

THE RELATIONSHIP BETWEEN
EXPRESSED ATTITUDES AND OBSERVED
BEHAVIORS OF MOTHERS OF PRESCHOOL
HEARING-IMPAIRED CHILDREN

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THESIS



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ABSTRACT

THE RELATIONSHIP BETWEEN EXPRESSED ATTITUDES AND OBSERVED BEHAVIORS OF MOTHERS OF PRESCHOOL HEARING-IMPAIRED CHILDREN

By

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The attitudes and behaviors of seventeen mothers of preschool hearing-impaired children were studied to examine relationships between expressed attitudes toward the disability of deafness, expressed attitudes toward family and behaviors exhibited by the mother in interaction with her preschool hearing-impaired child. The specific objectives were to examine relationships between 1) expressed attitudes and characteristics of the hearing-impaired child, 2) expressed attitudes and characteristics of the mother and the family, 3) maternal behavior and characteristics of the hearing-impaired child, 4) maternal behavior and characteristics of the mother and the family, and 5) expressed attitudes and behavior of the mother in interaction with her hearing-impaired child.

Emmerich's modified form of the Parental Attitude Research Instrument (PARI) was used to assess maternal attitudes toward family life and child development on the

dimensions of Authoritarian Control, Hostility-Rejection and Democratic Attitudes. The Attitude to Deafness Scale was used to examine expressed attitudes toward the disability of deafness. Ratings of the mother's characteristic behavior in interaction with her hearing-impaired child were made using the Maternal Behavior Inventory. The Pre-school Attainment Record and the Denver Developmental Screening Test were used to assess the developmental levels of the hearing-impaired child. Basic family information was gathered from the Language Development for Deaf Children through Parent Education Program case files.

As a group, the mothers studied disagreed with statements expressing a negative attitude toward the handicapping condition of deafness. They expressed agreement with democratic attitudes toward family life and children and tended to disagree with an authoritarian-control attitude. There were no significant correlations between the Attitude to Deafness Scale and the scales on the Parent Attitude Research Instrument.

The attitudes expressed by mothers of preschool hearing-impaired children toward the disability of deafness were not related to characteristics of the child, the mother or the family. Mothers in the lower income groups and with lower social class rankings expressed attitudes of authoritarian-control, seclusiveness, and an attitude favoring the fostering of dependency in their child. Mothers with higher educational levels expressed

attitudes favoring the suppression of aggression in their child. Young mothers with a young deaf child and a small family expressed attitudes of marital conflict and irritability while also holding attitudes of equalitarianism and comradeship and sharing.

As a group, the mothers were rated as being cooperative and sociable. They were viewed as expressing affection toward their hearing-impaired child, as granting him a positive evaluation and autonomy although, they also tended to limit his behavior through excessive contact. In general, the mothers were not punitive, irritable or ignoring of their child. They did not seem to withdraw from the relationship with the child or show excessive concern about his health.

Income and age of the mother appeared to be the most important personal variables related to maternal behavior toward the hearing-impaired child. Characteristics of the child that were related to maternal behavior were developmental level, age of the child, handicapping condition and position in the family.

Mothers who expressed a negative attitude toward deafness were seen as being equalitarian. They were also seen as granting the child autonomy and a positive evaluation. Mothers who expressed a negative attitude toward deafness were seen as behaving in an anxious, ignoring, punitive manner and as using punishment and fear to control the child. Mothers expressing an attitude of marital

conflict were seen as exhibiting behavior of punitiveness, withdrawal of relationship, ignoring, and mood changes in relation to their hearing-impaired child. Lack of the marital conflict attitude was related to cooperativeness, sociability and expression of affection toward the child.

Future research should consider the use of more comprehensive personality measures as well as assessment of the dynamics of family interaction. Future studies are needed regarding the development and use of instruments to assess attitudes and behaviors with clearer conceptual organization and definition. Action programs should be aware of the complexity of parent-child relationships and seek to understand individual and family dynamics so that intervention can be as effective as possible.

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CHAPTER I

CONCEPTUAL ORIENTATION

The parent-child relationship is the foundation upon which the child's orientation to "self" and his environment is created as well as the platform upon which the parent enacts his conceptualization of the parental role according to his personality system. The dynamic quality of the relationship is manifested in a constant inter-flow of action and reaction as the child learns to act upon and respond to his environment and as the parents seek to influence the child according to their interpretation of the culture and their personal preferences (37, 59). A complex multitude of personal, social and cultural variables are involved in the analysis of interpersonal relationships. Research studies have sought to define and identify these variables and to describe their relationship to each other and to the ongoing interaction. Research focused on the family unit has been primarily interested in the mother-child interaction. The interactional dynamics suggest that the mother's

attitudes influence the behavior she exhibits in interaction with her child and thus influences the child's personality development (2, 45). In turn, the child manifests unique characteristics and modes of reaction that influence the mother in her future actions toward the child.

This study was designed to explore the attitudinal and behavioral aspects of the mother-child relationship when the child is handicapped by a hearing impairment. Specific research questions were: What are the expressed attitude and behavior patterns of mothers of preschool hearing-impaired children? Are these attitude and behavior patterns related to personal, familial and social characteristics of the mother and to characteristics of the handicapped child? The relationship between expressed attitudes and behavior directed toward the handicapped child is also explored.

Need for the Study

Professionals working with young hearing-impaired children stress the importance of good parent-child relationships and the value of positive parental attitudes in the educational and rehabilitation programming for the child (9,38,69). According to Barsch there is a general tendency among professionals to characterize the parents of handicapped children as guilt-ridden, anxiety-laden, over-protective, and rejecting. "While it is true that such cases exist, the majority of the parents are unduly

stigmatized by this generalization" (4, p. 342). Research regarding the expressed attitudes and actual behaviors of parents of handicapped children is needed to clarify the concepts, to avoid overgeneralization, and to lend understanding regarding interpersonal dynamics.

When the handicapping condition is a hearing impairment, the child is especially dependent upon his parents for basic language stimulation and for the interpretation of his social and physical environment (7,8,41,56). The quality of the parent-child relationship and the attitudes of the parents toward the child are viewed as crucial variables in the development of speech and language (10,11, 21,28,31,36). Thus the parent of the deaf child is faced with increased responsibility in establishing communication with his child and in establishing an emotional environment conducive to language acquisition. There is a clear need to identify parental attitudes and the relationship of these attitudes to the behaviors of the mothers directed toward the child.

A need to study the effects of family attitudes on the adjustment of hearing-impaired people was noted by Mindel (39), Myklebust (41) and Oyer (43). According to Neuhaus, "there is a conspicuous dearth of material regarding the deaf child's relationship with his family, the effects of deafness upon parental attitudes toward the child and how these attitudes affect the emotional adjustment of the child" (42, p. 721). He has suggested

the application of knowledge derived from the study of parent-child relationships of hearing individuals (42). These studies have considered some of the relationships between attitudes and child behavior and between attitudes and personal and social characteristics. However, the relationship between attitudes and actual behavior exhibited toward the child has received little attention (1,39,47,70).

The parental attitude regarding the particular disability of deafness has received little attention in the research literature (42,44). From a clinical base, Love reports that many parents have preconceived ideas about deafness and that these ideas are often negative. For example, he reports a tendency for parents of hearing-impaired children to think that the loss of hearing incapacitates the individual and makes him helpless (33). It is not known if parents who express different attitudes toward deafness differ in their behavior toward their deaf child.

