontaneous conversation that occured during one of the sessions: "Had a nice discussion on life in general and deaf people. _____ (Hearing Impaired Child) will openly talk so seldom. I took advantage of the situation. His father was involved. It lasted about 30-45 minutes."

Interview with Family No. 1

The family did not offer a great deal of information during the interview. The mother reported that it was difficult to get the discussion going. None of the family members reported any communication difficulties during the sessions. The child noted that many of the discussions were boring, as did the sibling. The sibling said the hardest discussion was the one in which you were to discuss what you wanted to change about yourself. All of the members reported being glad that the program was finished.

Family Environment Scale No. 1

As can be seen in Figure 4, the pre/post-test profiles revealed that the mother decreased her score (1.2 s.d.) on the 'Cohesiveness' subtest, indicating a decreased perception

of the extent that the family is supportive and helpful to each other. Both mother and child decreased their score on the subtest 'Intellectual Cultural Orientation' (1.6 s.d.) The decrease was equally influenced by mother and child, indicating their decreased perception of the extent to which the family is concerned about political, social and cultural activities. Both mother and child also decreased their subtest 'Active Recreational Orientation' (2.2 s.d.). This indicates their decreased perception of the extent to which the family participated in recreational and sporting activities.

Discussion of Experimental Family No. 1A and Comparison Family No. 1

There were no clear cut patterns of change in either the videotapes or FES measures for each family. With regards to the family environment, there were changes within each family in scattered areas. The experimental family perceived less expressiveness and less cohesiveness, less involvement in intellectual and cultural pursuits, and less involvement in recreational activities.

The greatest changes in communication skills for the experimental family was an increase in 'Awareness' skills. The greatest change for the comparison family was an increase in their 'Mastery' skills. However, it is difficult to determine the accuracy of the measure with the experimental family due to the observed illness and fatigue at the time of the

post testing.

The most powerful comparisons may be seen in the comments made both in written form and during the interview. These reveal more enthusiasm and learning on the part of the experimental group. The experimental group expressed an awareness of the difficulties involved with communication vs. the comparison group, which found communication to be easy and the discussions boring. There was no change in the family incongruence score for the experimental group, indicating no change in their level of agreement. The comparison family decreased their score by 3 points, indicating a slight increase in their level of agreement.

Experimental Family 2A (2 Parent Family)

Ratings of Family Communication Skills

As can be seen in Figure 5, the family unit showed no change in 'Awareness' skills, decreased in their 'Mastery' skills by 43 points, and showed virtually no change in their 'Social Interaction' skills. A closer look (Fig. 6) reveals that each member of the family influenced the decrease in 'Mastery' skills. The child decreased by 12 points, the mother by 22 points and the father by 9 points.

The raters noted that during the pre-test, the mother did not take her expected turn in the 'Awareness' category, which both affected the scores in that area and demonstrated the inability to follow directions. There were no skipped turns during the post-test, indicating an improvement in

in these areas.

No. 2A Parents' Written Comments of the Sessions

This family's comments were quite extensive. In a summary evaluation written by the father, he wrote: "I saw all of us grow closer together because we tried to experience _____ (Hearing Impaired Child's) handicap on a personal level.

Each family commented about each activity. With regards to activity No. 3 (sounds), the mother wrote: "One example was _____(father) scratching his beard and the birds. She was astonished by this! I felt sad. _____ (sibling) felt shocked". Frustration was experienced during activity No. 4 (feeling proud) and the parents wrote: "It was hard getting _____ (Hearing Impaired Child) to zero in on an actual example of being proud of herself. She began showing signs of exasperation. We shortened this activity due to the frustration levels we were all reaching." With regards to activity No. 6 (sick relative) the father wrote: "My grandmother visited us this past fall and she is 82 years old. I was really astonished by the realization that _____ (Hearing Impaired Child) understood so little about her."

With regards to activity No. 8 (one person leaving the room), the parents wrote: We believe that _____ (Hearing Impaired Child) became more aware of the probability that the conversation is not about her."

Interview with Family No. 2A

The first statement made by the mother may explain the decrease found in 'Mastery' skills. She noted that repeating made the discussion long, and it showed her that they talked too much sometimes and needed to be briefer, in order to maintain attention. She added that repeating often caused frustration among family members, that they teased too much, and that they often didn't listen. With regards to activity No. 2 (T.V. with no sound) the hearing impaired child became frustrated because her parents could not answer her questions about what was happening. Thus she realized how much she relied on them. This response was quite different than most families in which the hearing impaired child was at an advantage over the other members when the T.V. sound was off. The mother also stated: "We bothered to give more time. It made us realize how little time we gave to her grandmother's illness (activity No. 6). We really never got deeper before, we only got to the surface. It's the little points that make the difference."

The father noted that: "The rules were good, forced us to really listen and pay attention. It was hard at first. The repetition helped... we will continue to use the rules in our family because we all agree that they helped improve our communication and understanding of each other. We got closer from this program."

In addition the father noted that their hearing impaired child seemed to want to stay with them more, that her mood

changed. Her arms were around us." He said that some of the directions in the book were confusing, although he couldn't remember which ones.

The hearing impaired child said that the rules were sometimes hard to follow. She also noted that the sound activity (activity No. 3) was most interesting and that it made her wish she could hear.

The sibling in this family noted that he did not enjoy turning off the sound on the T.V. His favorite activity was the 'sound one' (activity No. 3). He noted "I could find out more about what _____(Hearing Impaired Child) can't hear and it surprised me." He also noted that he liked this activity because it was written and it made a difference for him.

Family Environment Scale No. 2A

As can be seen in Figure 7, the pre/post-test profiles reveal that none of the changes were very great. The greatest change was an increase (1.2 s.d.) in the child's subtest 'Expressiveness', indicating an increase in her perception of the extent to which the family is encouraged to express their feelings openly.

The family Incongruence Score decreased 6 points, indicating more agreement among family members.

Matched Comparison Family No. 2 (Single Parent Family)

Ratings of Family Communication Skills

As can be seen in Figure No. 5, the family unit showed a decrease in 'Awareness' skills by 14 points, a decrease in 'Mastery' skills by 9 points, and no change in 'Social Interaction' skills. A closer look (Fig. 6) reveals that each member of the family influenced the decrease in 'Awareness and 'Mastery' skills. With regards to 'Awareness' skills, the mother decreased her score by 9 points; the child by 5 points. With regards to the 'Mastery' skills the mother decreased her score by 2 points; the child by 7 points.

The writer and videotaper were informed that just prior to the taping there had been a "big family fight," thus, the results may have been effected such that the motivation to communicate was lessened.

No. 2 Parent's Written Comments of the Sessions

The mother's comments were very brief and primarily contained the date and time of each activity. The only two statements describing their experiences were 1) Both children (hearing impaired child and sibling) enjoyed activity No. 4 (My favorite T.V. Show) and they both thought activity No. 10 (Three Things I'm Proud Of and Embarassed About) was difficult.

Interview with Family No. 2

The mother explained that she was disappointed in the program and stated: "I thought it would be great and it just didn't work out." When asked if more structure might improve things she responded positively. She noted that it was difficult for the hearing impaired child to remember things and that she needed to constantly remind him of instances or relevant ideas regarding the topic at hand.

Both children confirmed what had been included in the written comments when discussing their favorite activities They both indicated that they were often too tired to do the program. The sibling's only positive comment was that he enjoyed learning about himself and his family. When questioned further about this, he could not respond.

Famiy Environment Scale No. 2

As can be seen in Figure No. 8, the pre-post test profiles reveal very little change in most subscales. However the changes in the profiles do seem to reflect a similar pattern to the tape ratings. The family unit and the child decreased their score on the subscale 'Cohesiveness' (family 1.8 s.d.; child 1.2.s.d.). This indicates a decrease in their perception of the extent to which the family is concerned, helpful and supportive of each other.

Both the family unit and the child increased their subscale score (.9 s.d.) on the subtest 'Conflict'. This indicates an increased perception of the extent to which the

family expresses anger and aggression. The child decreased his score on the subtest 'Control' by 2.1 s.d. This indicates a decreased perception of the extent to which the family is organized in a hierarchical manner and the rigidity of family rules and commands.

There was very little change in the Family Incongruence Score which increased by 1 point.

Discussion of Experimental Family No. 2A and Comparison Family No. 2

With regards to the Experimental family 2A, the ratings are consistent with the comment made by the family members: i.e. they talk too much and therefore get lost and at times bored. Thus while their Awareness of what each other had said remained the same, the number of items that they discussed decreased. Logically this indicates that during the pretest more was said and less was picked up versus the posttest where less was said and a larger proportion was picked up.

There were few changes in the family environment as a result of the program. The greatest change being an increase in the child's perception of 'Expressiveness' within the family.

In the Comparison family, there were lowered scores in almost all the communication skills and a decreased perception of family 'Cohesiveness'. In addition the child decreased his perception of family 'Control'. This may be

a result of their fighting just prior to the taped session.

The comments and interview are crucial in understanding the changes that occured in both cases. Both groups demonstrated insight into their problems. The comparison group's mother agreed that more structure might improve their discussions. The Experimental family substantially decreased their Mastery skills, or the number of feelings and skills they discussed. However they increased their Awareness level of what had been said, proportionally. The Experimental group indicated an increased awareness of their lengthy discussions and consciously shortened them so as not to get bored and distracted. They appeared very enthusiastic about the program structure. They also felt that they had become closer as a result of the program and noted that they would continue to use the rules in the future.

Experimental Family No. 3A (2 Parent Family)

Ratings of Family Communication Skills

As can be seen in Figure No. 9, the family unit increased in their Awareness skills by 3 points; Increased in their Mastery skills by 11 points; and raised their Social Interaction score by 4 points, demonstrating more interruptions. A closer look (Fig. 10) reveals that the largest influence in the increased Awareness skills was by the mother (4 points). It is important to mention that the raters noted that during the pretest the mother was probing in a way which frequently bordered on what was considered to be an

interruption. For example she would say "Say more" or " What do you mean?" Similarly she remarked on the comment sheet that rule No. 6 (No interruptions, probing or put downs) was the most difficult for her to follow. However, not only did the number of interruptions she committed decrease slightly, she increased her Awareness score, indicating a slight improvement in her ability to listen accurately and repeat another's statement. There were no comments by the raters regarding probing during the post test.

The father was most influential with regards to the increased Mastery skills (7 points); and the Social Interaction score was most influenced by the hearing impaired child (increased interruptions). One rater noted that her interruptions during the post test were often done when telling a parent fo face her, or to parrot what a parent had said, appearing to attempt to confirm her understanding.

No. 3A Parent's Written Comments of the Sessions

The parents comments regarding each session were quite extensive. The large majority of them were positive and demonstrated an awareness of the intended issues covered during the sessions. For example with regards to session No. 2 (T.V. with no sound) they wrote: "Very hard to do, we understand how hard it is for hearing impaired persons to know what is really going on. You only get the plot in little pieces. Then you visually have to guess."

With regards to No. 5 (A sentence expressed without signs

or language) they wrote: "This session was a lot of fun. Very hard to communicate without words. Had to pay close attention to gestures and motions. Realized how hard it is for _____(Hearing Impaired Child) to get every gesture. We were put in her place and experienced visual difficulty without words or sign language." Lastly with regards to activity No. 10 (Summary and suggestions for new sessions) they wrote: "We learned more of _____(Hearing Impaired Child) feelings. _____(Hearing Impaired Child) was more open with her feelings. We realized how easy it is to understand her if we are calm and patient. If we do this everyday we can communicate better."

Interview With Family No. 3A

The interview with the family was consistent with their positive response on the comment sheets. As aforementioned the mother thought rule No.6 (No interruptions, probing, put downs) was most difficult. The hearing impaired child said that the repetition rule No. 4 was the most difficult and the father said that rule No.1 (Bring yourself to the session and nothing else) was the hardest. He further explained that just getting started and motivated was the most difficult portion.

Each family member appeared to enjoy session N. 5 (Guess a sentence with no signs or voice). They were all confused with No. 8 where one person leaves the room, and they suggested that it should be replaced.

The father noted that he was now considering the purchase of a decoder (captioned T.V.) . In addition he said that he was surprised at how well his child could perform. The hearing impaired child stated "I think the program is more helping me understand about what's going on about hearing impaired kids, and what's going on with normal people."

Family Environment Scale No. 3A

As can be seen in Figure 11, the pre-post test profiles revealed both consistencies and inconsistenscies with regards to the video ratings. The family unit and the child increased their subscale score on 'Independence' by 1.7 and 1.3 s.d. respectively. This indicates an increased perception of the extent to which family members are encouraged to be assertive and make their own decisions. The hearing impaired child increased her' Control' subscale score by 1.8. s.d.'s indicating an increased perception of the extent to which the family is organized hierarchically and maintains rigid rules.

Inconsistent with the videotapes and the comments was the decreased subscale score 'Expressiveness' for both the child and the family unit (.8 and 2.4 s.d. respectively). There was no change in the Family Incongruence score which indicates no difference in their level of agreement.

Matched Comparison Family No. 3

Family No. 3 did not complete the program. The mother

volunteered and left her address during the registration period. Subsequently, the family moved and left no address or phone number with the writer or the school which the child attended. There were no additional volunteers to take the place of this family. Thus there is no Comparison group for Experimental Family No. 3A.

Discussion of Experimental Family No. 3A

There were some patterns of change demonstrated by the video taped measure and the family comments. The increase in Awareness and Mastery skills is consistent with their comments and interview.

The increase in the childs' interruptions may have both positive and negative implications: 1) Interruptions disrupt the flow of communication; 2) In this case interruptions may have helped the child clarify what was being said which could improve the quality of communication in the long run.

The family environment remained unchanged in most areas. The changes that did occur were scattered and inconsistent. Surprisingly, they showed less expressiveness, increased independence and increased parental control in the childs' perception.

Experimental Family 4A (2 Parent Family)

Ratings for Family Communication Skills

As can be seen in Figure No. 12 the family unit increased their Awareness skills by 10 points; Increased their

Mastery skills by 28 points; And demonstrated no change in ther Social Interaction skills. A closer look (Fig. 13) reveals that the parents influenced the increase in Awareness skills; t he mother by 10 points and the father by 7 points, the child decreasing 7 points. All of the family members influenced the increase in Mastery skills, although the fathers'influence was the greatest. The father increased his score by 24 points, the mother by 2 points and the child by 2 points.

The raters noted that during the post test, the father took only 2 out of his expected 3 turns, indicating both the inability to follow directions precisely and a lowering of the Awareness score.

No. 4A Parent's Written Comments of the Sessions

The initial comment concerned that father's difficulty using sign language: "It seems to help Daddy learn more signs he should be using everyday. It teaches us to be patient and_____(Hearing Impaired CHild) to slow down and use good speech."

A majority of the comments were reflective of the intended issues written for the program. For example, with regards to activity No. 2 (Watching T.V. with no sound) they wrote: "It was very hard for us to understand the conversation around him." With regards to session No. 6 (Discussing a relative who was very sad) they wrote: This was a very sad session. We discussed how Grandpa died. We learned some

things that _____(Hearing Impaired Child) understood that we didn't think of."

Interview With Family No. 4A

The family agreed that on the whole, the program was not difficult. They all felt that they have always communicated well with their child. This is reflected in their high scores on the pretest. The father noted that he was interested in the knowledge that his child had, and how well his child could speak when he was trying..." It helped him understand how hard it is for me...I should know more sign language." He noted that he enjoyed the program and stated : "The pages hit different areas of life- they brought out different ideas and viewpoints."