Overview of the Study

This study is presented in five sections. Chapter I provides an introduction to the conceptual scheme and a statement of need for the study followed by a statement of the hypotheses to be tested and models illustrating the objectives of the study. In Chapter II, the relevant literature is reviewed. Chapter III includes a description of the sample, instruments used and procedures of

data collection and analysis. The results of the study are reported in Chapter IV. Chapter V includes a discussion of the findings and implications for further research.

Assumptions

The following assumptions underly this study:

1. Paper and pencil inventories are a valid measure of maternal attitudes.
2. Ratings of the mother's characteristic behavior toward her deaf child by a professional family worker are valid measures of maternal behavior.

Hypotheses

The following hypotheses will be tested:

Hypothesis I: There will be no significant relationships between the expressed attitudes of mothers of preschool hearing-impaired children and characteristics of the hearing-impaired child.

Hypothesis II: There will be no significant relationships between attitudes expressed by mothers of preschool hearing-impaired children and characteristics of the family.

Hypothesis III: There will be no significant relationships between the maternal behavior of mothers of preschool hearing-impaired children and characteristics of the hearing-impaired child.

Hypothesis IV: There will be no significant relationships between the maternal behavior of mothers of preschool hearing-impaired children and characteristics of the family.

Hypothesis V: There will be no significant relationships between attitudes expressed by mothers of preschool hearing-impaired children and maternal behavior.

Objectives

The main objective is to explore the relationships between the expressed attitudes and the behavior of mothers of preschool hearing-impaired children. The specific objectives are:

Objective I: To examine relationships between attitudes expressed by mothers of preschool hearing-impaired children and characteristics of the hearing-impaired child.

Objective II: To examine relationships between attitudes expressed by mothers of preschool hearing-impaired children and characteristics of the family.

Objective III: To examine relationships between maternal behavior and characteristics of the hearing-impaired child.

Objective IV: To examine relationships between maternal behavior and characteristics of the family.

Objective V: To examine relationships between attitudes expressed by mothers of preschool hearing-impaired children and maternal behavior.

Definitions of Terms

Expressed Attitudes. An attitude was conceptualized as an organization of beliefs toward an object or situation that predispose a person to respond in some

preferential manner toward the object or the situation. The mother's expression of agreement or disagreement with statements on the Attitude to Deafness Scale (13) and a modified form of the Parent Attitude Research Instrument (20) was used to assess her attitudes toward the handicapping condition of her child and toward her family.

Observed Behavior. The Maternal Behavior Inventory (52) provides a conceptual system for observing and organizing trait-actions of the mother in interaction with her child. Specific trait-actions are organized into more general behavioral conceptualizations that assume the generality and consistency of traits as well as their integration into a broader organized structure.

Family Worker. The family workers were trained teachers of the deaf who were participants in a training program designed to provide service to both the parent and the hearing-impaired preschool child in the home situation.

Hearing-impaired Child. A child who during standard audiological assessment procedures appropriate for his age exhibits behavior indicating a hearing loss of 30 decibels or more.

Handicapping Condition. Categorical descriptions of the child as exhibiting a singular impairment (a hearing loss) or as being multiply impaired with a hearing loss plus a heart and/or a vision impairment or a hearing loss plus other multiple impairments.

Objectives and Models for Study

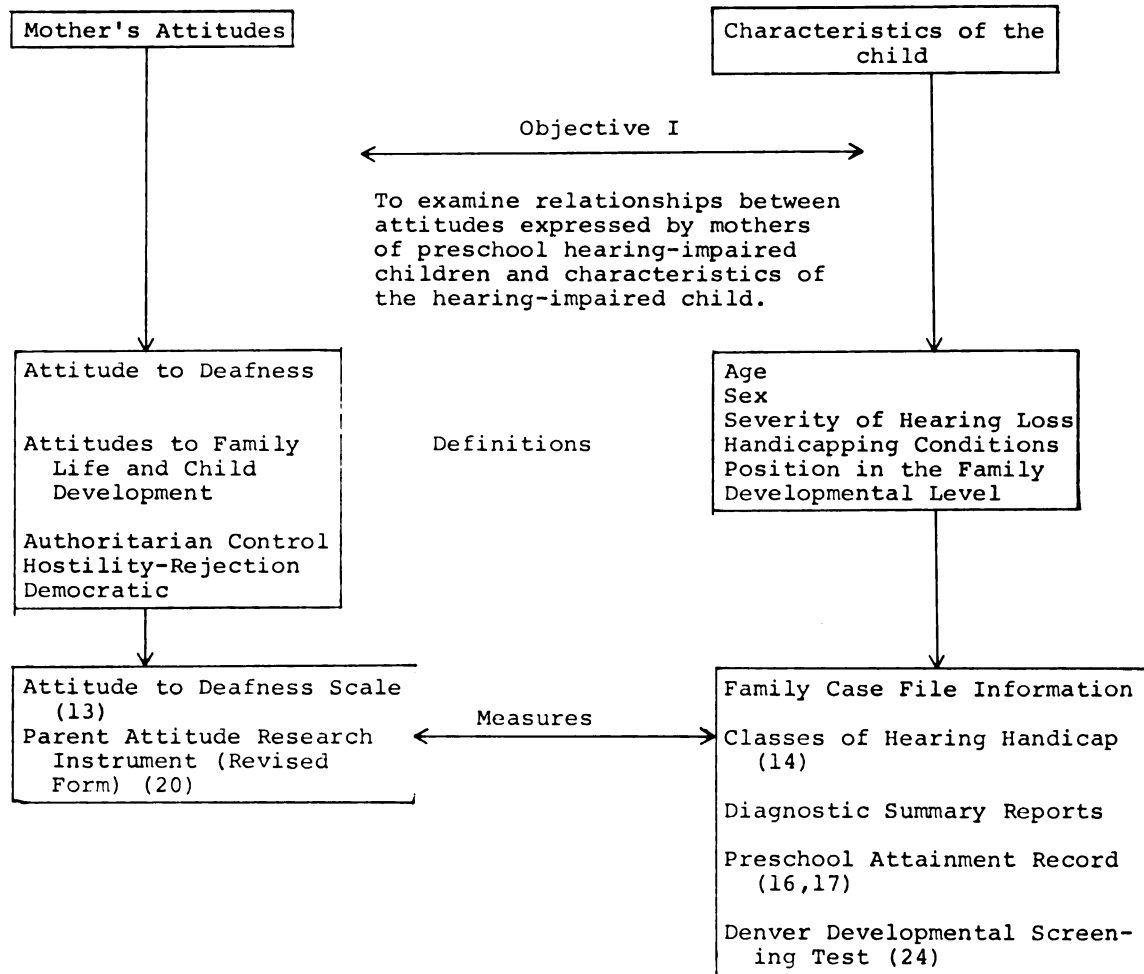


Figure 1.--Model of method for study of maternal attitudes and their relationship to characteristics of the child.