The mother described how hard it was to find the time to complete the activities. She remarked that if they skipped one night it seemed harder to get back into it. When further questioned. both parents recommended that the program be competed in a regimented fashion everynight. When asked if they would recommend this program to others they said: "It would help younger kids with parents starting to deal with this to teach them how to communicate."

The child said that he enjoyed the sounds activity (No.3) the best, and also liked the acting out one (No.5). The only other comment he made was " had fun ".

Family Environment Scale No. 4A

As can be seen in Figure No. 14, the pre-post test profiles revealed that both family unit and child increased their subscale score 'Independence' (1.6 and 2.6 s.d.'s respectively). This indicates an increased perception of the extent to which family members are encouraged to be assertive and make their own decisions. The child increased his subscale score 'Conflict' by 2.8 s.d. indicating an increased perception of the extent to which the family expresses anger and aggression.

The child also increased his subscale score 'Organization' by 2 s.d. indicating an increased perception of the extent to which the family is hierarchically structured and maintains rigid rules. The Family Incongruence Score decreased by 8 points indicating more agreement among family members.

Matched Comparison Family No. 4 (Two Parent Family)
Ratings of Family Communication Skills

As can be seen in Figure 12, the family unit showed virtually no change in Awareness skills, decreasing 1 point; Very little increase in Mastery skills, gaining 2 points; And an increase in the Social Interaction score of 4 points, demonstrating more interruptions. A closer look (Fig. 13) reveals that the child and her father decreased slightly in their Awareness skills (2 points and 1 point respectively) and the mother increased her Awareness skills slightly (2 points). The child influenced the small increase in Mastery skills

(3 points) while the mother decreased by 1 point and the father showed no change.

The largest increase in interruptions as reflected by the increased Social Interaction score was by the child (3 points).

No. 4 Parents Written Comments for the Sessions

The family did not have any written comments for the sessions available. They indicated that they had written comments about the sessions which primarily included the date and time of the session. However they could not be located. This lost comment sheet is indicative of the family's organization throughout the program. They were difficult to reach, frequently cancelled their appointments, took three times as long to complete the activites which were done while discussing other things.

Interview With Family No. 4

The parents noted that because of their travel schedule for their job. they did not have time to put energy into the sessions. They discussed things when they could but did not actually tell their child that they were having 'sessions' to talk about something. They noted that some of the topics such as reading books was not interesting for their child so they changed the discussion to center around newspaper articles.

They did indicate that they were aware of communicating

more since the program began due to their awareness of trying to complete the program. There was no report of differences in their communication methods or patterns. The observer noted a lack of adeptness at signing within the family. When asked about this the parents commented that if they had known about hearing impairments when their child was young they would have learned to sign. Presently they said they were too busy and too old to learn.

Family Environment Scale No. 4

As can be seen in Figure No. 15, the pre-post test profiles revealed that the family decreased their 'Cohesiveness' score; The family by 1.3 s.d and the child by 1.2 s.d. This indicates a decreased perception of the extent to which family members are concerned and committed to the family and the degree of support and help that is expressed.

The family decreased their score on the 'Expressiveness' subscale , the family by 1.2 s.d and the child by 1.2 s.d. This indicates a decreased perception of the extent to which family members are encouraged to act openly and express their feelings. The child increased her Independence score by 1.3 s.d. indicating an increased perception of the extent to which family members are encouraged to be assertive and make their own decisions. The child decreased her subscale score 'Moral Religious Emphasis' by 1.5 s.d. indicating a decreased perception of the extent to which the family actively discusses and emphasizes ethical and religious

issues.

The family Incongruence Score decreased slightly, by 4 points indicating more agreement among family members.

Discussion of Experimental Family 4A and Comparison Family No. 4

The Experimental family appears to have responded quite positively to the program. With regards to communication, the family increased both their Mastery and Awareness skills. The father had the largest improvement, increasing 24 points in his Mastery skills. This coincides with the comments made and the interview which indicated a struggle and improvement in literally learning how to sign and read sign language

The only negative change in communication skills was the child's decrease in Awareness skills by 7 points. It is difficult to explain the cause of this result. Perhaps due to the increase in the number of things being said as measured by Mastery skills, the child was unable to recall or repeat the growing number of stated items.

The family environment also showed positive growth. There was a decrease in 'Conflict', an increase in 'Independence' primarily perceived by the child. The child also perceived more organization within the family. The comments and interview reflected positive experiences and an increased awareness of the issues concerning the hearing impaired member.

The Comparison group appeared to show very little change

in their communication skills. The largest change which occured was a 3 point increase in the child's Mastery skills (moving from a score of 3 to a score of 6). However it is difficult to evaluate this families' reactions to discussion sessions due to their lack of organized and regular participation. With regards to the family environment, several notable changes did occur. They perceived less cohesiveness and less expressiveness. The child perceived more independence and less moral religious emphasis. It is difficult to explain why this occured particularly because there was no or little change in the family patterns as a result of this study. Perhaps the inability to cooperate in the request to sit down and have discussion sessions brought to their awareness the knowledge that family cohesiveness and expressiveness was limited.

Family Environment, Summary and Conclusions

With regards to hypothesis A: Family Environment will change following the treatment program, the following patterns of changes in the various subscales are described below. Tables 3 and 4 include the summary of the FES profiles for the Family unit and child, respectively. One must keep in mind that 'change' refers to any positive (+) or negative (-) change of one or moere standard deviations, with a (0) showing no changes. There were no changes of more than 3 standard deviations and the majority of changes were no more that 1 standard deviation. This type of analysis was

TABLE 3 - Summary of Changes in FES for Families

\+ indicates a positive change 1 standard deviation
\- indicates a negative change 1 standard deviation

EXPERIMENTAL GROUP

Family No.	C	EX	Con	Ind	AO	ICO	ARO	Mre	Org	Ctl
1A	-	(+)		(+)			(+)		(-)	-
2A					(+)		(-)			
3A				+						
4A				+		-				

COMPARISON GROUP

Family No.	C	EX	Con	Ind	AO	ICO	ARO	Mre	Org	Ctl
1	- (-)			(+)		-	-		(-)	
2	-	(+)					(+)			
3	NO FAMILY									
4	-	-			(+)					

C = Cohesion
Ex = Expressiveness
Con = Conflict
Ind = Independence
AO = Achievement Orientation
ICO = Intellectual-Cultural Orientation
ARO = Active Recreational Orientation
Mre = Moral Religious Emphasis
Org = Organization
Ctl = Control

TABLE 3 - (cont.) Summary of Changes in FES for Families (totals)

\+ indicates a positive change 1 standard deviation
\- indicates a negative change 1 standard deviation
0 indicates no change

PRE-POST

		C	EX	Con	Ind	AO	ICO	ARO	Mre	Org	Ctl
Experimental	+				50%						
	-	25%					25%				25%
	0	75%	100%	100%	50%	100%	75%	100%	100%	100%	75%
Comparison	+										
	-	100%	33%				33%	33%			
	0		67%	100%	100%	100%	67%	67%	100%	100%	100%

POST FOLLOW-UP

		C	EX	Con	Ind	AO	ICO	ARO	Mre	Org	Ctl
Experimental	+		25%		25%	25%		25%			
	-							25%		25%	
	0	100%	75%	100%	75%	75%	100%	50%	100%	75%	100%
Comparison	+				33%	67%					
	-	33%						33%		33%	
	0	67%	100%	100%	67%	33%	100%	67%	100%	67%	100%

C = Cohesion. Ctl = Control
EX = Expressiveness
Con = Conflict
Ind = Independence
AO = Achievement Orientation
ICO = Intellectual-Cultural Orientation
ARO = Active Recreational Orientation
Mre = Moral Religious Emphasis; Org = Organization

Exp. Group	Comp. Group
Child N = 4	Child = 3
Mother N = 4	Mother = 3
Father N = 3	Father = 1
Family N = 4	Family = 3

TABLE 4 - Summary of Changes in FES for CHILD

\+ indicates a positive change 1 standard deviation
\- indicates a negative change 1 standard deviation
( ) indicates changes on FOLLOW-UP testing

EXPERIMENTAL GROUP

Child No.	C	EX	Con	Ind	AO	ICO	ARO	Mre	Org	Ctl
1A	+	- (+)	- (+)	(+)		(-)	(+)		(-)	- (+)
2A	(+)	+ (-)	(-)		(+)	+	+ (-)		- (+)	+ (-)
3A		- (+)	(-)			+	+			+ (-)
4A	(+)	(-)	-	+	(+)	(+)			+	+ (+)

COMPARISON GROUP

Child No.	C	EX	Con	Ind	AO	ICO	ARO	Mre	Org	Ctl
1	(-)	(-)	(+)	- (+)	(+)	-	-			-
2	- (+)	(+)	(+)	(-)	(-)	(+)	(+)		- (-)	-
3										
4	- (+)	-		+			+ (+)	-	- (+)	- (-)

C = Cohesion
Ex = Expressiveness
Con = Conflict
Ind = Independence
AO = Achievement Orientation
ICO = Intellectual-Cultural Orientation
ARO = Active Recreational Orientation
Mre = Moral Religious Emphasis
Org = Organization
Ctl = Control

TABLE 4 - (cont.) Summary of Changes in FES for CHILD (totals)

\+ indicates a positive change 1 standard deviation
\- indicates a negative change 1 standard deviation
0 indicates no changes

PRE-POST

		C	EX	Con	Ind	AO	ICO	ARO	Mre	Org	Ctl
Experi-mental	+	25%	25%		25%		50%	50%		25%	75%
	-		50%	50%						25%	25%
	0	75%	25%	50%	75%	100%	50%	50%	100%	50%	
Compar-ison	+				33%			33%			
	-	67%	33%		67%		33%	33%	33%	67%	100%
	0	33%	67%	100%		100%	67%	33%	67%	33%	

POST FOLLOW-UP

		C	EX	Con	Ind	AO	ICO	ARO	Mre	Org	Ctl
Experi-Mental	+	50%	50%	25%	25%	50%	25%	25%		25%	50%
	-		50%	50%			25%	25%		25%	50%
	0	50%		25%	75%	50%	50%	50%	100%	50%	
Compar-ison	+	67%	33%	67%	33%	33%	33%	67%		33%	
	-	33%	33%		33%	33%				33%	33%
	0		33%	33%	33%	33%	67%	33%	100%	33%	67%

C = Cohesion, Ctl = Control
EX = Expressiveness
Con = Conflict
Ind = Independence
AO = Achievement Orientation
ICO = Intellectual-Cultural Orientation
ARO = Active Recreational Orientation
Mre = Moral Religious Emphasis
Org = Organization

Exp. Group	Comp. Group
Child N = 4	Child N = 3
Mother N = 4	Mother N = 3
Father N = 3	Father N = 1
Family N = 4	Family N = 3

pursued due to the small number of families involved and the difficulty using inferential statistics with such a small N.

Cohesion (The extent to which family members are concerned and committed to the family and the degree to which family members are helpful and supportive of each other)

As can be seen in Table 3, 25% of the Experimental family units perceived a decrease in 'Cohesiveness' versus 100% of the Comparison family units who perceived a decrease. Twenty five percent of the Experimental children perceived an increase in the family's 'Cohesiveness' versus 67% of the Comparison children who perceived a decrease in this area (Table 4).

Thus we can say that some children who participated in the program increased their perception of family cohesiveness. However all of the families who participated in the less structured discussion perceived less cohesivenss; and the majority of families who participated in the program saw no change in family cohesiveness.

Expressiveness(The extent to which family members are allowed and encouraged to act openly and to express their feelings directly)

As can be seen in Table 3, none of the family units perceived positive changes in 'Expressiveness' . One hundred percent of the Experimental families saw no change versus

67% of the Comparison families pereceiving no change, with the remaining family perceiving a negative change. As can be seen in Table 4, 25% of the Experimental children saw an increase in their family's expressiveness versus 0% perceived by the Comparison children. Fifty percent of the Experimental children and 33% of the Comparison children saw a decrease in expressiveness with the remaining children perceiving no change.

Thus the program had very little to no positive effect in the families perceptions of expressiveness. In addition 10 unstructured discussion sessions experienced by the Comparison group appear to have decreased their perceptions of family expressiveness.

Conflict(The extent to which the opwn expression of anger and aggression and generally conflictual interactions are characteristic of the family)

One hundred percent of both groups of family units perceived no change in amount of conflict within their families (Table 3). However 50% of the Experimental children perceived less conflict versus 100% of the Comparison children who perceived no change (Table 4).

Thus we can say that some of the children who experienced the program decreased their perception of conflict within the family.

Independence(The extent to which family members are

encouraged to be assertive, self-sufficient, to make their own decisions and to think things out for themselves)

As can be seen in Table 3, 50% of the Experimental family units perceived an increased amount of independence within the family versus 0% of the Comparison families in which no change was perceived. As can be seen in Table 4, 25% of the Experimental children increased their perception of independence within the family with the remaining children perceiving no change. Thirty three percent of the Comparison children saw an increase in independence and 67% saw no change.

Thus the treatment program appears to increase some families perceptions of independence which was also true for one Experimental child. Sixty seven percent of the Comparison children perceived decreased independence while their family units perceived no change at all.

Achievement Orientation (The extent to which different types of activities are cast into an achievement oriented or competitive framework)

As can be seen in Tables 3 and 4, there were no changes perceived by family units or children with regards to achievement orientation. Thus the program had no effect on this perception, nor did loosely structured discussions.

Intellectual Cultural Orientation (The extent to which the family is concerned about political, social, intellectual

and cultural activities)

As can be seen in Table 3, 25% of the Experimental family units perceived a decrease in this area as did 33% of the Comparison families. The remaining families in both groups perceived no change. Fifty percent of the Experimental children perceived an increase in this area versus 0% of the Comparison children, 33% of whom saw a decrease in this area (Table 4).

Thus the program experience appears to have increased 50% of the children's perceptions of Intellectual Cultural Orientations. No other major effects were observed.

Active Recreational Orientation(The extent to which the family participates actively in various kinds of recreational and sporting activities)

As can be seen in Table 3, 100% of the Experimental family units perceived no change in this area as did 67% of the Comparison family units. One Comparison family perceived less activity and recreation. As can be seen in Table 4, 50% of the Experimental children perceived an increase in this area with the remaining 50% perceiving no change. The Comparison children were equally divided between positive, negative and no change in their perceptions.

Moral Religious Emphasis(The extent to which the family actively discusses and emphasizes ethical and religious

issues and values)

As predicted when choosing this measure, this subtest was not related to the program. One hundred percent of both Experimental family units and Comparison family units showed no perceived changes in this area (Table 3). Similarly 100% of the Experimental children and 67% of the Comparison children perceived no change with the remaining 33% perceiving a decrease in this area (Table 4).

Thus the program and the loosely structured discussions did not affect the children or family's perception of moral religious emphasis.

Organization(Measures how important order and organization is in the family in terms of structuring the family activities, financial planning and explicitness and clarity in regard to family rules and responsibilities)

As can be seen in Table 3, there were no changes perceived by either group of family units in this area. Twenty five percent of the Experimental children perceived an increase in organization, 25% perceived a decrease, and the majority (50%) saw no change. Sixty seven percent of the Comparison children perceived a decrease in organization with the remaining child (33%) perceiving no change (Table 4).

Thus there appear to be no overall changes in perception of organization as a result of the program. However a majority of the Comparison children perceived less organization

after 10 loosely structured discussions.