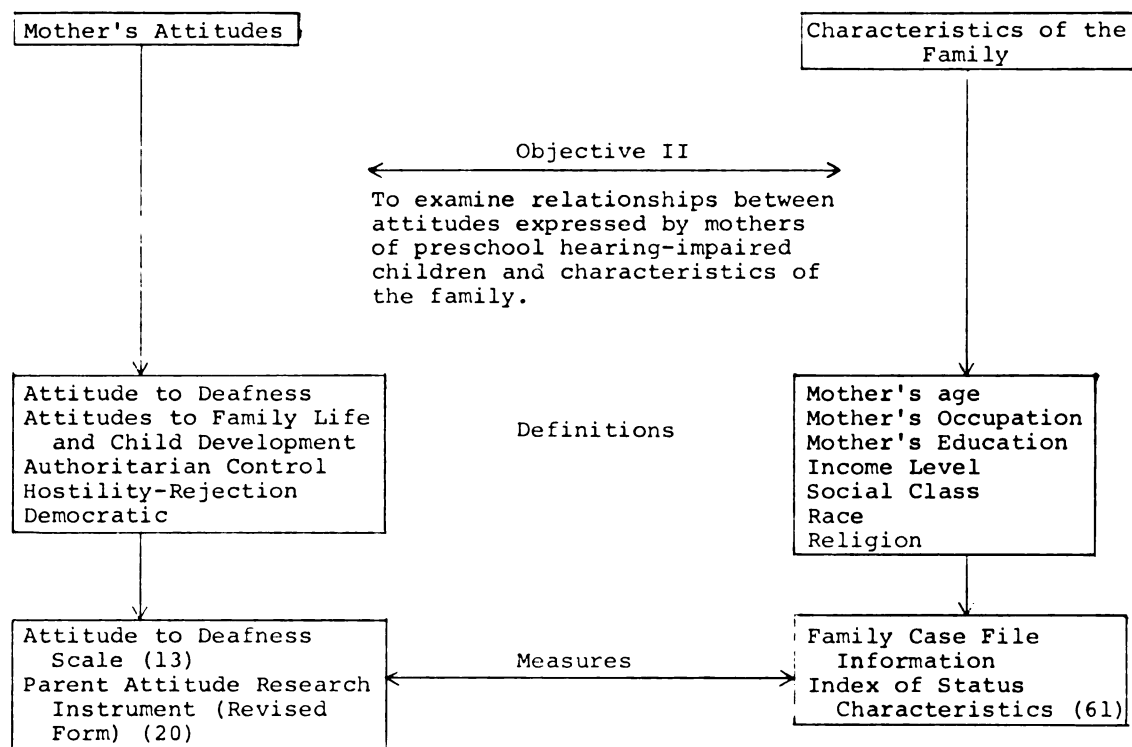


Figure 2.--Model of method for study of maternal attitudes and their relationship to characteristics of the family.

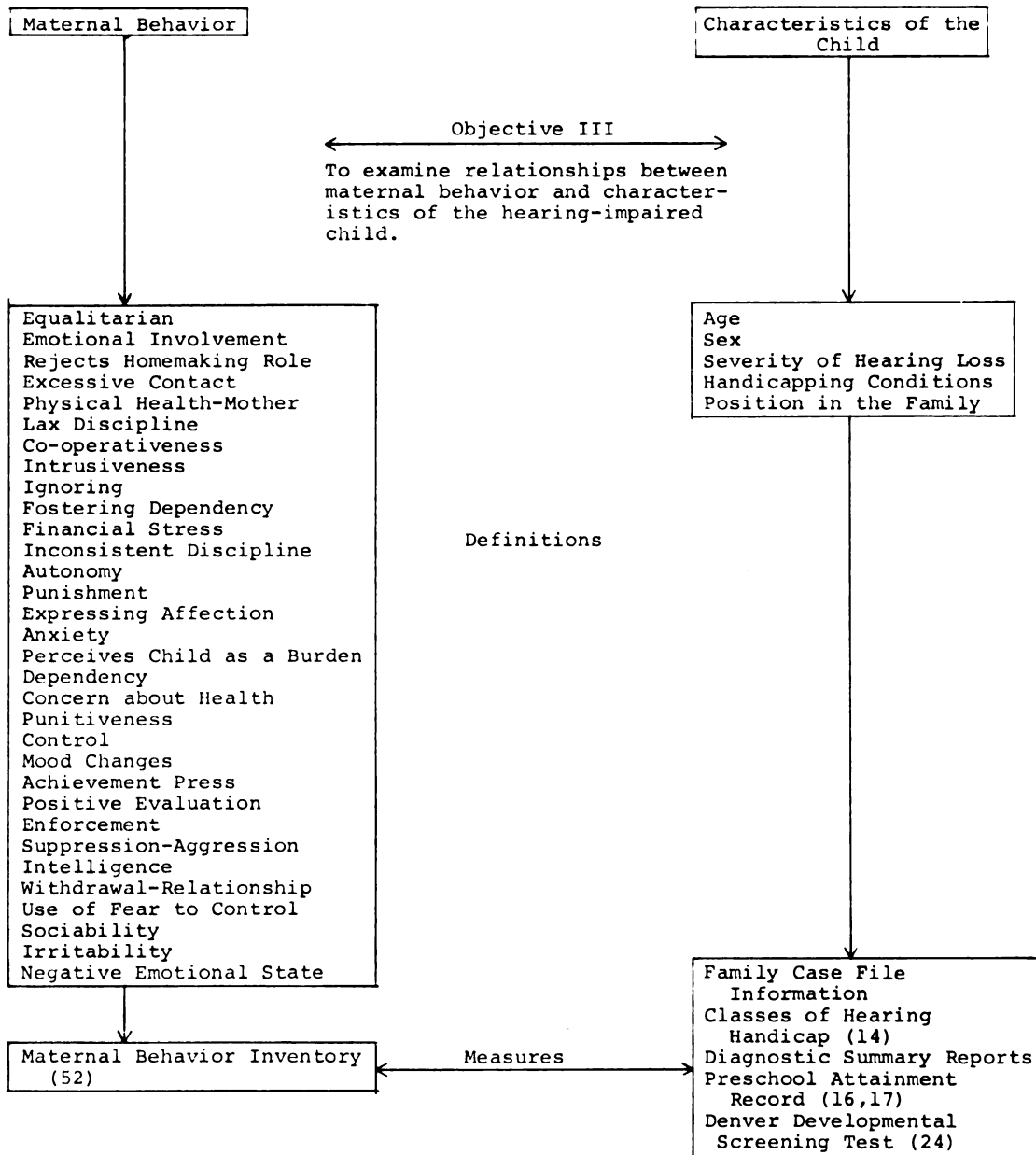


Figure 3.--Model of method for study of maternal behavior and its relationship to characteristics of the hearing-impaired child.

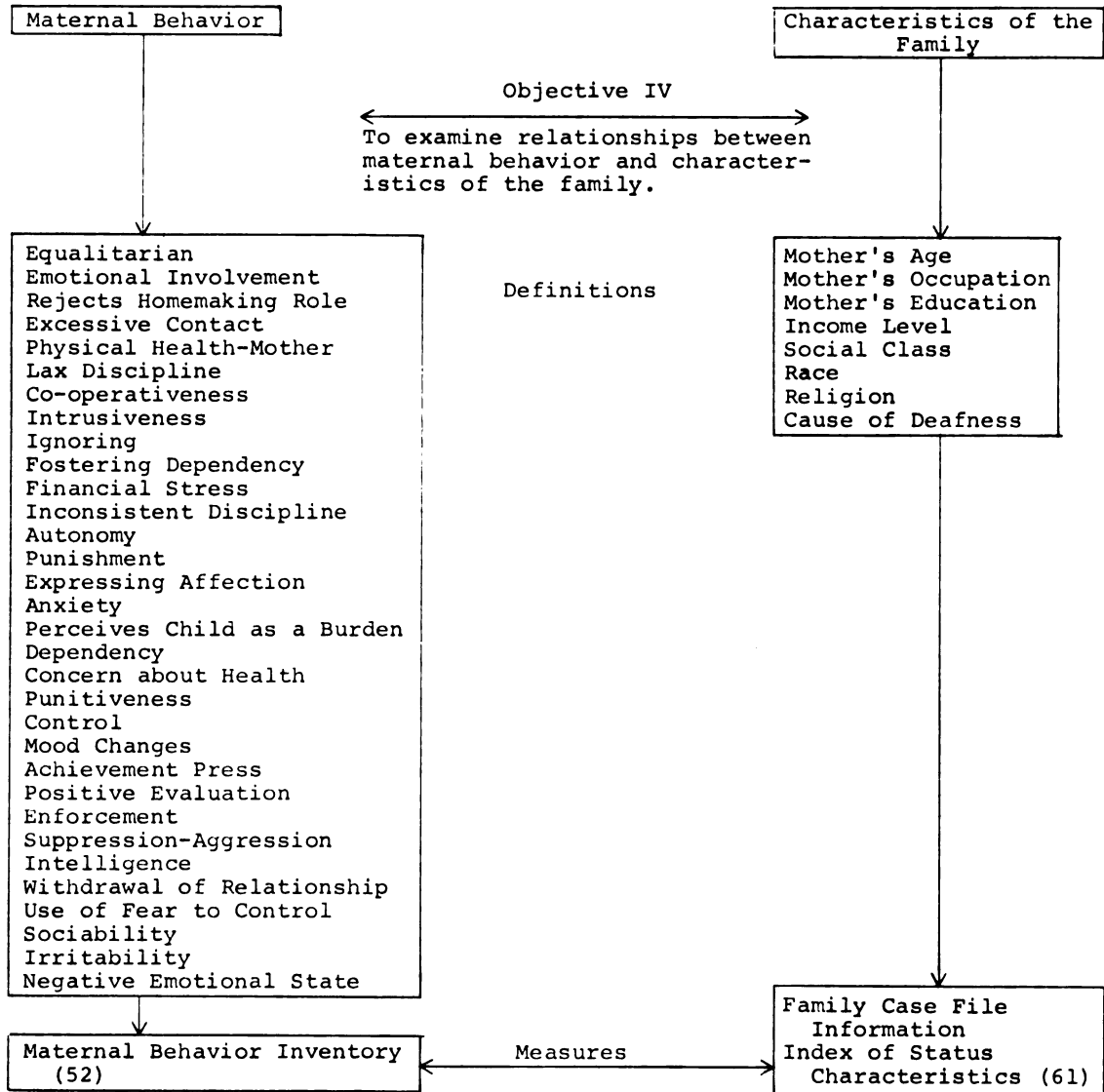


Figure 4.--Model of method for study of maternal behavior and its relationship to characteristics of the family.

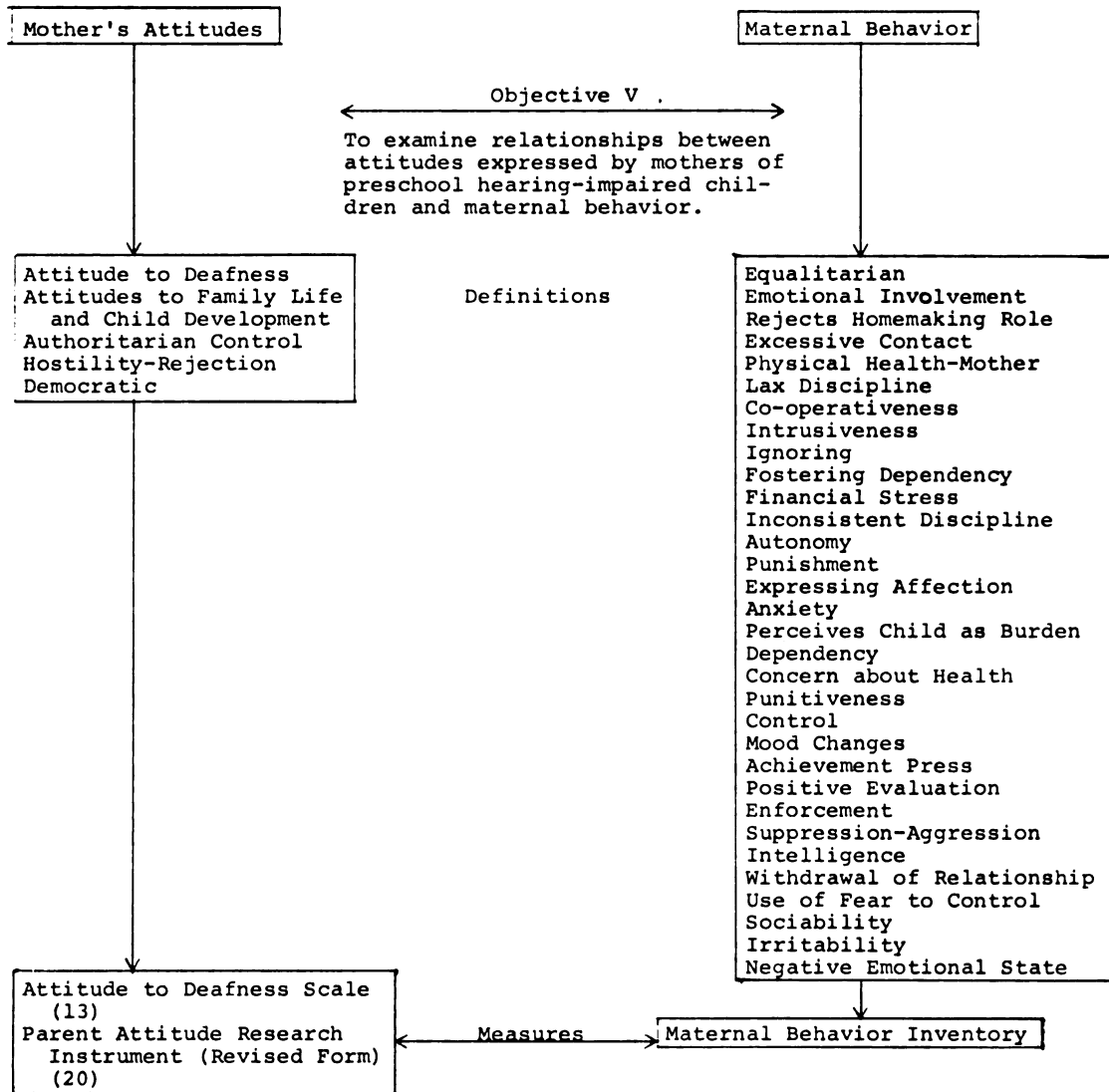


Figure 5.--Model of method for study of maternal attitudes and their relationship to maternal behavior.

CHAPTER II

REVIEW OF LITERATURE

The literature is reviewed under the following general headings: Psychological, Social and Cultural Factors Related to Maternal Attitudes toward Children; Studies Relating to Attitudes toward Deafness; Studies Relating to Maternal Behavior toward Children; and Relationship Between Maternal Attitudes and Behavior.