Control(Assesses the extent to which the family is organized in a hierarchical manner, the rigidity of family rules and the procedures and the extent to which family members order each other around)

As can be seen in Table 3, a majority of both groups of family units perceived no change in this area. Seventy five percent of the Experimental children perceived more control with the remaining 25% perceiving less control. In contrast 100% of the Comparison children perceived less control (Table 4).

Thus the program appears to have increased the children's perceptions of control within the family. In addition unstructured family discussions appear to have decreased children's perceptions of control within the family.

Family Incongruence Scores

There were no clear patterns between the Experimental and Control families with regards to their Incongruence scores. Two of the Comparison families decreased their scores and one increased its' score. Fifty percent of the Experimental families decreased their scores and the other 50% showed no change.

Thus the families appear to have increased the amount of agreement (indicated by a decreased score) in half to two thirds of the cases in both groups following the

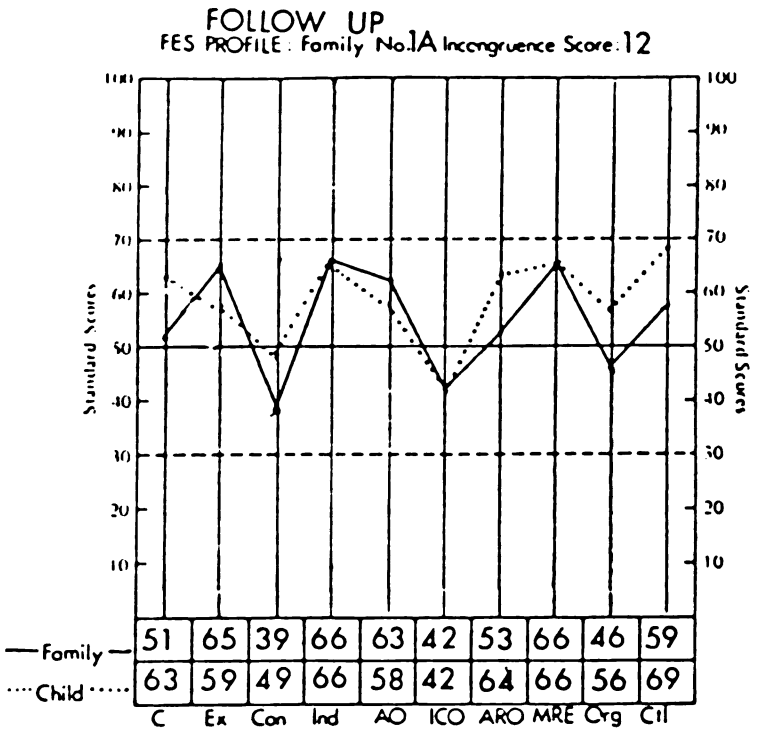
program or loosely structured discussions. Although the treatment cannot be distinquished from the comparison with regards to family agreement, it appears that any form of regular discussion may increase the amount of agreement among family members in some cases.

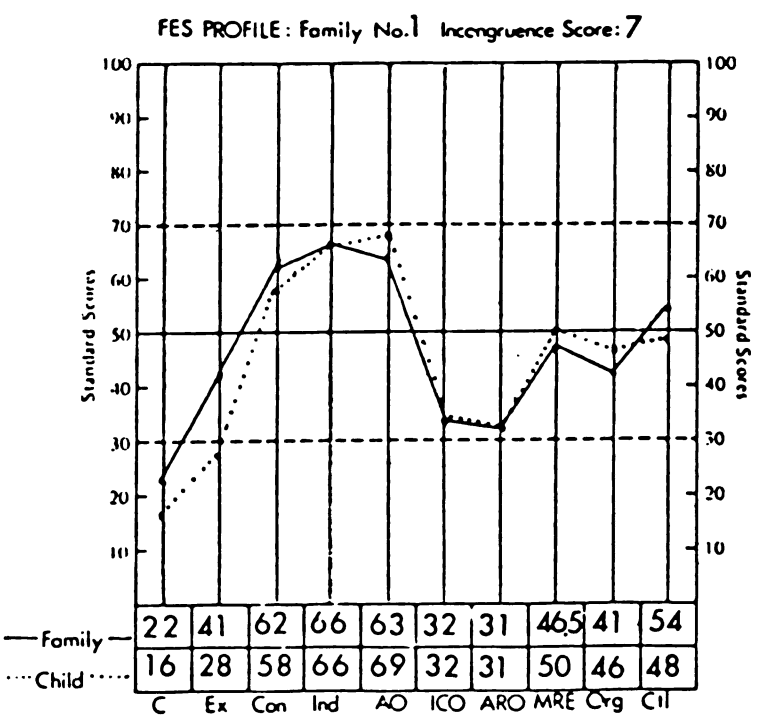
Post Test-Follow Up Testing

The post test follow up testing was investigated in order to observe any potential changes in the various subscales 3-4 weeks after the program's completion. Tables 3 and 4 include a summary of the family unit and child FES profiles, respectively. One must keep in mind that 'change' refers to any positive (+) or negative (-) change equal to or greater than one standard deviation. There were no changes of more than 3 standard deviations and the majority of changes were no more than one standard deviation. This type of analysis was pursued due to the small number of families involved, and the difficulty of using inferential statistics with such a small N.(Figures 16-19)

Cohesion (The extent to which family members are concerned and committed to the family and the degree to which family members are helpful and supportive of each other)

As can be seen in Table 3, all but one family showed no change 3-4 weeks following the post testing. One Comparison family unit perceived a decrease in family cohesion. Fifty percent of the Experimental children increased their





C – Cohesion
Ex–Expressiveness
Con–Conflict
Ind – Independence
AO – Achievement Orientation
ICO – Intellectual Cultural Orientation
ARO – Active Recreational Orientation
MRE – Moral Religious Emphasis
Org – Organization
Ctl – Control

Figure 16: Follow Up FES Profiles for Experimental and Comparison Family Units 1A and 1

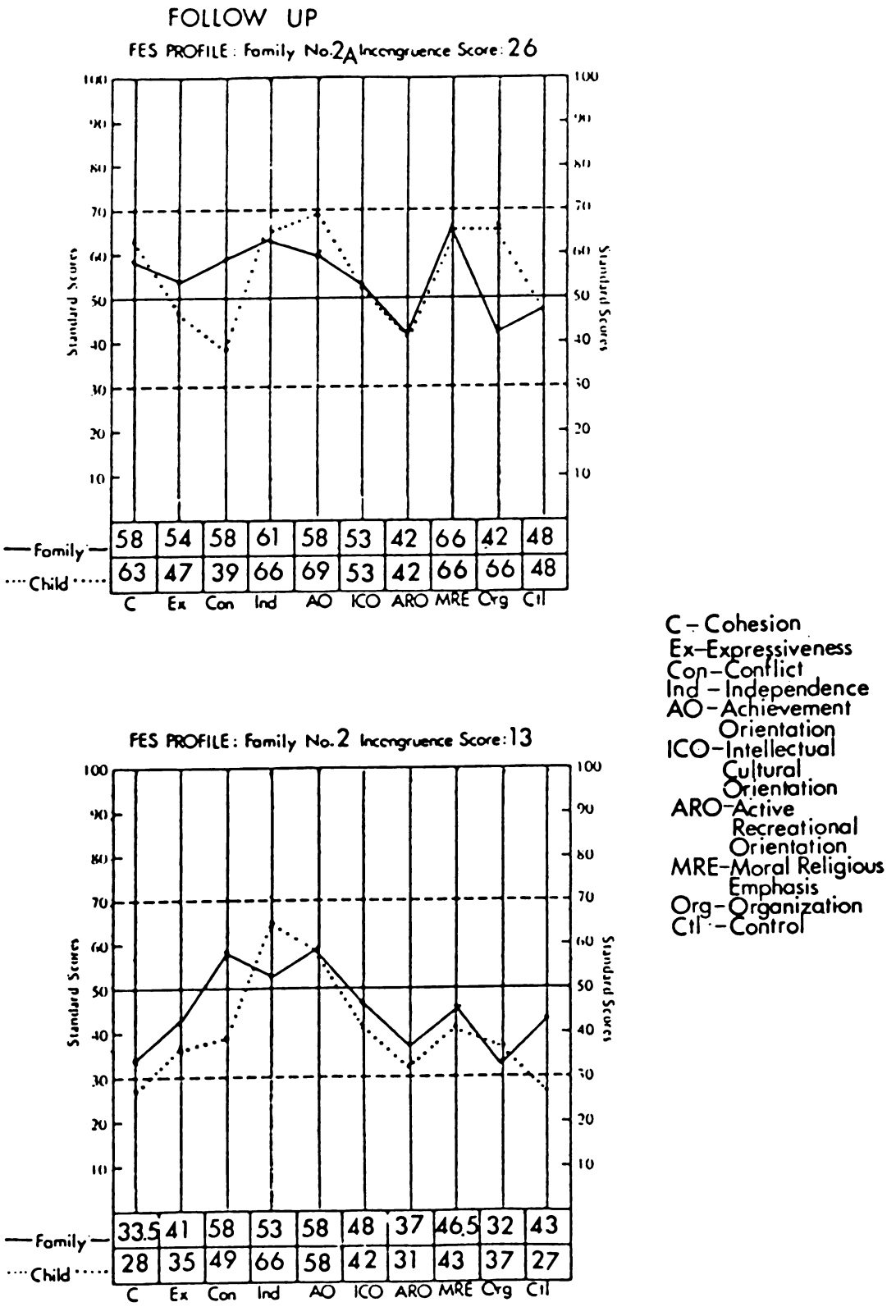


Figure 17: Follow Up FES Profiles for Experimental and Comparison Family Units 2A and 2

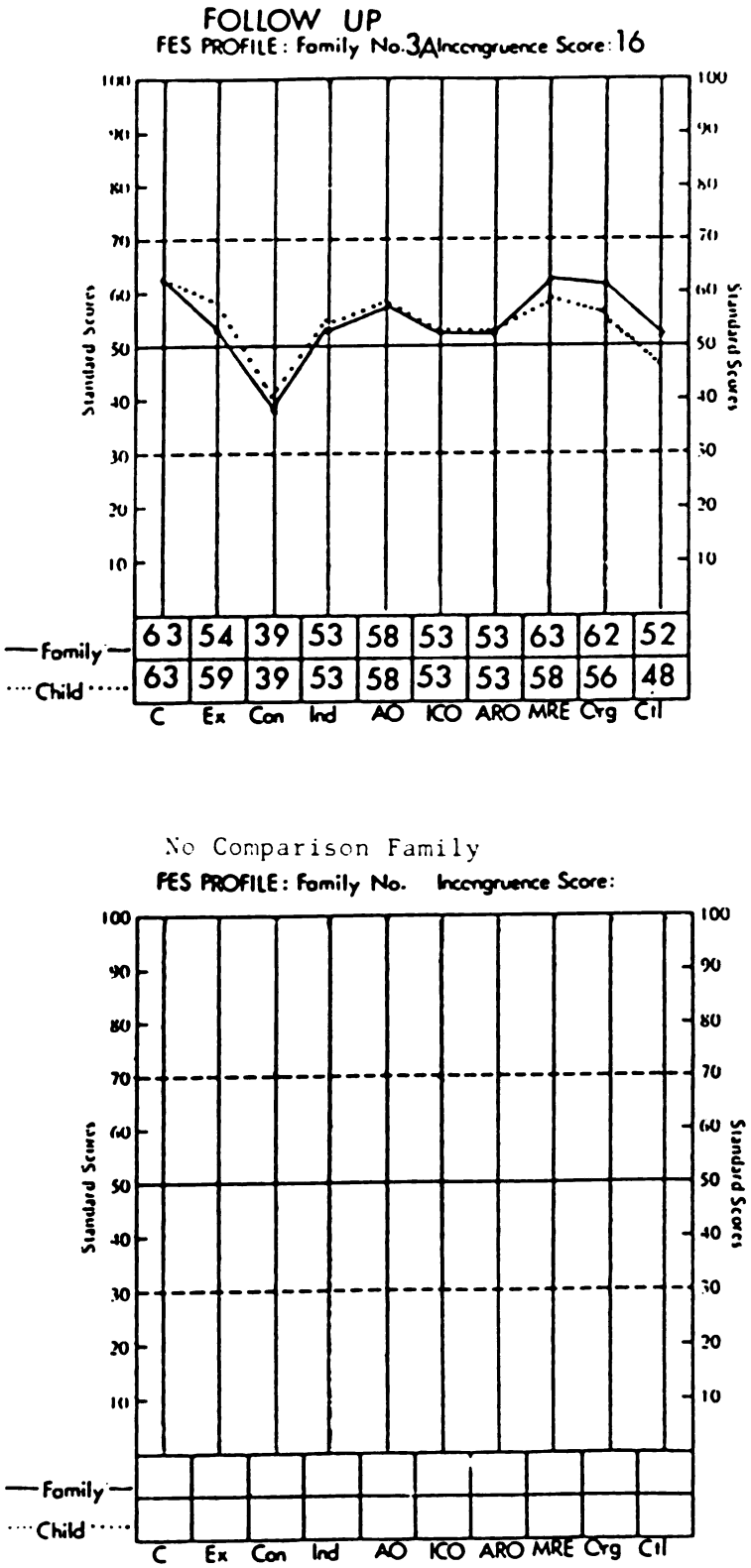


Figure 18: Follow Up FES Profile for Experimental Family Unit 3A

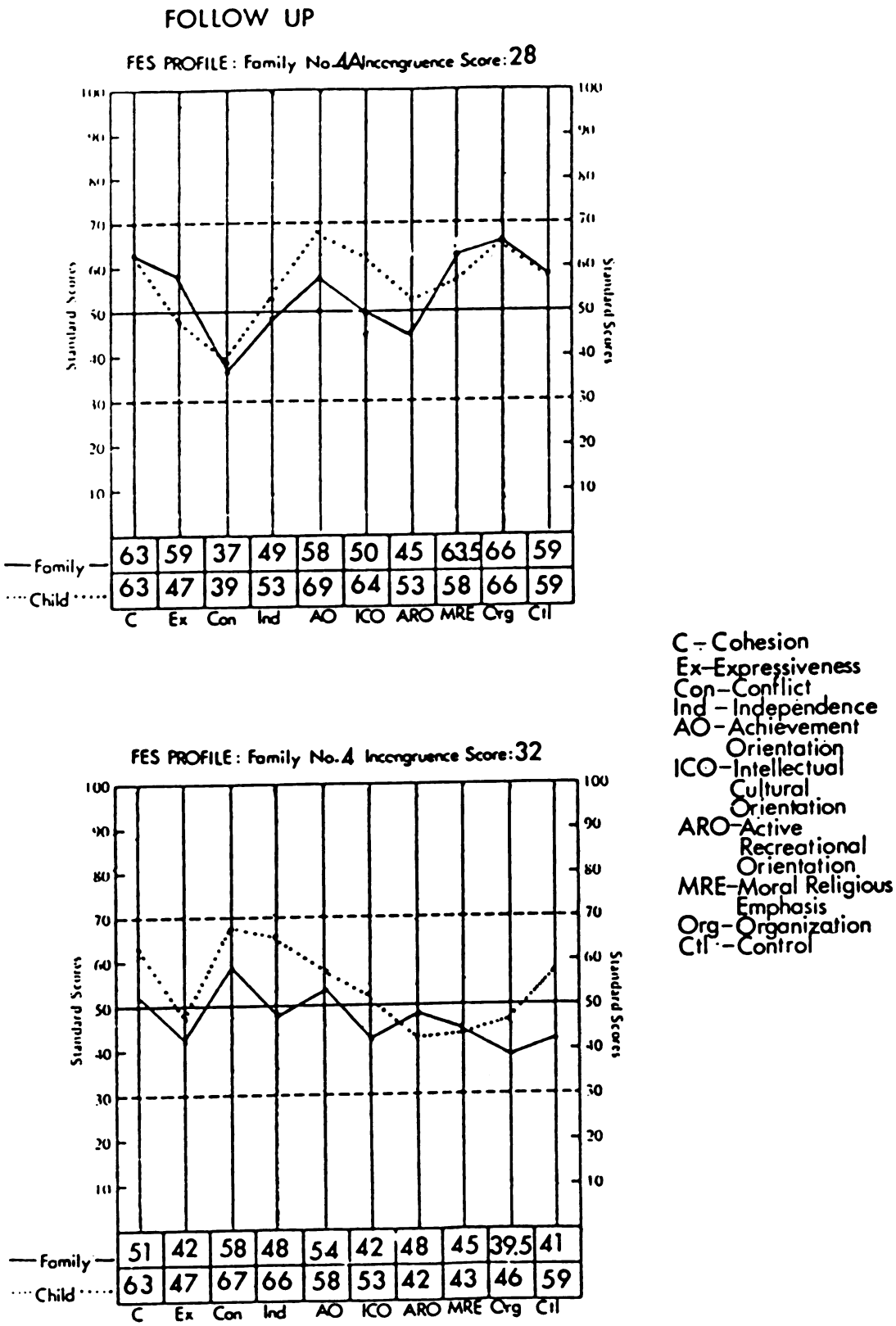


Figure 19: Follow Up FES Profile for Experimental and Comparison Family Units 4A and 4

perception of cohesiveness as did 67% of the Comparison children (Table 4).