Psychological, Social and Cultural Factors Related to Maternal Attitudes toward Children

A complex multitude of physical, social and cultural factors influence the individual's attitude structure and behavioral patterns (15,59). Some of the factors identified in the research literature are: socioeconomic status (23,25,63,67), religion (68,69), educational level (23,25), age (22,25), family problems (30,33), personality needs (47,66), and patterns of adjustment to life situations (30). However, the results of these studies are not conclusive and the findings are often contradictory.

Socioeconomic Status

Davis and Havinghurst (15) studied child-rearing patterns in the 1940's and concluded that middle-class mothers exhibited greater harshness and an earlier, more general curbing of the child's impulses than lower-class mothers. Several years later Sears, Maccoby and Levin (57) reported that middle-class mothers were generally more permissive and less punitive toward their children than working-class mothers. They also concluded that middle-class mothers expressed more warmth toward their children. Contradictions in findings between these two studies are often attributed to differences in definition of social class, lack of differentiation between attitudes and behavioral measures, different methods of data collection and possible shift in child-rearing orientation over time.

Garfield and Helper (25) studied the attitudes of mothers of normal and mentally retarded children using the Parent Attitude Research Instrument. Two of the groups consisted of mothers of normal children, who differed in socioeconomic status. The third group consisted of mothers of children suspected of mental deficiency and held an intermediate socioeconomic status between the other groups. "It was found that the socio-economic status of the mother was significantly related to the expressed child-rearing attitudes and appeared of more importance in this regard than the normalcy of the child"

(25, p. 175). The factor of Authoritarian Control accounted for most of the differences between the groups studied.

Religion

The religious experience and beliefs of the parents may influence their acceptance of the handicapped child. Love (33) suggests that if parents have been reared in a strict puritanical religious environment they are more likely to be overwhelmed by guilt and less able to accept their child's handicap than parents whose religion gives them faith and support in everyday living. Parents may view the handicap as retribution for their sins and feel that they have failed the child and are inadequate. Feelings of guilt and inadequacy and the religious orientation to ways of dealing with these feelings may influence the degree of parental acceptance of the child.

Zuk states the opinion that "religious background can powerfully determine the degree of family acceptance of handicap in the child" (68, p. 407). The results of his most recent study tend to support this position (69). This study examined the relationships of religious background to maternal acceptance of children. Seventy-five mothers of retarded children responded to a mailed questionnaire designed to elicit information about religious practices and attitudes, feelings and beliefs about retarded children. Clinical judgements regarding the

acceptance of the child by the mother and adjustment of the child were obtained from a social worker and pediatrician who had seen the mother and child in a hospital setting. "A low but positive correlation was found between measures of maternal acceptance and religious background" (69, p. 538). Catholic mothers rated themselves as more intense in religious practices than non-Catholic mothers and also verbalized more acceptant attitudes especially on items in the areas of discipline and overdependence.

Educational Level

Zuckerman, et al. (67) in their report on a factor analytic study of the Parent Attitude Research Instrument (PARI) concluded that the education of the mother was most significantly related to scores on the scales. The more highly educated mothers were more likely to score low on the Authoritarian Control Scale.

Age

Zuckerman, et al. (67) reported a relationship between mother's age and attitude. Older mothers tended to have more severe attitudes on the scales. They expressed attitudes that were authoritarian, suppressive and hostile.

Family Relationships

The amount of marital harmony in a marriage influences the attitudes manifested toward the children.

"Parents who have a good marital relationship tend to accept their children, while those parents who have a poor

relationship tend to reject their children" (33, p. 82). Marital difficulties may place increased burdens upon the mother and give her less freedom to perform at maximum potential in her interaction with her child (27). Financial strain can add additional strain and interfere with the amount of time and energy the mother has to spend with her child (23).

Personality Characteristics

Parents have certain needs which can only be met by their children. When a handicapped child is born, some of the parental needs will be unmet because of the child's limitation in responsiveness to parenting and the increased demand on parental resources. The personal needs and background of the parents of a handicapped child will influence reactions in the following areas: feelings of disappointment, shame and guilt, a loss of pride in independence brought about by the need to utilize services of an outside agency, feelings of inadequacy and failure, ability to cope with problems, and ability to cope with increased responsibility (23).

Parents react to the child's handicap on the basis of their total personalities. Zuckerman and Olteon predicted that the Authoritarian Control factor on the PARI would relate to personality traits characteristic of the Authoritarian Personality. Using the California F Scale of Authoritarianism with thirty-two female psychiatric in-patients and eighty-eight unmarried student nurses they

found significant correlations in the predicted directions and concluded that ". . . authoritarianism in social attitudes is an expression of personality tendencies which affect attitudes about child-rearing" (66, p. 30). Another aspect of the same study tested the relationship between PARI responses and manifest personality needs reflected on the Edwards Personal Preference Schedule. It was found that:

. . . the mother who tends to be hostile and rejecting in her parental attitudes tends to have a high need for achievement, a low need for nurturance, and a high need for aggression . . . A woman whose significant rewards tend to lie in achievement outside the nurturing, maternal role is one who is likely to be irritable with her children and her husband because she is functioning in a role which does not fit her needs (66, p. 30).

Adjustment of Life Situations

Jordon has studied family reaction to crisis and reports that individuals and families develop their own system of reaction to crisis events (22). The family will react to the existence of a handicapped child in a manner similar to their pattern of reaction to other crisis events (68).

Studies Relating Attitudes to Handicapping Condition of the Child

Characteristics of the Child

The individual characteristics of the child, such as appearance, behavior, developmental rate, and responsiveness to parenting, are important determinants of

parental reaction. Studies of mothers of exceptional children indicate that "a mother's attitude is affected by her perception of the child as differing in some way from her expectations" (47, p. 32). Analysis of these variables should provide insight into parental attitudes toward children, the handicapped child and the particular disability (23).

Barsch studied maternal attitudes as part of his study on 177 mothers and fathers residing in Milwaukee County and known to have a handicapped child between the ages of 4 and 10 years in one of the following diagnostic categories: blind, deaf, mongoloid, cerebral palsy, and organic. The Parent Attitude Research Instrument was administered to the mothers in groups of five to ten people. The child-rearing attitudes of the mothers of the five groups of handicapped children were located in four quadrants defined by the interaction of the two attitudinal dimensions of authoritarian-control and of warmth. The groups were characterized by the following attitudes: ". . . blind-over-protective attitudes; deaf-over-indulgent attitudes; mongoloid-punitive attitudes; cerebral palsy-punitive attitudes and organic-over-indulgent attitudes" (4, p. 320). Barsch notes some limitations on the interpretation of the data because differences among the groups on the warmth dimension were minimal and minor variations from the present study could change the quadrant identification of the parent groups (4, p. 321).

The authoritarian dimension was related to handicapping condition and to the severity of the handicapping condition. "The most authoritarian attitudes were evidenced by mothers of the blind, followed by the mongoloid, cerebral palsied and deaf, with the mothers of organic having the least authoritarian attitudes" (4, p. 321). Mothers of the severely handicapped expressed the more authoritarian attitudes. Barsch concluded that "attitudes of authoritarian control in child-rearing may vary as a function of the degree to which the child's capacities are perceived to deviate from the normal and that the geneses of this perception may be in the visibility of the handicap" (4, p. 322).