Thus the program appears to have no long term effects on family units perceptions of cohesiveness. In addition the decrease originally perceived by the Comparison family units (pre-post testing_ remained the same 3-4 weeks later. The only other major change was that a majority (67%) of the Comparison children increased their perception of cohesiveness 3-4 weeks after the loosely structured discussions were completed.

Expressiveness (The extent to which family members are allowed and encouraged to act openly and to express their feelings directly)

As can be seen in Table 3, the majority of both groups of family units continued to see no change in this area. The Experimental children showed no discernible patterns (Table 4). Fifty percent of the children increased their perception of expressiveness and 50% decreased their perceptions. The Comparison children were equally split between no change, increased perception and decreased perceptions.

Thus 3-4 weeks following the program a majority of the families in both groups were still perceiving no changes in this area and the children in both groups showed no patterns in their perceptions regarding expressiveness.

Conflict (The extent to which open expressions of anger and

aggression and generally conflictual interaction are characteristic of the family)

As can be seen in Table 3, 100% of both Experimental and Comparison family units continued to see no change in this area. As can be seen in Table 5, 50% of the Experimental children decreased their perception of conflict, 25% increased their perception and 25% showed no change. Sixty seven percent of the Comparison children increased their perception of conflict and 33% perceived no change.

Thus 3-4 weeks preceeding the program no long term effects appeared for the family units, but a majority of the Experimental children (50%) continued to decrease their perceptions of conflict. Three to four weeks following the loosely structured discussions the Comparison family units continued to see no change in their perceptions but the Comparison children (67%) increased their perception of conflict within the family.

Independence (The extent to which family members are encouraged to be assertive, self sufficient, to make their own decisions and to think things out for themselves)

As can be seen in Table 3, both groups of family units showed no change in their perception of independence 3-4 weeks after their experiences. The Experimental children continued to perceive no change in their perceptions (75%) and the Comparison children were split between increased, decreased and no change in their perceptions (Table 4).

Thus 3-4 weeks following the program the majority of family units and children perceived no change in their perceptions of independence. Similarly the majority of Comparison family units continued to see no change, and the Comparison children were eqully split in their perceptions indicating no apparent patterns of change.

Achievement Orientation (The extent to which different types of activities are cast into an achievement oriented or competitive framework)

As can be seen in Table 3, the majority of Experimental family units (75%) perceived no change in their perceptions of achievement orientation. The Comparison family units perceived an increased achievement orientation (67%) which indicates a change from their pre-post testing in which 100% saw no change in this area. Fifty percent of the Experimental children perceived an increase in this area, the remaining 50% perceiving no change. The Comparison children were equally split between increased, decreased and no change in their perceptions.

Thus 3-4 weeks following the program one half of the children perceived an increase in their perception of achievement orientation while the majority of their family's continued to see no change. Three to four weeks following the loosely structured discussions the Comparison family units perceived an increase in independence while the children's perception reflect no pattern of change.

Intellectual Cultural Orientation (The extent to which the family is concerned about political, social, intellectual and cultural activities)

As can be seen in Table 3, 100% of both groups of family units perceived no change in this area as did the majority of families during the pre-post testing. The majority of both Experimental and Comparison children perceived no change in this area although there was some scatter in their responses (Table 4).

Thus 3-4 weeks following the program or loosely structured discussions, the majority of all families continued to perceive no change in this area. Similarly the majority of children in both groups perceived no change although their response patterns are not quite as clear.

Active Recreational Orientation (The extent to which the family participated actively in various kinds of recreational and sporting activities)

As can be seen in Table 3, the family units of both groups showed no discernible patterns of change 3-4 weeks after their respective programs. The majority (50%) of Experimental children perceived no change in this area while the majority of Comparison children perceived an increase in their active recreational orientation (Table 4).

Thus 3-4 weeks following the program the majority (50%) of Experimental family units and children perceived no change. The only perceived change was by the children using

loosely structured discussions. These children perceived an increase in active recreation 3-4 weeks afterwards.

Moral Religious Emphasis (The extent to which the family actively discusses and emphasizes ethical and religious issues and values)

As predicted when deciding to use the FES measure, family and child remained stable in their perceptions of this area. Thus the program and the loosely structured discussions had no effect in this area of family environment.

Organization (Measures how important order and organization is in the family in terms of structuring the family activities, financial planning and explicitness and clarity in regard to family rules and responsibilities)

As can be seen in Table 3, the majority of both groups of family units perceived no change in this area. The majority (50%) of Experimental children continued to perceive no change in their perceptions of organization (Table 4). The Comparison children were equally split between an increased, decreased and unchanged perception in this area.

Thus 3-4 weeks following the program, neither the Experimental family units nor the Experimental children perceived change in this area. This was true for the Comparison family units as well, while the Comparison children showed no distinguishable pattern in their responses.

Control (Assesses the extent to which the family is organized in a hierarchical manner, the rigidity of family rules and procedures and the extent to which family members order each other around)

As can be seen in Table 3, 100% of both groups of families perceived no change in their perceptions of control within the faily. Fifty percent of the Experimental children perceived an increase in control and 50% perceived a decrease, thus revealing no discernible patterns of response. The majority of Comparison children (67%) perceived no change in the follow up testing, thus maintaining their decreased perception of control from pre to post testing (Table 4).

Thus 3-4 weeks following the program , the Experimental family units continued to perceive no change while the children showed no discernible pattern of response. Following the loosely structured discussions, the Comparison family units continued to perceive no change while the children perceived no change, maintaining their decreased perceptions of family control.

Family Incongruence Score for Post-Follow Up Testing

The Comparison families continued their original patterns of change in the level of agreement among family members. Thirty three percent of the families increased their level of agreement, 33% decreased their level of agreement and 33% showed no change. However in the Experimental families 50% who had previously increased the amount of agreement

reversed their trends, resuming their original level of agreement. The remaining 50% was split in their direction of change.

Thus although directly following the program the Experimental families (50%) increased their level of agreement, 3-4 weeks later their old patterns were resumed, suggesting no long term effects. The Comparison group on the other hand continued their scattered patterns 3-4 weeks later indicating that either: The loosely structured discussions did have a long term effect which was different for each family; Or the discussions had no effect and the patterns within the family were due to other causes.

Family Communication Skills, Summary and Conclusions

With regards to hypothesis B: Family communication will change following the treatment program, the pattern of changes in communication skills are described below. Table 5 includes a summary of changes in communication skills. One must keep in mind that direction of change rather than quantitative amounts of change were analyzed. Thus one family may have increased by 2 points and another by 20 points and bothe received a plus (+). This type of analysis was pursued due to the small number of families involved and the difficulty using inferential and/or nonparamentric statistics with such a small N.

In addition the families were matched for existing characteristics (SES, degree of hearing loss, age, IQ, type

TABLE 5 - Summary of Changes in Communication Skills

\+ indicates any increase in score
\- indicates any decrease in score

Child

	A	M	SI	
1A	+	-		
2A	+	-		
3A	+	+		
4A	-	+		Experimental Group
1	-	+	+	Comparison Group
2	-	-		
3				
4	-	+	+	

Mother

	A	M	SI	
1A	+	+		
2A	+	-		
3A	+	+	-	
4A	+	+		Experimental Group
1	-	+	+	Comparison Group
2	-	-		
3				
4	+	-	+	

Father

	A	M	SI	
1A				
2A	-	-	-	
3A	-	+		
4A	+	+		Experimental Group
1				Comparison Group
2				
3				
4	-		-	

Family

	A	M	SI	
1A	+	-		
2A		-	-	
3A	+	+	+	
4A	+	+		Experimental Group
1	-	+	+	Comparison Group
2	-	-		
3				
4	-	+	+	

TABLE 5 - (cont.) Summary of Changes in Communication Skills

TOTALS

Awareness	Experimental Group			Comparison Group		
	+	-	0	+	-	0
Child	75%	25%			100%	
Mother	100%			33%	67%	
Father	33%	67%			100%	
Family	75%		25%		100%	

Mastery						
	+	-	0	+	-	0
Child	50%	50%		67%	33%	
Mother	75%	25%		33%	67%	
Father	67%	33%				100%
Family	50%	50%		67%	33%	

Social Interaction						
	+	-	0	+	-	0
Child			100%	67%		33%
Mother		25%	75%	67%		33%
Father		33%	67%		100%	
Family	25%	25%	50%	67%		33%

Experimental Group		Comparison Group	
Child	N = 4	Child	N = 3
Mother	N = 4	Mother	N = 3
Father	N = 3	Father	N = 1
Family	N = 4	Family	N = 3

of communication used at home) and not for pretest scores. Thus one family could have a score of 3 in Awareness during the pretest, a score of 6 on the post-test and actually have increased their skills 100%. Similarly another family could have an Awareness score of 60 on the pretest, and 75 on the post test and increased their score by 15 points but by a relatively smaller percentage in contrast to the aforementioned family.

Awareness (The ability to repeat or rephrase what another has said)

The Experimental group showed a much greater improvement in this skill than did the Comparison group. Seventy five percent of the children increased their score in the Experimental group while in the Comparison group 100% of the children decreased their score. Similarly 100% of the mothers increased their Awareness score versus 33% of the Comparison group, the other 67% decreased their score. The same pattern was found for the fathers in which 33% of the Experimental troup increased their scores and 0% of the Comparison group increased their scores. With regards to the entire family 75% of the Experimental group increased their score and 25% showed no change, while 100% of the Comparison group showed a decrease in their scores.

Mastery (The ability to label one's feelings or skills)

The Experimental group showed less positive change in

this area than did the Comparison group. However both groups were split in this skill, some showing positive and some showing negative changes. Fifty percent of the children showed improvement in this area in the Experimental group and 67% of the children in the Comparison group showed an increase . Seventy five percent of the mothers in the Experimental group showed an increase versus 33% of the Comparison group. Sixty seven percent of the Experimental fathers showed improvement versus 0% in the Comparison group (only one father showed no change in his score). With regards to the entire family, 50% of the Experimental group increased their score and 50% decreased their score; While 66% of the Comparison group increased their scores and 33% decreased their scores.

Thus we can say that for the mothers and fathers in the program, Mastery skills improved more than in the Comparison group. Yet for the children and Family unit, the Comparison group increased their skills to a slightly greater degree.

Social Interaction (Defined as put downs, attention breaks, interruptions)

An increase in Social Interaction points indicates an increase in negative behaviors. If one looks at the tables one can see that this area had the least degree of change, the largest being 5 points. In the Experimental group the children showed no change versus the Comparison children,

67% of whom increased their score indicating primarily an increase in the number of interruptions, the remaining 33% showed no change.

Twenty five percent of the Experimental mothers decreased their score by some amount with the remaining 75% unchanged. Sixty seven percent of the Comparison mothers increased their score with the remaining 33% unchanged. The Experimental fathers showed no change (67%) with 33% decreasing their scores. The one Comparison father decreased his score. The Experimental family units showed an overall increase in 25% of the families, a decrease in 25% and no change by the other 50% or two families. Two of the 3 Comparison families increased their scores while the other family showed no change.

Thus Social Interaction skills were slightly improved in the Experimental families while the Comparison families became worse with time.

CHAPTER 5: CONCLUSIONS AND DISCUSSION

The results of this study do indicate that the FWHIC program had beneficial effects for families with a hearing impaired child. In addition, the loosely structured discussions in which the Comparison families participated actually had more negative effects than positive ones in some respects.

For example, 75% of the families who partook in the program increased their Awareness skills and 100% of those involved in the loosely structured program actually decreased their scores. An improvement in Awareness skills seems extremely important. Once a family consistently demonstrates their abilities to listen and understand each other their ability and motivation to express themselves would also be reinforced.

This was seen in the parents improved Mastery skills. As frequently noted during the interviews, most parents involved in the FWHIC had realized the need to learn more sign language and to stop taking for granted their child's ability to comprehend what was being said. In contrast, the families who participated in the loosely structured program often noted that they were bored, tired or frustrated with the discussions. This is often the reaction of parents with a hearing impaired children. Their reaction was reflected in an actual decrease in Awareness skills with a very slight increase in Mastery skills.

Although the rules of conversation (Social Interaction) such as 'no interrupting, attention breaks or put downs' was not effected a great deal for any of the families, some important changes did occur. The families participating in loosely structured conversations began to interrupt each other more often. This compliments the fact that they also became less 'Aware' or poorer listeners. This might be explained by the fact that these families were required to sit and talk for ten evenings in a way which rarely occurs in families with a hearing impaired child. Thus, their normal difficulties with communication were intensified and their skills actually decreased over the ten sessions.

The FWHIC program provided a structured framework which facilitated the use of positive communicative dimensions. The importance of rules such as no interruptions or put downs, confidentiality and attention to the speaker were stressed and yet each family member was encouraged to freely express any of their feelings when it was their turn. In addition each person was asked to repeat what another had said which encouraged both clarity in the speaker and comprehension in the listener.

The ability to communicate is essential to the socialization process. Baumrind (1967) found that the most competent children were those in which parent-child communication included the use of reasoning to obtain compliance, as well as asking for the child's opinions and feelings. Hoffman's review of moral internalization (1977); Kagan's

discussion of the 'democratic' parent (1964) and Baumrind's research on 'authoritative' parents (1967) all stress the importance of facilitating socialization through reasoning and warmth.

The decrease in Awareness skills in the loosely structured discussion group may represent the frustration experienced by parents who literally don't know how to communicate. Without the guidelines provided in the program, old communication patterns were maintained. Schlesinger & Meadow (1972) found that deaf children with fewer communication skills appeared less happy, enjoyed interaction less, were less compliant and showed less pride in their mastery. Thus as Awareness skills increase (the ability to listen and reflect what another has said) Mastery skills (the ability to label ones own feelings and skills) might also improve. Following this logic we might expect that the Experimental children would improve their Mastery skills if the program was used on a long term basis. Their ability to label feelings and skills would improve following more experience with the words and concepts which were used by other family members. Simply stated, the more one listens and learns the more one has to say.

The comments and interviews were reflective of the families enthusiasm for the program. The most obvious indication came from the lengthy comments and interviews completed by those families participating in the FWHIC program. This was not true for the Comparison group whose responses were

brief and often shallow, only indicating time and date of discussion most of the time. The lengthy comments made by the Experimental families demonstrates the amount of thought and reaction which was evoked by the program. In addition when asked if they would recommend the program to others, all of them responded positively. Some of the most frequent points brought out by this group were: 1) We need to learn to sign better; 2) Our child needs to understand how hard it is for us to understand; 3) We've taken for granted that she understands; 4) We were surprised at what we learned about each others thoughts and feelings; 5) We should discuss things like this more often.

The parents using the FWHIC program were able to discover many of the problems experienced in family-child interaction described in the literature. Research regarding communication systems in family's with hearing impaired children consistently have found that: Parents have difficulty explaining their recent experiences; Parents cannot sign or effectively speak to their hearing impaired children and that most parents of a hearing impaired child know nothing of the multitude of difficulties faced by their child (Vernon 1974, Evans 1975, Schlesinger & Meadow 1972).

Measures of family environment were less easy to decipher. A major reason for this was the instrument itself which appears to be sensitive to the 'moment' of testing versus changes due primarily to the overall environment. The results indicate that the childrens perceptions

changed much more frequently than the family as a whole. This may be due to more flexibility in the childs thinking or more likely to poor and inconsistent comprehension of the questions being asked on the FES. The concept of poor comprehension may be further supported by the fact that not only did their perceptions change a great deal more than the families they changed most often without any pattern in what appeared to be a random fashion. For example, on the post-follow up test, the Comparison children increased their perception of 'Cohesiveness' (The extent to which the family is concerned about each other and helpful and supportive of each other) and 'Conflict' (The extent to which they express anger, aggression and have conflictual interactions). The increased perception of both of these areas does not appear to be logical.

Thus although the results from this measure are questionable, some interesting data was obtained. It was found that in support of the program, some children perceived greater cohesiveness, less conflict, improved intellectual cultural orientation, more active recreational orientation and more family control. In contrast, children in loosely structured discussions perceived less cohesiveness, less organization within the family and less family control. The majority of their perceptions were unchanged after their participation in the discussions.

The childrens' perceptions reflect a positive reaction to the program versus the Comparison children who actually

saw several aspects of their environment deteriorate. It is interesting to note the difference perceived by the groups regarding the issue of control. As was aforementioned, the children in this study were all pre-early adolescents. This stage of development is characteristically one in which parent-child conflict begins a quick ascent. Unexpectedly, many of the parents commented on their quickly developing conflicts with their children with regards to discipline (This occurred most often during the last follow up visit when many of the parents engaged in informal conversation). However those children participating in the FWHIC program perceived an increase in parental control, a direct contrast to the Comparison group. This may indicate an increased acceptance of parental authority and family rules.

Redd, Morris & Martin (1975) studied various disciplinary tactics and their effects on young children (recall that hearing impaired children are frequently socially immature). Adults who used disciplinary tactics such as positive reinforcement and verbal reprimands versus punishment or ignoring tactics were preferred by children as well as being an effective means of teaching children a new task. The use of punishment without providing reasons for it and behaving undemocratically can have negative effects. Children prefer not to interact with the punitive disciplinarian and their identification process will often be impeded (Kagan 1962, Hoffman 1977). In addition, a parent who does not communicate and reason during a disciplinary action but rather

physically punishes the child is providing an aggressive model (Bandura 1967).

Thus an increased perception of control and organization by the children in the program may reflect an improved method of communicating democratically whereby control became less of an issue; Similarly the amount of conflict within the family was perceived by these children as being decreased. The potential benefit of improved disciplinary tactics is particularly important in families with hearing impaired children in light of the finding that three times as many mothers of hearing impaired children used physical punishment than did mothers of hearing children (Schlesinger & Meadow 1972).

Fifty percent of the family units who participated in the FWHIC program perceived more independence within the family (versus 100% of the Comparison families who perceived no change). This may indicate an increased awareness on the part of the parents regarding their child's ability to make their own decisions and think things out for themselves. As aforementioned, overprotectiveness is common among parents with hearing impaired children. Schlesinger & Meadows (1972) found that mothers of hearing impaired children more often control their child's environment and overprotect their child.

Children who participated in the loosely structured program perceived less cohesiveness and less expressiveness. This might be attributed to their increased awareness of

difficulties within the family environment which were brought to the surface during the discussion sessions. One could conclude that in some respects the loosely structured sessions also had a beneficial effect, that is after participating in primarily unsuccessful discussions, these families increased their perception of environmental difficulties. Awareness of these difficulties might have a remediational effect in the long run.

Three to four weeks following the program or loosely structured discussions, follow -up FES testing was completed. This was done in order to determine if any long term effects could be observed. Children who participated in the program continued to increase their perceptions of Cohesiveness (25%) ; Achievement Orientation (50%); Expressiveness (25%); and decrease their perception of Conflict (50%) and of Control (25%). The majority of children perceived no change in the areas of Independence (75%); Intellectual Cultural Orientation (50%); Active Recreational Orientation (50%); Moral Religious Emphasis (100%) and Organization (50%).

Thus we can say that long term effects were observed in the childrens perceptions (not the family units) of how concerned and supportive family members are; the extent to which the family members are encouraged to express their feelings; and a decrease in the expression of anger and aggression. In addition 50% of these children perceived their activites as being cast into an achievement oriented or competitive framework. In contrast their perception of the

family's concern for political, social, intellectual and cultural activites decreased (25%) as did their perception of control (25%).

In most cases the result from the children in the program during the follow-up testing were more split versus grouped in patterns. More children perceived directional change (versus 'no change') in scattered directions. This may support the concept of poor comprehension or lack of interest in the test due to the fact that it was their third time using it. Test responses appeared to frequently be contradictory within one child's protocol.

The families in the program continued to perceive no change during the follow-up testing. As previously mentioned this may be due to more fixed ways of perceiving the family or better comprehension of the questions. It is important to note that their interviews and comments reflected perceptions of more change than was seen on the FES. This may be due to the fact that the FES questions were more general and were not sensitive to the types of environmental changes that they were perceiving.

The children using the loosely structured discussion perceived an increase in Cohesiveness (66%); Conflict (66%); and in Active Recreational Orientation (66%). It is difficult to understand how these increases can be integrated into a meaningful group of patterns. One does not often feel more supportive and helpful, or engage in recreational activites when experiencing increased conflictual interactions

within the family. These results may be explained by the previously described lack of comprehension of the questions and to the small number of subjects which allow the patterns of change to fluctuate easily. These children continued to perceive no change in Moral Religious Emphasis, Intellectual Cultural Orientation and Control. The remainder of their responses were split, leaving no prevalent patterns.

Limitations

Number of Subjects

The greatest limitation of this study was the small number of families which were included. Any study requiring entire families to participate on a regular basis is difficult particularly when there are so few families available such as families with hearing impaired children. Several noparametric tests which are often used with small N's were examined, and none of them were sensitive enough to detect differences with groups of 3 or 4 units. Similarly when working with a small N. individual differences within families strongly influences performance measures. This becomes evident when reading the case studies in which family fights, illness and various interruptions were likely to be the cause for some of the FES and videotaped measures.

Videotapes

The videotapes were often unclear and fuzzy due to the limited lighting in some homes and the inconsistent

performance of the equipment. In addition the sign language used by family members was frequently unclear. Thus the tapes often had to be played several times prior to a final rating. This may have effected the raters reliability and judgements when scoring the discussions.

Population

The hearing impaired population is a minority group. Thus the availability of subjects for a study such as this is limited. In addition matching subjects is difficult due to the large numbers of crucial variables which need to be included. Thus finding a replacement for the family that dropped out of the study was impossible.

Implications for Future Research

The difficulty in obtaining a large sample for a family study with hearing impaired children leads the writer to several suggestions with regards to future studies; 1) Replication; The power of these results could be improved with the confirmation through several similar studies. 2) Various other types of systematic inquiry might be used to investigate the effectiveness of this type of program i.e. intensive case studies;3)Observations of families during the use of the program (or similar programs);4)Longitudinal studies using repeated measures on communication skills throughout the course of a program;5)Studies of a similar nature using teachers and students instead of families;6)The use of

measures other than the FES which might be less sensitive to localized problems at the time of testing. It is also recommended that transcripts of the videotaped sessions be made in order to reduce the need for replaying the tapes several times in order to completely comprehend the dialogue.

The response of the families who used the FWHIC as well as some of the empirical results indicate that participants were moving in a positive direction with regards to many of the issues at hand. As previously noted (see literature review) high impulsivity, lack of communication skills and lack of conversation beyond a superficial level are all often associated with this population. Improved communication within the family early in the child's life may well eradicate some of the common socialization problems experienced by this population (Liben, 1978; Levine, 1960; Rainer & Altshuler, 1966; Schlesinger & Meadow, 1972).

Liben (1978) discusses the need for hearing impaired children to get answers to the incessant "whys" of early childhood. Schlesinger & Meadow (1960) and Mindel and Vernon (1971) agree that gratifying reciprocal communication within the family during the deaf child's early years is essential. The FWHIC program could be seen as preventative as well as remedial.

The past research in using affective education with the hearing impaired (Primarily the Human Development Program) has resulted in enthusiastic views of childrens improved

communicative abilites to express thoughts and feelings. Newton (1975) noted that students began to carry over what they had learned from the program into the classroom. Becker (1978) found that affective education for a sample of hearing impaired children was so successful that she proposed using it for all hearing impaired school aged children.

This study was unique in that more formal measures were used and family involvement versus school involvement was stressed. In addition the content of the FWHIC program included topics of concern for hearing impaired children and their families. Thus this study empirically supports what was found in previous studies regarding affective education for the hearing impaired child.

Perhaps the most important factor with regards to the usefulness of the program is the way in which it may be conducted without the constant attention and expense of a professional. It may be considered an educational program versus a program for seriously pathological families. Thus it could be used at home for a majority of 'normal' families with hearing impaired children. A school psychologist, counselor or educator would explain and monitor the program without needing a great deal of time or money.

One must keep in mind that the program consists of only 10 sessions or activities. This encompasses only a brief interlude of remediation or prevention within the family system. The families in this study improved their

communication skills after a brief time, however their perception of family environment changed very little. Simlarly the children in the program improved in some of their communication skills within a brief period of time, yet their perceptions of family environment seemed to fluctuate. As previously described (in the results section) some positive increases in perception appeared to continue 3-4 weeks following the program and yet many of their percepts appeared quite unstable.

In order for this program to become internalized it must be followed up with more extensive work in improving communication. Difficulties within families develop over a long period of time and we must expect solutions to take a long time as well.

Research on long-term effects of communication programs would begin to provide answers to questions regarding how the socialization of hearing impaired children can be facilitated such that we may reduce the number of common difficulties experienced by this population.

APPENDICES

APPENDIX A

Demographics of Phoenix Day School for the Deaf
March 8, 1982. Alan Molmod, Assistant Director.

The following tables contain comparative data in 7 categories for PDSD students and hearing impaired children at the state and national level. The 7 categories include: Age, Sex, Degree of Hearing Loss, Age at Onset, Ethnic Origin, Additional Handicapping Conditions, and Cause of Deafness.

AGE

	PDSD (150)		STATE (822)	NATION (54,504)
Under 3 years	(1)	.7%	2.6%	2.2%
3-5 years	(23)	15.3%	7.9%	8.7%
6-9 years	(44)	29.3%	23%	20.3%
10-13 years	(43)	28.7%	22%	25.1%
14-17 years	(36)	24%	34.5%	35.4%
18-over	(3)	2%	10%	8.4%

SEX

	PDSD (150)		STATE (822)	NATION (54,504)
Male	(79)	52.7%	51.8%	53.2%
Female	(70)	46.7%	47.6%	45.8%
Unknown	(1)	.7%	.6%	1%

APPENDIX A (continued)

Degree of Hearing Loss

		PDSD (150)	STATE (822)	NATION (54,504)
Under 27 dB	(2)	1.3%	9%	6%
27-40 dB	(0)	0%	6.7%	6%
41-55 dB	(6)	4%	9%	8.5%
56-70 dB	(7)	4.7%	9%	11.3%
71-90 dB	(47)	31.3%	20%	20.9%
91-above	(88)	58.7%	46.2%	47.4%

Age at Onset

		PDSD (150)	STATE (822)	NATION (54,504)
Unknown	(22)	14.7%	25.7%	22.4%
Total Known Information	(128) (all statistics in these numbers.)		611 variable are	42,318 based on
Onset at Birth	(92)	71.9%	74.8%	77%
Under 1 year	(21)	16.4%	8.3%	6.7%
At 1 year	(10)	7.8%	5.7%	6.1%
At 2 years	(3)	2.3%	4.9%	4.2%
At 3 years	(1)	.8%	1.8%	2.1%
At 4-6 years	(1)	.8%	2.6%	2.9%
At 7-over	(0)	0%	1.8%	1.0%

APPENDIX A (continued)

Ethnic Origin

	PDSD (150)	STATE (822)	NATION (54,504)
Caucasian	(94) 62.7%	65.1%	69.9%
Negro	(15) 10%	4.4%	17.5%
Hispanic	(33) 22%	22.6%	9.5%
American-Indian	(2) 1.3%	5.1%	.5%
Oriental	(4) 2.7%	1.2%	1.1%
Other	(2) 1.3%	.4%	.9%

Additional Handicapping Conditions

	PDSD (150)	STATE (822)	NATION (54,504)
Students without a Handicapping Condition	(111) 74%	63.7%	70%
Students with One or More Handicaps	(39) 26.4%	36.3%	30%

APPENDIX A (continued)

Cause of Deafness

	PDSD (150)	STATE (822)	NATION (54,504)
Unknown	(50) 33.3%	44.9%	44.1%
Causes at Birth (percentages based on known causes)			
Rubella	(32) 32% (100)	24.3% (453)	29.6% (30,448)
Trauma	(3) 3%	2.9%	3.9%
Other Complications	(1) 1%	4.4%	5.2%
Heredity	(15) 15%	18.3%	19.2%
Prematurity	(5) 5%	3.8%	6.8%
RH	(2) 2%	1.5%	2.7%
Other	(9) 10%	7.7%	7.2%
Causes After Birth			
Meningitis	(21) 21%	12.1%	12.5%
Fever	(8) 8%	7.5%	5.2%
Mumps	(0) 0%	.4%	.5%
Infections	(1) 1%	11%	4.7%
Measles	(2) 2%	2%	1.7%
Trauma	(1) 1%	1.3%	1.3%
Otitis Media	(0) 0%	5.1%	4.2%

APPENDIX B

Topics Used For Discussion When Filming Pre- and Post-Tests

Pre-test discussion topics:

1. "My best Friend and Why."
2. "My favorite movie and why."
3. "What I did today."

Topics used for discussion when filming post-tests:

1. "My favorite animal and why."
2. "My favorite job."
3. "What I'd like to do for vacation."

APPENDIX C

Suggestions For the Professional When Facilitating Use Of Program For Families With A Hearing Impaired Child

1. Clarify the concept that this program is not designed for improving manual or oral communication skills, although it may have indirect effects in this area. It is designed to improve the ability to communicate feelings, ideas, and information within the family. Although improved communication abilities are not guaranteed, it should facilitate more frequent interaction among family members.