Klebanoff (32) compared the attitudes of mothers of schizophrenic, brain-damaged, retarded and normal children. The mothers of schizophrenic children expressed fewer pathological attitudes than the mothers of brain-damaged and retarded children. A comparison of attitudes of the mothers of the brain-damaged children with those mothers of normal children indicated that the mothers of impaired children expressed more pathological attitudes than the mothers of normal children. These findings were interpreted to indicate that mothers react to having seriously disordered children and one expression of this reaction is in "pathological attitudes" (32, p. 309).

Other studies report no relationship between maternal attitudes and the handicapping condition of the

child. Margolis (36) studied a group of mothers of chronic asthmatic children and a control group and found no significant differences in PARI scores. Zuckerman, Barrett, Bragiel (65) reported that the authoritarian factor was not related to a child's diagnosis within a clinic group at a child guidance clinic and did not show marked differences between parents of children served in the clinic or a control group of parents.

However, a study by Mardoff indicated that mothers of disturbed children show a different pattern of attitudes from mothers of healthy youngsters (35).

Although some relationships have been reported regarding maternal attitudes toward children and various handicapping conditions, the discrepancies in findings and lack of relationships in some studies indicates that further research is needed in order to understand the relationships between attitude and handicapping condition.

Studies Relating to Attitudes Toward Deafness

Mindel (38) and Myklebust (41) report that the deaf child by the nature of his handicap is forced into a position of greater dependency and a longer period of dependency than the normal child. This requires the parents to adjust expectations and demands and to formulate new approaches in interaction with the child. Because of the child's limited ability to communicate verbally, his expression of ideas and preferences may be by crude behavioral affirmation or refusal and the parents must

negotiate and interpret for the child in many situations. This may result in the child becoming the object for the projection of his parents' feelings and he is particularly vulnerable for becoming the focus of family conflicts which are not his creation. The deaf child may in many instances be unable to fulfill the expectations and standards set forth by the parents. There has been very little research regarding the inter-personal dynamics and attitudinal variables associated with the unique problems encountered when there is a deaf child in the family.

Cowen (13) noted the need to study attitudes toward the disabling condition of deafness and felt that such studies would help establish normative attitude data as well as provide a basis for understanding demographic and personality variables related to the formation and modification of attitudes toward deafness. In response to this need Cowen, et al. (13) developed a 25-item Attitude to Deafness Scale. They examined the relationship between the antideafness scale scores and a series of attitude and personality measures. The results of the correlation analysis indicated that ". . . negative attitudes to deafness were related to anti-Negro, antiminority and proauthoritarian attitudes" (13, p. 190). No relationships were found between attitudes to deafness and measures of hostility and desirability, and they concluded that the other relationships found were not mediated by these factors. They suggested that the relationships

reported may point to a tendency to view the disabled person as being in the same underprivileged position in society as the minority group member and may reflect the inclination of the authoritarian individual to see the person with an auditory disability as a weak person.

Another part of the study was a behavioral prediction study using 48 male subjects; half of the subjects had high antideafness scores and half had extremely low scores. Subjects interacted with two confederates who were trained to present themselves to the greatest extent possible as equally attractive human stimulus objects. The manipulated variable was that one was wearing a hearing aid and the other was not. Subjects with high antideafness scores rated the confederate wearing the hearing aid significantly less favorable than the normal hearing confederate (13, p. 190).

Horowitz, Rees and Horowitz (29) studied the attitudes toward deafness expressed in a sample population that varied in age and maturity. One hundred subjects indicated degree of agreement to 97 statements designed to reflect realistic and unrealistic attitudes toward the deaf. The statements were categorized into four areas concerning treatment, training, personal characteristics and achievement characteristics of the deaf. The group of 100 subjects was divided into five groups of twenty subjects to represent a continuum of increasing maturity and education. Membership in the five groups

consisted of sixth-grade students, high school students, college students, graduate students, and members of a PTA group. Results indicated that there were no statistical differences among the five groups in their attitudes toward treatment and training of the deaf. Statistically significant differences among the groups were found for the personal and achievement characteristic categories. The largest number of responses in the unrealistic and neutral range were in the personal characteristic category. This suggests less awareness and reality orientation toward the personality characteristics of the deaf. They concluded that increased age and education were related to increased maturity and sophistication in regard to attitudes toward the deaf.

Neuhaus (42) conducted a study of the relationships between parental attitudes and emotional adjustment of deaf children at three age levels. The subjects were 84 deaf children with average intelligence who exhibited no severe secondary physical handicaps. The children were divided into age groups from 3 to 7, 8 to 12 and 13 to 19. The parents of the children studied were both living, were not deaf, had no foreign language handicap and had at least an eighth grade education. Shoben's University of Southern California Parent Attitude Survey was used to measure the expressed attitudes of the fathers and mothers toward children. The Attitude Toward Disabled Persons Scale, Form A, was used to measure the attitude toward

physical disability. The child's emotional adjustment to the school situation was rated using the Haggerty-Olson-Wickman Behavior Rating Schedule.

Neuhaus concluded that expressed maternal and paternal attitudes toward children affected the emotional adjustment of the deaf child. Maternal attitudes toward children were significantly related to the deaf child's emotional adjustment at all three age levels, whereas, the paternal attitudes toward children were significantly related to the child's emotional adjustment for age groups 8 to 12 and 13 to 19. When the attitudes of both the mother and father were related to the emotional adjustment of the deaf child it was found that ". . . deaf children whose parents expressed congruent positive attitudes toward children were rated as better emotionally adjusted than those deaf children whose parents expressed congruent negative attitudes" (42, pp. 722-23). When attitudes were noncongruent it was found that ". . . deaf children of parents with the combination of positive maternal-negative paternal attitudes towards children were rated as better emotionally adjusted than those deaf children of parents with positive paternal-negative maternal attitudes" (42, p. 723).

Maternal and paternal attitudes toward disability were not significantly related to the emotional adjustment of the child. No significant relationships were found between congruent positive and negative attitudes toward disability nor between noncongruent attitudes

toward disability and the deaf child's emotional adjustment. Neuhaus suggests that this lack of relationship between attitude toward disability and the deaf child's emotional adjustment may indicate that attitudes toward disability cannot be classified with other parental attitudes and that parental attitudes towards disability are more easily modified than attitudes toward children.

Significant differences were found between maternal and paternal attitudes toward disability for deaf children at the various age levels. "These differences indicated that mothers of deaf children between ages of 3 to 7 were more accepting of disability than mothers of deaf children between ages 8 to 12 and 13 to 19, and that fathers of deaf children between the ages of 3 to 7 and 8 to 12 were more accepting of disability than fathers of deaf children between ages 13 to 19" (42, p. 725). Parents may become more aware of the limitations that deafness imposes upon the individual as the child grows older. These attitudes then become ". . . less accepting or perhaps more realistic" (42, p. 725).

Specific characteristics of the deaf child may influence his parents reaction to him. Characteristics mentioned in the literature as being influential are: sex, age, birth order, sibling position, presence of accompanying secondary disability, severity of impairment, and a general level of functional ability (4,7,12,27,30). It is especially important for the parent and the

professional to understand the child's ability and potential so that they can reach a reality orientation concerning expectations regarding the child's functioning and his potential for change. This understanding will influence the nature of the parental interaction with the child and may influence the attitudes the parent holds toward the child and his future. However, the parent has little basis for understanding the child's level of developmental functioning and his view is often clouded by his emotional reaction to the child. Psychological, intellectual and educational assessment of the handicapped child is difficult because one cannot be sure that the child understands what is wanted or if he is able or unable to respond to what his intelligence dictates (18).