2. Clarify the directions which are stated on the first two pages.

3. Make sure it is understood that both the activities and the rules should be followed. The rules are for directing a particular type of communication; the activities are designed around issues concerning families with hearing impaired children.

4. Emphasize the concept that this program is supposed to be pleasant and frequently a game-like activity. Thus, if a family member has difficulty following the rules or understanding an activity the others should be patient and helpful. If necessary, a rule should be restated or clarified; there should be no punishment involved. Learning the rules is another aspect of completing the program.

5. Give some examples of how the procedures would be used and be particularly sure that rule number four is clearly understood.

6. Make yourself available for further questions and follow up on the family's progress and comments.

7. By responding to any difficulties the family may have regarding their experience, one may learn more about the family's functioning. This may be reflected to the family, or used for constructive criticisms.

APPENDIX D

For Your Family

A Family Education Program for families with a hearing impaired child.

Dear Parents,

This program is designed to promote better communication and focus on important issues for you and your family. There are ten activities which focus on topics that concern families with a hearing impaired child, or children. The activities were created by searching through the research done in this area and choosing topics which have been found to be important.

Everyone in the family will take part in the activities. Each parent will take a turn as the group leader, but don't forget you will be a group participant as well. As a leader, your job will be to explain and enforce the activites and the ground rules (explained below). The activites are written in simple language so that many of your children can read along with you, but you should still make sure that everyone understands what to do.

After each activity is finished you should sum up what has been said or done by the group members. This will help 'bring it all together'. If no one wants to start, or take their turn first, it is your job to 'set the stage' and begin with an example of your own. There will be one activity, or one page finished each night. You should sit in a comfortable room facing eachother so that you can keep good eye contact.

You begin each session by explaining the ground rules; Then you explain the activity, and when you're all finished, sum it up. If a ground rule is broken you should remind the person what the rule is, or ask them to repeat it. Remember this should be an enjoyable time so try to enforce the rules calmly and plesantly by simply restating the rule.

Ground Rules

Without using the ground rules, you are not completing the program correctly. They are just as important as the things you will do, and talk about. REMEMBER TO REPEAT THE RULES EACH TIME YOU BEGIN A SESSION.

1) Bring yourself to the session and nothing else.

2) Everyone gets a turn to speak, including the leader.

3) You can skip your turn.(Leaders: Come back to a person again and encourage them to share)

4) Listen to the person who is taking their turn.(Leaders: After a turn is done, a member must be asked to repeat or rephrase what was said. If that member cannot repeat or rephrase what was said, the original speaker must be asked to repeat his/her original response. For example:"John, what did Mary say?" or "John, what was Mary feeling?";and if John can't answer you may ask: "Mary, can you repeat yourself?" or, "Mary, can you explain that again?")
   This must be done politely, because the hearing impaired member might need to have things repeated several times and it could get uncomfortable.The leader picks a different person to repeat a response each time someone has finished their turn.

5) Each member of the group may take as much time as needed for their response.

6)There are no interruptions, probing, putdowns or gossip. What is talked about in the group remains private, and not to be talked about anywhere else.

Get to know these rules very well and repeat them each time you begin an activity. Pay close attention to Rule #4. This one may be frustrating at first, but you may find it very helpful for helping with listening skills, especially for your hearing impaired child.

Now, have a good time!

We have a hearing impaired person in our family. The name of this person is _____.

The other names in our family are:

_____.

_____.

_____.

_____.

We all know what if feels like to have a hearing impaired person in our family. _____ is the only one who knows what it's like to be hearing impaired in our family.

In this book we will try to understand what it feels like to be hearing impaired. We will play games and work hard together.

Today we learned the ground rules for our meetings, Why do you think we have to use these rules? Pick one of the rules that seems important. Think of 2 reasons you picked this rule and explain them to the others.

Next time we will use all the rules at our meeting.

Remember the ground rules!

What if we couldn't hear the T.V.?

How much could we understand about the story?

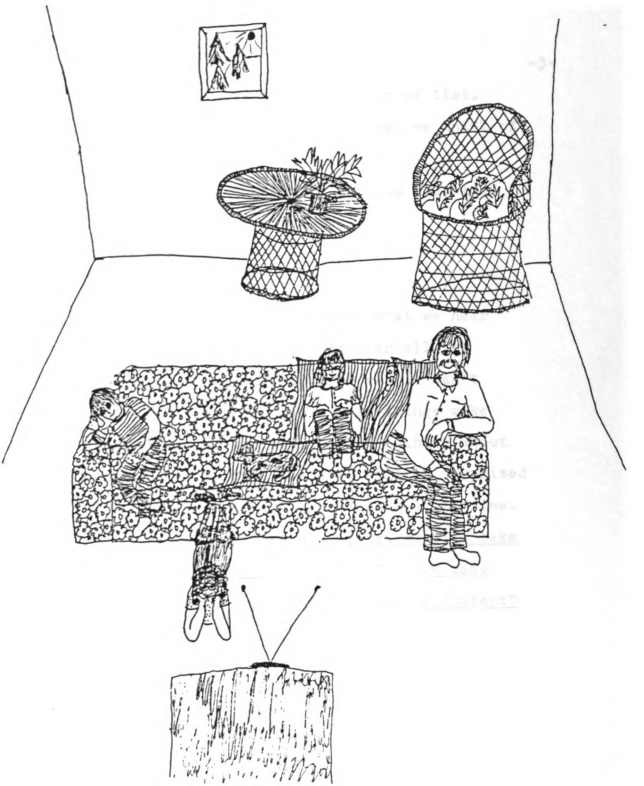
Tonight we are all going to watch a ½ hour T.V. show. There will be no sound during the show. There will be no sound on the T.V. for ½ hour. The T.V. show we will watch is called:

_____.

After the show we will all talk together. We will listen to eachother carefully and pay attention. <u>We will each take a turn to answer these questions</u>:

What do you think the story was about?
Which part did you like the best?
Which people in the story were friendly?
Was it fun to watch T.V. this way?
If the sound on the T.V. was always off, how could you learn to understand the shows better?

_____ doesn't hear what the actors are saying when the sound is on. _____ can teach you about what this feels like.



Ground Rules

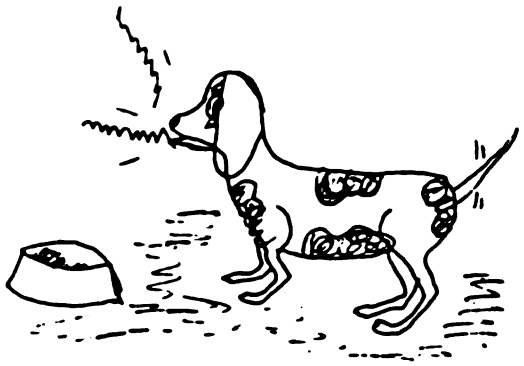
Today we will make a special kind of list. We will write down everything that we think of that makes sound.

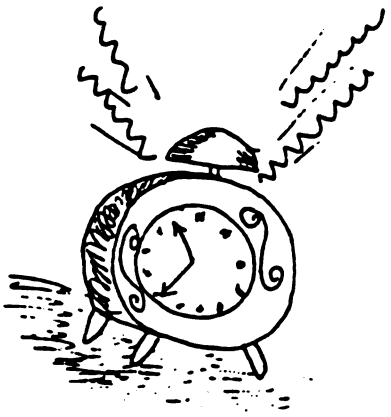
Here are 5 hints to get you started:

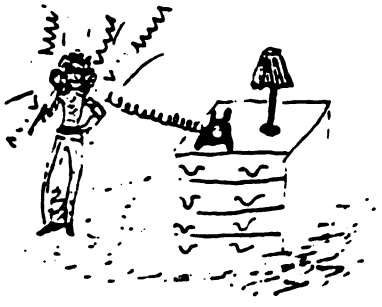
1-Mom talking on the phone.
2- A dog barking.
3- The shower.
4- A typewriter.
5- An alarm clock.

There are so many sounds that we hear everyday. _____ can't hear all the sounds. When hearing impaired people can't hear sounds they can guess what things make sounds. Most of the time we don't think about sounds. When we make lists we will be surprised at how many sounds are around us all the time.

<u>After we finish our lists, we will take a turn to read them to the family. How many sounds were the same? How many were different?</u>







Don't forget to go over the rules!

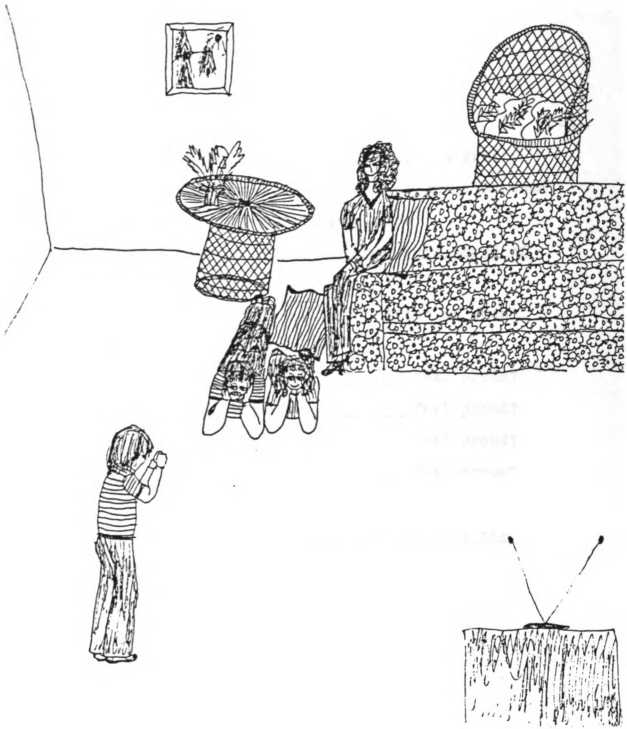
Today we will play a new game. Each person in the family will think of a sentence. Everyone must keep their sentence a secret. Write it down so you won't forget it.

Now everyone will take a turn and try to show the family what their secret is. BUT don't use voices or any real sign language. Everyone will take a turn and guess what the secret sentence is. Don't tell what the sentence is until everyone has guessed.

After each turn is finished each person who guessed should answer these questions:

How did you decide what the secret was?
How did each person communicate without voice or sign language?

It would be hard to explain ideas this way if you were in a big hurry!



Each person in the family has felt very proud of themself. Think of one time when you were very proud of yourself.

Take a turn to explain why you were proud of yourself once upon a time.

Put your name in a different place on each side once.

_____ why did _____ feel proud?

_____ why did _____ feel proud?

_____ why did _____ feel proud?

_____ why did _____ feel proud?

Now read each question and give the answer when it is your turn.

Every person learns in different ways. Today we want to find out how each person in the family learned about something.

Think of a relative that was very sad once upon a time.

We have all decided to think of

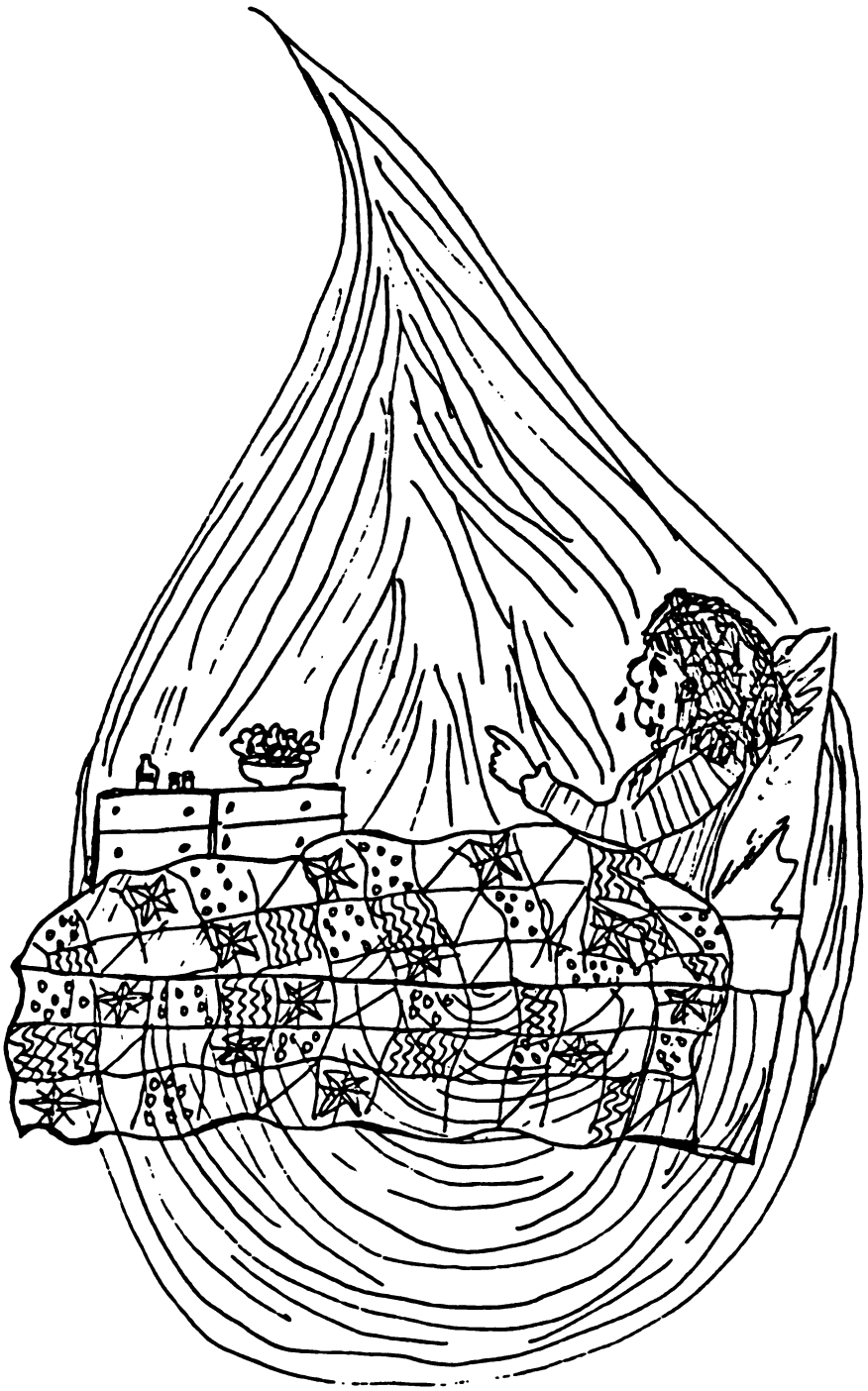
_____.

We will each think of as many reasons as we can for why _____ was sad.

Now, everyone answer these questions:

1-What is something you learned from the others when it was their turn?
2- How did you first find out about your relatives problem?
3- How did you find out how your relative was feeling?

Sometimes it is a surprise to find out what we don't know until we all talk about it.

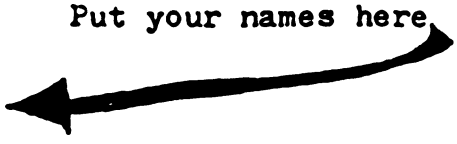


Today we want to find out more about

_____'s day.

_____

_____ Put your names here

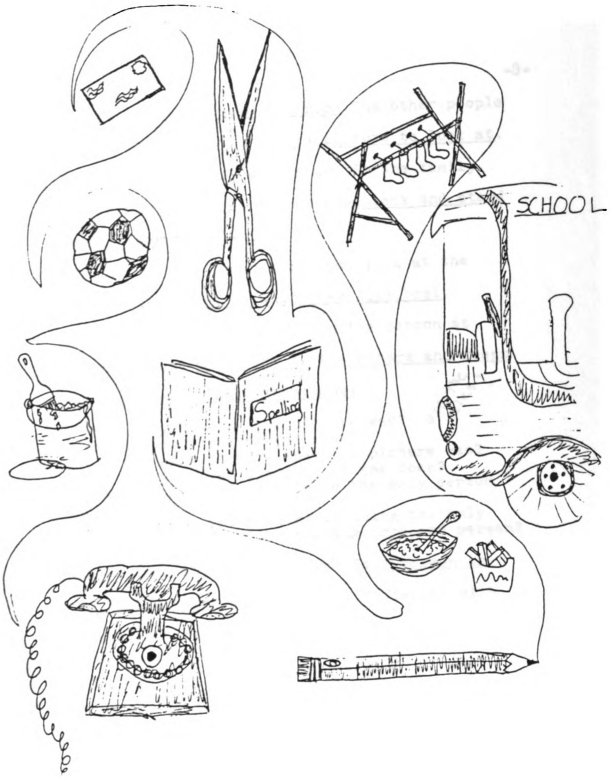


_____

_____

We will each take a turn and answer these questions:

1-Where do you go after you leave the house on weekday mornings?
2- Each day you do many things before you are finished working. What are all the things you can remember?
3- What are the most fun things you do each day?
4- What are the hardest things you do each day?
5-Talk about one person you work with each day.
6- If you could change one thing about your day what would it be?


SCHOOL
Spelling

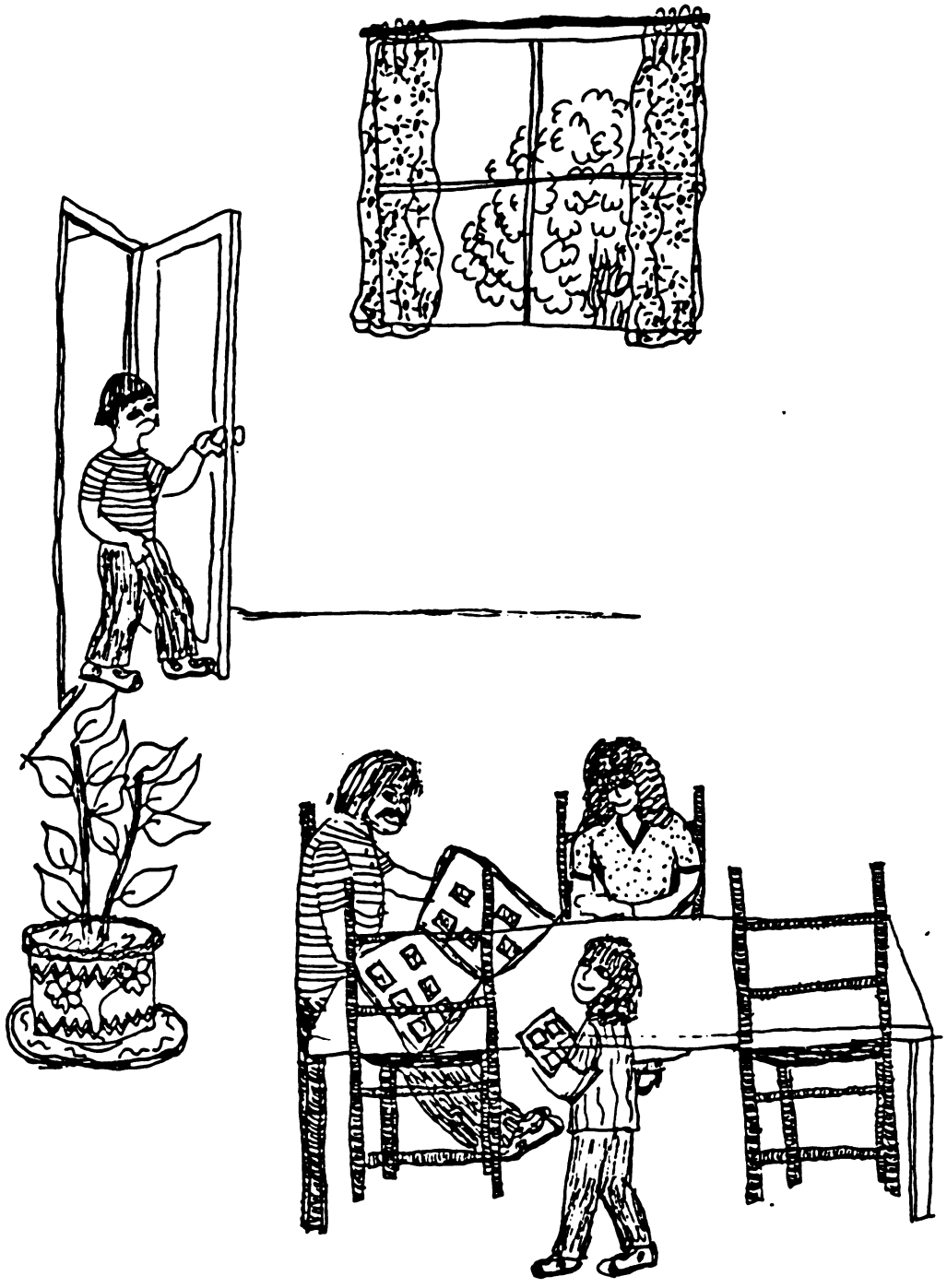
One person must leave the room. The other people in the family must choose a picture to look at. It can be a picture of someone in the family. The person that left must come back and stand at the doorway to watch.

Now..... all the others must look at the picture and point to what they like best. Then put the picture away. Now the person at the door must come back to the others and guess the answers to these questions:

Use the rules!

1-What do you think the picture was?
2-Who do you think talked most?
3-Did you want to know what the picture was?
4-How did you feel standing at the door?
5-What did it feel like to be the only person who didn't see the picture?
6-Do you think the feeling of being the 'only one' happens a lot to a hearing impaired person?

Now you can show the picture! Each person in the family takes a turn. Use a different picture each time.



People in a family worry about eachother.

They worry because they care about eachother.

Now each person take a turn to explain 3 things that make you worry about each person.

Now, choose one person that worries about you and answer these questions:

1- Why is that person worried about you?
2- Is it OK that they are worried? Why?
3- Are you worried about that person for the same reason?

How are everyone's worries the same? How are they different?

-10-

This is the last page. Take a turn to answer these questions:

Why do you think these games helped you learn about how _____feels?

What game do you think you learned the most from? Why did you learn the most from this game?

Which rules were the hardest to follow?

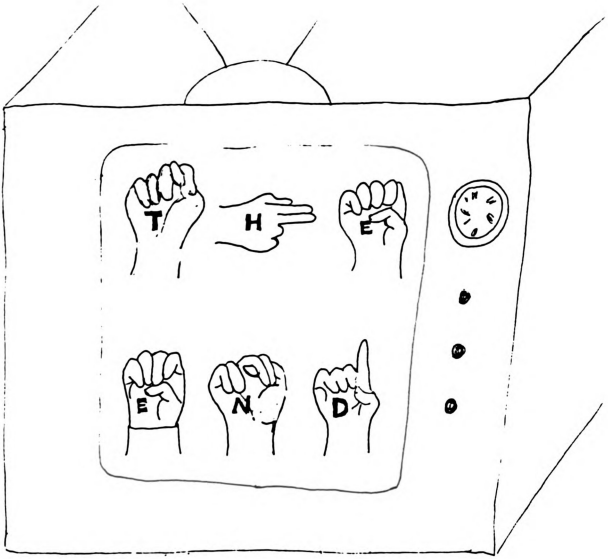
What new things did you learn about how it feels to be hearing impaired?

What new things did you learn about being a part of a family with a hearing impaired member?

Can you think of other games that might help you learn more?

If you can.....

Play Them!


T
H
E
E
N
D

APPENDIX E

Topics Used For Discussion In Comparison Group

Topics For Discussion

Check When Completed:	
_____	My favorite book.
_____	What season I like best and why.
_____	A place I'd like to see.
_____	My favorite T.V. show and why I like it.
_____	How I'd like to spend my next birthday.
_____	Something I remember doing with the family a long time ago... and how I felt doing it.
_____	What I do when I'm sick and have to stay home, and how it feels to be missing school or work.
_____	Something I want to learn more about and why.
_____	Something I would like to change about myself and why.
_____	Three things I'm proud of and three things I'm embarassed about.

DIRECTIONS: Discuss each of these with your family for approximately 10-20 minutes.

APPENDIX F

Examples of Scoring Pre- and Post-Video Tapes

The following sentences are hypothetical examples of family dialogue. Below each sentence or sentence part, are the points which would be awarded. An (A) is awarded for "Awareness"; an (M) is awarded for "Mastery"; and "Social Interaction" points are noted when appropriate.

Dialogue

Child: "My favorite movie is 'E.T.'. I think the actors
(M)
are good. E.T. was big and he made me laugh. E.T
(M) (M)
hid in the closet. I think E.T. was nice."
(M)

Mom: "Child said his favorite movie was 'E.T.'. He
(A)
thought the actors were good. He thought E.T. was
(A)
big and strong and cute. E.T. made him laugh."
(A) (A)

Mom: "My favorite movie was 'Gone With the Wind.' The
(M)
actors were attractive. (Note: one must assume this
(M)
sentence to say, I felt or I thought the actors were attractive). It was about the Civil War." (Note: this is stating fact and not ones feelings or skills).

Child: "Today I went to school and worked hard. I did read-
(M) (M) (M)
ing with Smith, and math with Jones. I came home and
(M)
cleaned my room."
(M)

Dad: "Child said he went to school. He did reading with
(A) (A)
Smith and math with Jones. He cleaned his room."
(A) (A) (A) (A)

APPENDIX F (continued)

Dad gets up and closes the door. (One point for breaking attention).

Mom corrects child in middle of his turn. (One point for interruption).

APPENDIX G

Written Comments by Parents

(Sessions are presented in the exact order as completed by each family)

Family No. 1

Sessions (1-10)	Day	Time	Comments
1&2	11/22	7:00	The book discussion was not good. The season discussion was better, with birthdays and snow. Hearin Impaired Child's favorite. Siblings was undecided. We ended up talking about motorcycles.
3&4	11/23		Terrible discussion, but we tried. "Chips" won out for Hearing Impaired Child's T.V. Show. Sibling's was "Brady Bunch" and "Gilligan's Island." Disneyland was favorite for place to see. Sibling was very uncooperative and Hearing Impaired Child wanted to watch T.V. We got into a discussion of cops.
?	11/24		Had a nice discussion on life in general and deaf people. Hearing Impaired Child will openly talk so seldom. I took advantage of the situation. His father was involved and it lasted about ½ hour to 45 min.
5	?		Fair discussion on birthday. Didn't find out a whole lot. The kids don't like these talks.

7	?	?	Nobody likes to be sick. Sibling watches T.V., or plays with the girl next door. Hearing Impaired Child is never sick, he said.
?	?	20 mins.	People we knew. ? and gradparents. All in all, it was a good discussion- about 20 minutes.
8	?	10 mins.	Hearing Impaired Child wants to learn more about ?. Sibling about cooking. Good talk, about 10 minutes.
9	12/13	?	Hearing Impaired Child sometimes lies and does not like it. He would also like to contrl his temper better,. Sibling would like to change the color of her hair. The kids enjoyed this. A neighbor had a new baby. We had a nice talk about this.
10	12/13	?	Hearing Impaired Child was proud of doing better in school. Sibling was proud of being in school- in the fifth grade- and of living in a house.

Family No. 2

1	Nov. 14 3pm	No comments
2	Nov. 18 6pm	No comments
3	Nov. 18 6:30pm	No comments
4	Nov. 19 6pm	The both like this one.
5	Nov. 20 3:30	No comments
6	Nov. 20 3pm	No comments
7	Nov. 21 11am	No comments

8	Nov. 21	11am	No comments
9	Nov. 22	6:30pm	No comments
10	Nov. 22	6:30pm	This one was very hard I did't thind they quite understood it.

Family No. 3

(Withdrew from the study)

Family No. 4

(Could not locate their comments)

Family No. 1A

2	Thurs.	8:00	We watched -To close for Comfort. It was very hard to understand what was going on and the theme of the show. It just didn't fit together at all. We didn't enjoy it hardly at all.
1	Sunday	8:00	This one was OK but it was a little hard for Hearing Imaired Child to understand. I realize that I myself take alot for granted when it comes to him. By doing so it makes it hard for him to really express his true feelings.
5	?	8:00	It was fun and interesting and we had a good talk about it. Not only did we answer the questions, but got on other conversations which lead from what we did.
6	?	?	This was a good way to express and to understand someone feelings it was very interesting
3	?	?	Most of the things all listed is normal things. I had to turn off the radio so Hearing Impaired Child could hear the crickets.

			We do take a lot of sound for granted.
7	?	?	This one was very simple. It did give us a chance to explain our usual day.
8	?	?	It did make you wonder and it does show how a hearing impaired person feel in not knowing.
9	?	?	Most of the reason were the same because we are a family and we depend on each other because we really don't have anyone else to turn to.
10	?	?	The game we pick that we like the most is game #2 game #5 and game # 7. Hardest rules was for Hearing Impaired Child was #4 and for Sibling #6. Other fames that would be good to do is to put cotton in your ears and then have a conversation and then to blind fold someone and then talk about what you see around you. We kind of got out of order in doing these games. I must of missed the pages when we starded and didn't realize it.
Family No. 2A			
1	?	?	It was interesting to note everyone reaction initially. The boys were annoyed. Hearing Impaired Child became frustrated when we couldn't tell her what was being said. She

			even got angry and told us to turn it on. I found I really had to pay attention and if someone interrupted I was bothered by it. Usually this isn't the case I only ½ pay attention. Father: This activity was educational for wife and me but not much for the kids. I began to be more sensitive to Hearing Impaired Child's hearing impairement.
3	?	?	Our list were long. Hearing Impaired Child's seemed to feel "hurtish" (like on the outside looking in feeling) It really hit me that she really doesn't hear much and we take sound for granted (One example was husband scratching his beard and the birds she was astonished by this! I felt sad and sibling felt shocked). Father: We all became closer as a result of this activity and we began to try and share more about the sounds around us.
5	?	?	Husband did best at this put in a ? range we all did a -10. This was a disaster. It was a surprise to me that Hearing Impaired Child who is fantastic a mime did such a poor job in this one. We were all together on this-stinks! Father: For me it was fun to act out, but difficult to guess the other's sentences.
4	?	?	It was hard getting Hearing Impaired Child to zero in on an actual example of being proud of herself. She began showing signs of exasperation. Father:We shortened this activity due to the frustration levels we were

			all reaching
6	?	?	We all picked Grandma. Hearing Impaired Child was amazed at how much we knew about some things in grandmas life. She seemed surprized and very curious. Father: My grandmother visited us this past fall and she is 82 hears old. So I knew a great deal about her. I was really astonished by the realization that Hearing Impaired Child understood so little about her.
7	?	?	This was not to surprizing We pretty much knew how each other spends their day. Hearing Impaired Child however gave a minute to minute accound which felt boring. Father: We didn't get any great insights into each others days here, except for the discussion that followed later between wife and me regarding time managing.
8	?	?	This ended up being a game in every sense of the word. There was no anxiety about being left out because we all knew we'd see it eventually. This was a silly and very teasing excercise. Father: This also was a fun excercise. I was especially curious how Hearing Impaired Child would handle this because she always assumes a conversation is about her when others are talking and one of them looks in her direction. This didn't solve that problem but I believe she became more aware of the probability that the conversation is not about her.
9	?	?	This activity set up forces of daughter vs. mother. Wife

			shared her concern for Hearing Impaired Child's and she took it the wrong way. Explaining she was no a baby why should her parents worry about her.
10	?	?	The rule that was the hardest was not to interrupt. I discussed that we like to tease alot and we really had to watch out for small jabs! Also I found I turned Hearing Impaired Child off alot because she went on and on and on. But I do also making sure she understands so I repeat things 5 different ways. It takes to long in our buzy lives and we get bored!! Some of the games were fun, T.V. sound pictures Some were very frustrating. Hearing Impaired Child was frustrated with the rules sometimes. If we had to ask her to repeat it really upset her and yet she thought it was funny if she asked us to repeat. I discovered we really have little time in our lives to sit down with nothing else but each other and wonder in areas other than the "necessitiesof life" I'd lie to see that change! It seems we spend more time "telling " than conversing with her. Father:I always believed I had a degree of sensitivity to her hearing problem. I have a minor hearing impairment myself. But after taking part in these activities my sensitivity became more acute. I felt closer to her and my family I saw all of us grow closer together because we tried to experience Her handicap on a personal level.