A search of the literature by Smith (58) revealed that the tests, scales and schedules used to evaluate the preschool deaf and hard of hearing child are highly inadequate. She questioned ". . . the existence of any tests normed at suitable levels and appropriately based for the study of the intellectual potential of deaf children from 2 to 4 years of age" (58, p. 1).

Review of tests currently used for the assessment of deaf children, such as Randall's Island Performance Series, Ontario School Ability Examination, Nebraska Test of Learning Aptitudes for Young Deaf Children, Leiter International Performance Scale, and the Stanford-Binet Intelligence Scale, indicates that extrapolated norms are

the rule and that children ages 2 and 3 appear to be practically absent from most of the standardizing population. Observations of preschool deaf children's behavior are often based on items and subtests of developmental scales and intelligence tests in common use for hearing children. Scoring of these developmental measures is often impossible because of the necessary omission of the verbal items (58). Avery (3) used the Vineland Social Maturity Scale in studying the social competence of 50 hearing-impaired children between 10 months to six years of age. The subjects were found to be normal in social maturity when the scale was scored as directed in the test manual. The group of hearing-impaired children were found to be superior in social maturity when an alternative scoring system was used. This system made some allowance for the way hearing handicapped children communicated by gesture in place of oral speech and language.

Miller (39) reports that in 1969 the Preschool Attainment Record was added to other means of evaluation for deaf children of the University of Kansas Medical Center. This scale is designed for use with children between the ages of one month to seven years who are not responsive to other systems of evaluation. It is useful in assessing children with or without various types of handicaps in that information for scoring is obtained through an interview with a person familiar with the child. Blair (9) investigated reporting accuracy in a study by

comparing the ratings of the mothers and teachers of four-year-old children enrolled in a preschool program based on a diagnostic readiness approach to learning disabilities. Mothers rated boys significantly higher than the teacher rated them while there were no significant differences in their evaluations for girls.

The Denver Developmental Screening Test was designed to detect developmental delays in the areas of motor, language and personal-social development and has been developed and used to detect delays for handicapped children (24). This test combines observation of the child's performance on items presented as well as interview information from a person familiar with the child's usual behaviors. A gross estimate of developmental level is obtained and has been a sensitive indicant of developmental problems.

Two studies regarding the development of tests designed for use with preschool hearing-impaired children are reported. Lowell and Metfessel (34) developed an experimental concept formation test for children ages two to six. Validity of the test was based on the assumption that in very young deaf children concepts are abstracted from concrete objects. Smith (58) reports preliminary steps in the development and standardization of a test for preschool hearing-impaired children. This test includes nonverbal tasks presented in a structured pantomime

method. When standardized the instrument will be an important aid in assessing the preschool deaf child.

Studies relating attitudes to handicapping condition need to consider the handicap and its severity as well as its influence on the total functional ability of the child. An understanding of these factors may help in gaining insight into the complex interactional relationship between parent and child and on the role that the child's condition plays in this interaction.

Studies Relating to Maternal Behavior toward Children

Bell, Bayley and Schaefer (51,52,55) report the development of a scale for rating maternal behavior. The conceptual scheme for the scale was developed from an analysis of concepts used in studies of parental attitudes and from a review of concepts regarding mother-child interaction. Circumplex ordering of the variables resulted in two axes of love-hostility and autonomy-control (48).

Factor analysis of the scores of 100 unmarried nursing students revealed five independent factors: Suppression and Interpersonal Distance, Hostile - Rejection of the Homemaking Role, Excessive Demand for Striving, Over-possessiveness, and Harsh Punitive Control. However, a subsequent factor analysis of 100 multipare mothers revealed three factors: Approval of Maternal-Control, Approval of Expression of Hostility and Approval

of Positive Attitudes toward Child-rearing. Another study of 100 primiparae mothers revealed a pattern that differed from both of the other groups. "Apparently, the factorial structure of these scales is dependent upon the roles a mother has had in parent-child relationships, with experienced mothers revealing a simpler pattern" (49, p. 127).

Previous studies of maternal child-rearing practices (15,51,60) indicate that there is a relationship between the nature of the practices and the socio-economic status of the mother. Bayley and Schaefer studied the relationship between maternal behavior and the following socio-economic variables: father's occupation, family income, social rating, and educational level of both mother and father using data from the Berkley Growth Studies. Their findings indicated a tendency for mothers of higher socio-economic status to be warm, understanding and accepting, and for those of lower status to be more controlling, irritable and punitive. These tendencies were present for the two groups of children ages one to three, and nine to fourteen years. The differences found were greater for the mothers of boys than for the mothers of girls. "In the dimension of Autonomy versus Control there is some evidence for a differential socio-economic determiner in the treatment of infant sons and daughters; that is, higher status boy babies and lower status girl

babies seem to have been granted a measure of autonomy and freedom from maternal supervision" (5, p. 76).

One study relating maternal behavior to perceived inadequacies in the child is reported by Merrill. He conducted an observational laboratory study of mother-child interaction in a free-play situation. The experimental mothers were told that their children had not shown full realization of their capacities. The control group of mothers were not exposed to this mild criticism. After the mothers received the criticism of their child, they exhibited significant increases in behaviors classed as directing, interfering, criticizing and structuring changes in activity. Merrill concluded that middle class mothers tend to react to perceived inadequacies of their children by implementing authoritarian control of the child's behavior (40,41). Ross suggests that in view of the fact that the criticisms implied that there was something wrong with the child, that this finding was relevant to how mothers of handicapped or defective children might react to the recognition that something is wrong with their child (47).

Relationship Between Maternal Attitudes and Behavior

It is commonly assumed that the measurement of parental attitudes yields important insights into parent-child relationships. This assumption is based on the conceptualization of attitudes as having a behavioral

component in that they predispose one to make a preferential response. Allport notes that "If attitudes constitute a predisposition toward action . . . then correctly and accurately recorded attitudes would serve as indicants of future behaviors" (2, p. 44). A review of the literature regarding attitudinal and behavior aspects of the parent-child relationship shows that while many studies have explored the parental attitude-child behavioral relationship very few have been concerned with the mediating link between parental attitudes and parent behavior (6,26). Zunich's review of literature revealed that the relationships between attitudes measured and parent behavior are not clearly understood and that empirical investigations have not established the validity of the concept. He states in 1962 that ". . . no studies directly concerned with the relation between parental attitudes and behavior of parents in interaction with their children have been reported in the literature" (70, p. 155). Abel (1) reports the need for such studies.