Family No. 3A

1	11/20	7pm	It showed us more patience with eachother while discussing our choice of rules.
2	11/21	7:30pm	Very hard to do. We understand how hard it is for hearing impaired persons to know what is really going on. You only get the plot in little pieces. The you usually have to guess.
3	11/22	7:30pm	Realize how many everyday sounds She is missing.
4	11/23	5:30pm	Realizing that each individual had a different meaning of the word proud. Examplesome were personal proudness and others material proudness.
5	11/26	6:30pm	This session was alot of fun. Very hard to communicate without words. Had to pay close attention to gestures and motions. Realized how hard it is for her to get every gesture. We were put in her place and experienced the visual difficulty without words and sign language.
6	11/27	7pm	Found out true feelings on how grandpa really felt.
7	11/27	6pm	Found question #2 difficult to explain and to understand we finally understood it
8	11/28	7pm	At first had difficult under standing what session was trying to signify but then we did it and it all worked out fine. It is very hard for a hearing impaired person to be able to know what is going on when they walk in on a conversation
9	12/6	7:30pm	Very interesting session. Found out worries are

			family caring. Found out our family is a close one.
10	12/7	4pm	We learned more of Hearing Impaired CHild was more open with her feelings. We realized how easy it is to understand her if we are calm and patient. If we do this everyday we can communicate better.

Family No. 4A

1	11/23	8-8:25	It seems to help Daddy learn more signs he should be using everyday. It teaches us to ve patient; and Hearing Impaired Child to slow down and use good speech.
2	11/24	8:30-9:20	It was very hard for us to understand the program with out sound. It helped us to understand the frustration he faces watching T.V. and trying to understand conversation around him.
3	11/26	8-8:30	He really enjoyed this excercise. He thought some of our answeres were very funny. We had 25 of the same answers and 29 different ones. He had many sounds on his list that we take for granted.
4	11/28	7:55-8:15	This was a very easy lesson.
5	11/29	7-7:20	He really enjoyed this lesson. We all took turns acting out our secrets. It was not too hard to know our secrets since most of them were about our pets. We all decided it is easier to talk or use sign language to communicate our ideas.
6	12/5	8:30-8:55	This was a very sad session. We discussed how Grandpa felt when Grandma died. We learned

			some things that he understood that we didn't think he would think about
7	12/12	8:30-8:45	We discussed the fact that each one of us had different jobs and responsibilities that we sometimes do not share with the family
8	12/13	7:15-7:45	We saw how difficult it is being hearing impaired. Sometimes we exclude him in our conversations for many reasons. This excercise let us experience how he must feel at those times.
9	12/14	8:45-9:15	We learned that we all have different worries about each other and that it is okay to worry about each other because we do it out of love.
10	12/19	8:15-8:30	I don't think we learned much new in these excercises because we have good communication now. However it made us more aware of his problem and feelings. It will help us to communicate these feelings more openly.

LIST OF REFERENCES

LIST OF REFERENCES

Allen, R.;Braun, K.
1967 Developing Communication Competence in Children. Skokie, Ill.: National Textbook.

Bandura. A. & Huston, A.
1961 "Identification as a Process of Incidental Learning." Journal of Abnormal and Social Psychology, 63, 311-318.

Bandura, A.; Ross, D. & Ross, S.
1963 "A Comparative Test of Status Envy, Social Power and Secondary Reinforcement Theories of Identificatory Learning.: Journal of Abnormal and Social Psychology, 67 527-534.

Bandura, A.
1967 "The Role of Modeling Processes in Personality Development" In W. Hartup & L Smothergill, The Young Child, Vol. 1, Washington: National Association for the Education of Young Children,42-48.

Baumrind, D.
1967 "Child Care Practices Anteceding Three Patterns of Behavior." Genetic Psychology Monographs.

Baumrind, D.
1971 "Current Patterns of Parental Authority." Developmental Psychology Monograph, No. 4, part 2.

Barker, R. et al.
1953 Adjustment to Physical Handicap and Illness: A Survey of Social Psychology of Physique and Disability. New York: Social Science Research Council.

Barlow, B.; Fulton, H.; Peplow, E.
1971 "Reading Comprehension Skills Among Hearing Impaired Adolescents." The Volta Review, 113-119.

Barsch, H.
1968 The Parents of the Handicapped Child: The Study of Child Rearing Practices. American Lecture Series. National Institute of Mental Health, 239-285.

Becker, S.
1978 "An Approach to Developing Personal and Social Maturity." Volta Review, Vol. 80, 105-108.

Becker, & Krug.
1964 A Comparison of the Ability of the PAS, PARI, Parent Self Ratings and Empirically Keyed Questionnaire Scales to Predict Ratings of Child Behavior. Urbana: University of Illinois.

Bender, R.
1981 Conquest of Deafness. The Interstate Printers and Publishers.

Bessel, H.
1972 The Magic Circle: Methods in Human Development Manual. Human Development Training Institute.

Brill, R.
1960 "A Study in Adjustment of Three Groups of Deaf Children." Exceptional Children, 464-66, 470.

Cartwright, D. & Zanders, A.
1968 Group Dynamics: Research and Theory. New York: Harper & Row.

Day, R.; Griffin, R.
1980 "Children's Attitudes Toward the Magic Circle." Elementary School Guidance and Counseling. Dec. , 137-144.

Dell, R.
1975 'Humanizing Education by Improving Communication: The Report of a Curriculum Project in Rural Elementary Schools.: ERIC Document. Department of Health, Education and Welfare.

Doll, E.A.
1965 Vineland Social Maturity Scale: Condensed Manual of Directions. Circle Pines, Minn. : American Guidance Service.

Eron, Walder, Huesmann, & Lefkowitz.
1974 "The Convergence of Laboratory and Field Studies of the Development of Aggression." In J. De Witt and W.W. Hartup's Determinants and Origins of Aggressive Behavior. The Hague: Mouton.

Evans, D.
1975 "Experimental Deprivation: Unresolved Factor in Improvishment Socialization of Deaf School Children in Residence." American Annals of the Deaf, 120, 545-554.

Feiring, C. & Taylor, J.
1977 "The Influence of the Infant and Secondary Parent on Maternal Behavior: Toward a Social Systems View of Infant Attachment." Merrill-Palmer Quarterly.

Freeman, R.D.; Malkin, D. & Hastings, J.
1975 "Psychosocial Problems of Deaf Children and Their Families: A Comparative Study." American Annals of the Deaf, 120, 391-405.

Fry, E.
Graph for Estimating Readability. New Jersey: Rutgers University Reading Center.

Furth, H.
1973 Deafness and Learning. Wadsworth Publisher.

Garmezy, N.
1975 "The Study of Competence in Children at Risk for Severe Psychopathology." IN J.F. Anthony & C. Koupernik 's The Child and His Family at Psychiatric Risk.New York: Wiley.

Glueck, S. & Glueck, E.
1950 Unraveling Juvenile Delinquency . Cambridge, Mass.: Harvard University Press, 1950.

Hetherington, E.
1965 "A Developmental Study of the Effects of Sex of the Dominant Parent on Sex-role Preference, Identification and Imitation in Children. Journal of Personality and Social Psychology, 188-194.

Hetherington, E.& Frankie, G.
1967 "Effects of Parental Dominance, Warmth and Conflict on Imitation in Children". Journal of Personality and Social Psychology, 119-125

Hetherington, E. & Cox, R.
1978 Mother-Child, Father-Child Relations. Washington D.C. : National Association for the Education of Young Children.

Hetherington, E. & Parke, R.
1979 Child Psychology: A Contemporary Viewpoint. New York: McGraw-Hill.

Hoffman, L.
1977 "Changes in Family roles, Socialization and Sex Differences". American Psychologist, 1977, 644-657.

Kagan, J.
1964 Acquisition and Significance of Sextyping and Sex Role Identity. Volume 2, New York: Russell Sage, 1964, 137-167.

Kagan, J. & Moss, H.
1964 Birth to Maturity: A Study in Psychological Development. New York: Wiley.

Larson, L.& Backlund, P. & Redmond, M. & Barbar, A.
1978 Assessing Communicative Competence. Falls Church, Va.: Speech Communication Association and ERIC.

Levine, E.
1956 Youth in a Soundless World. NYU Press, 9-11.

Levine, E.
1960 The Psychology of Deafness. Columbia University Press.

Liben, L.
1978 Deaf Children: Developmental Perspectives. Academic Press

Locke, D. & Gerler, E. Jr.
1978-79 "Visually Impaired Children." Education for the Visually Handicapped. Winter, 118-120.

Martin, B. & Hetherington, E.
1971 Family Interaction and Aggression Withdrawal and Nondeviancy In Children. Progress Report, University of Wisconsin, Project NIMH12474, National Institute of Mental Health.

McCord, W & McCord, I. & Zola, T.
1959 Origins of Crime. New York: Columbia University Press.

McGee, G.
1971 An Evaluation of the Effects of Bessell Palomares Human Development Program on Five Year Olds in an Appalachian Head Start Class. Ann Arbor, Mich.: University of Tennessee. Doctoral Dissertation. University Microfilms, No. 72-5462.

Meadow, K. & Greenberg, M. & Erting, C. & Charmichael, H.
1981 "Interactions of Deaf Mothers and Deaf Preschool Children: Comparisons with Three Other Groups of Deaf and Hearing Dyads." American Annals of the Deaf, June, 126 No. 4. 454-468.

Mindel, E. & Vernon, M.
1971 They Grow In Silence: The Deaf Child and His Family . National Association of the Deaf.

Mischel, W. & Grusec, J.
1966 'Determinants of Rehearsal and Transmission of Neutral and Aversive Behaviors." Journal of Personality and Social Psychology,2, 197-205.

Montgomery, J.
1970 The Effects of Awareness Training in Modified Encounter Group on Selected Aspects of Personality with Kindegarten Children.Unpublished Doctoral Dissertation, University of Miami.

Mussen, P. & Parker, A.
1965 "Mother Nuturance and Girls Incidental Imitative Learning." Journal of Personality and Social Psychology, 2, 94-97.

Myklebust, H.
1960 Psychology of Deafness. New York: Gruen and Stratton.

Nass, M.
1964 "The Deaf Child's Conception of Physical Causality." Journal of Abnormal and Social Psychology. 69, 669-673.

Newton, J.
1975 "Finger Spellers and the Magic Circle" ERIC Document.

Ohlsen, M.
1977 Group Counseling. New York: Hold, Rinehart & Winston.

Palomares, U.&Ball G.
1980 Grounds of Growth: The Human Development Program's Comprehensive Theory. Human Development Training Institute.

Patterson, G.
1977 "The Aggressive Child: Victim and Architect of a Coercive System. In E. Mash, L. Hamerlynck, G. Hangy, Behavior Modification and Families, Theory and Research. New York, Brunner/Mazel.

Pederson, F.
1975 Mother, Father and Infant as an Interactive System. Chicato: Paper Presented at the Annual Convention of the American Psychological Association.

Pederson, F.& Anderson, B. & Cain, R.
1977 An Approach to Understanding Linkages Between the Parent-Infant and Spouse Relationships. New Orleans: Paper Presented at the Society for Research and Child Development.

Psalthas, G.
1960 "Phase, Movement and Equilibrium Tendencies in Interaction Process in Psychotherapy Groups.: Sociometry, 23,177-194.

Quigley, D. & Frusuba, D.
1961 Institutionalization and Psychoeducational Development of Deaf Children. Council of Exceptional Children: Research Monographs, 3,

Rainer, J. Altschuler, K.
1966 Comprehensive Mental Health Services for the Deaf. Columbia University: Dept. of Medical Genetics, N.Y. Psychiatric Institute.

Rainer, J. & Altschuler, K & Kallman
1969 Family and Mental Health Problems in a Deaf Population. 141,142,146,245. Charles Thomas Publisher.

Redd, W. & Morris, E. & Martin, J.
1975 "Effects of Positive and Negative Adult-Child Interactions on Children's Social Preferences. Journal of Experimental Child Psychology. 153-164.

Schein, J.
1975 "Deaf Students with Other Disabilities." American Annals of the Deaf, 120, 92-99.

Schlesinger. H. Meadow, K.
1972 Sound and Sign: Childhood Deafness and Mental Health, 208 107-110,179.

Schoenwald. B.
1980 "The Great Training Default." The Directive Teacher, V. 2. 19,30.

Schwirian, P.
1976 "Effects of the Presence of a Hearing Impaired Preschooler Child in the Family on Behavior Patterns of Older Normal Siblings." American Annals of the Deaf, Vol. 121 N. 4 Aug. 373-380.

Stein, L. & Mindel. E. & Jabaley, T.
1981 Deafness and Mental Health. Grune & Stratton.

Streng, A. & Kirk, S.
1938 "The Social Competence of Deaf and Hard of Hearing Children in a Public Day School." American Annals of the Deaf, 83, 233-254.

Ulrey,G. & Rogers,S.
1982 Psychological Assessment of Handicapped Infants and Young Children. New York: Thieme-Stratton, Inc.

Vernon, M.
1969 Multiply Handicapped Deaf Children: Medical Educational and Psychological Considerations. Council for Exceptional Children: Research Monograph. Washington D.C.

Vernon, M.
1974 "Psychological Aspects in Diagnosing Deafness in a Child." In P.J. Fine's (ed.) Deafness in Infancy and Early Childhood. Baltimore: Williams & Wilkins Co.

Vernon, M & Koh, D.
1970 "Manual Communication and Deaf Children's Achievements." American Annals of the Deaf, 115, 527-536.

Wang, M. & Rose, S. & Maxwell, J.
1973 The Development of the Language Communication Skills Task. Pittsburgh: Learning Research and Development Center, University of Pittsburgh.

Weimann, J. & Backlund, P.
1980 "Current Theory and Research In Communicative Competence". Review of Educational Research, Spring, V. 50,185-199.

Weinstein, F.
1969 "The Development of Interpersonal Competence." In D.A. Goslin's (Ed.) Handbook of Socialization Theory and Research. Chicago: Rand McNally.

Ziesuila, F.
1982 Assessment of Hearing Impaired People: A Guide for Selecting Psychological, Educational and Vocational Tests. Gallaudet College Press.