In response to the stated need, Zunich conducted a study to test the hypothesis that maternal attitudes toward children are significantly related to maternal behavior in interaction with her child (70). The subjects were 40, white, American-born, middle-class mothers between the ages of 20-35 who had two or more children, were full-time homemakers, and were from intact families. Twenty of the children were male and twenty female. They

ranged in age from two years, nine months to five years, one month. Observations were made of the mother-child interaction in an unstructured laboratory setting. After the observation session mothers responded to 16 scales of the Parent Attitude Research Instrument. Of the 272 comparisons made, only twelve evidenced significant relationships at the .05 level or beyond. Conclusions were not drawn from these relationships because the number of relationships could be attributed to chance. Zunich suggests that the lack of relationship may be a function of the observational method used and that maternal behavior in the laboratory setting may not have been representative of their behavior at home. However, if reasonably close approximations of the usual mother-child relationships were made, the finding suggests that ". . . maternal behavior of middle-class mothers cannot be predicted for an analysis of maternal attitudes toward children" (70, p. 163). The study of parental attitudes of child guidance cases by Zuckerman, Barrett and Bragiel (65) reports that the attitude scores of the mothers and fathers as measured by the PARI failed to predict the parents cooperativeness with the clinic and did not distinguish between those who prematurely terminated their contact and those who remained in clinic contact.

Barsch (4) and Ross (47) point out that the relationships between attitudes and behavior are very complex and that further research is needed in this area before

conclusions can be drawn regarding the effects of child-rearing attitudes and practices. The presence of a handicapped child in the family adds additional variables that need to be considered when working with the handicapped child and his parents.

CHAPTER III

DESCRIPTION OF THE SAMPLE

The sample was a purposive, non-random one and included the seventeen families served for at least a six-month time period by the Language Development for Deaf Children through Parent Education Program conducted in the area of Flint, Michigan in 1969. A family qualified for service when there was a hearing-impaired child below five years of age living in the home.

Characteristics of the Families

Family Composition

Fifteen of the families were intact families with the original mother and father living at home with the children of the family. In two of the families the mother was the only parent living in the home with the children but the parents were not legally separated or divorced.

The number of children in the families ranged from one to twelve. The mean number of children per family was 3.6 and the median was three.

Race

Fifteen of the families were Caucasian and two were Negro.

Religion

Husbands and wives in all families were of the same religious affiliation. Nine families were Protestant and eight were Catholic.

Income

Reported family incomes by category were:

Under 4,000	1
4,000-5,999	1
6,000-7,999	2
8,000-9,999	7
10,000-11,999	5
12,000 and over	1

Social Class

Social class rankings were made using Warner's Index of Status Characteristics (61). Five families were in the lower-lower class, two were in the upper-lower class, nine were in the lower-middle class and one family was in the upper-middle class.

Characteristics of the Fathers

The natural fathers of the preschool hearing-impaired children ranged in age from 27 to 39 years with a mean age of 30.8 years. Median age was 30 years.

Educational level and occupations of the fathers are shown in Table 1. Most of the fathers were high school

TABLE 1.--Fathers' Educational Level and Occupation.

Occupation ^a	Education Less than High School	High School	College
None	1	1	
Manual	2	6	
Foreman		1	
Clerk		3	
Service		1	
Professional			2

^aClassification based on categories used by Lloyd Warner in Social Class in America (New York: Harper & Row, Pub., 1960).

graduates and were employed in manual work. The two fathers with a college education were studying for degrees beyond the masters level. Four of the fathers were graduates from schools for the deaf. Three of these fathers were employed in manual occupations and one did not have an occupation.

Characteristics of the Mothers

The natural mothers of the preschool hearing-impaired children ranged in age from 23 to 38 years. Mean age was 28.9 years and median age was 28 years. Mean age difference between husbands and wives was 1.9 years with the wives being the same age or younger than the husband.

Educational levels and occupations of the mothers are shown in Table 2. Most of the mothers were high school graduates and full-time housewives. One mother held a college Bachelor's degree.

TABLE 2.--Mothers' Educational Level and Occupation.

	Educational Level		
	Less than High School	High School	College
Housewife	2	11	
Employed		3	
Non-paid Community Work			1

Four of the mothers were graduates from schools for the deaf. Two of these mothers were employed outside the home on a full-time basis and two were housewives.

According to the mother's report, deafness was caused by rubella in four cases, meningitis in one case and by inherited factors in four cases. Six mothers reported the cause of deafness as unknown. One mother reported prenatal factors as the cause and another mother attributed the cause of deafness to trauma suffered by the infant at birth.

Characteristics of the Hearing-Impaired Children

The children studied ranged in age from 17 months to 55 months. The mean age was 39.8 months or 3.3 years. The median age was 39 months or 3.3 years. Nine of the children were girls and eight were boys.

Five of the children were first children with three of these having younger siblings. Eight of the children were middle children and four were the last child in the family.

Each child was assessed by a qualified audiologist and the hearing losses were categorized according to the classes of Davis and Silverman (14). The child's handicapping conditions were rated by the staff psychologist and teacher of the deaf based on their knowledge of the physical defects. Table 3 shows the distribution of severity of hearing loss in relation to the physical handicapping condition.

TABLE 3.--Severity of Hearing Loss and Handicapping Condition.

Severity	Handicapping Condition		
	Hearing	Hearing + Heart/or Eyes	Multiple
Mild	1		
Marked	4	3	
Severe	5		
Unknown	1		3

Description of the Instruments

The tests and inventories used in the study were the Parent Attitude Research Instrument (PARI), Attitude to Deafness Scale, Maternal Behavior Inventory, Preschool Attainment Record (PAR), and the Denver Developmental Screening Test (DDST). The conceptual content of each instrument as well as the methods of recording responses and for scoring are described below. Copies of each instrument are included in Appendix A.

Parental Attitude Research Instrument (PARI)

Emmerich's (20) modified form of the Parental Attitude Research Instrument (Appendix A) originally developed by Schaefer and Bell (53,54) was used to assess maternal attitudes toward family life and child development. This set of 55 statements includes a mixture of items taken from Schaefer and Bell and Zuckerman (64,67) with some items formulated by Emmerich. The three factors and the corresponding scales on the mother's form were:

Authoritarian Control--Fostering dependency, seclusiveness of the mother, suppression of aggression, excluding outside influences and suppression of sexuality;

Hostility-Rejection-Marital Conflict--Rejection of the homemaking role, and irritability;

Democratic Attitudes--Encouraging verbalization, equalitarianism, comradeship and sharing.

For each statement, the mother was asked to circle letter which best represented her opinion of the state-according to the following key:

A = if you strongly agree
a = if you mildly agree
d = if you mildly disagree
D = if you strongly disagree

Scoring was based on assigning the numerical values of 4 for strongly agree, 3 for mildly agree, 2 for mildly disagree and 1 for strongly disagree. Scoring was reversed for items where agreement signified the absence of the attitude so that high scale scores represent the presence of the attitude.

Attitude to Deafness Scale

The Attitude to Deafness Scale (Appendix A) contains 25 items presented in a 4-point Likert-type rating framework of strongly or mildly agree or disagree. Agreement on 21 of the items indicates a negative attitude to deafness whereas agreement indicates a positive attitude to deafness on four of the items. Positive items are reverse-scored so that higher scores on the final scale indicate more negative attitudes to deafness.

Cowen, et al. reported a corrected split-half reliability of .83 (14:185) for the scale. A judging procedure was used to establish face validity. Concurrent validity was demonstrated in a correlational study in which negative attitudes to deafness were related to a cluster of socio-psychological attitudes. The scale had predictive validity in an experimental test situation (13).

1

Maternal Behavior Inventory

The Maternal Behavior Inventory (Appendix A) was designed to provide a set of constructs for the organization and quantification of behavioral observations of mother's behavior toward her child (55,59,62). Thirty-two scales based on major concepts were derived from 186 statements of trait-actions defining the concept. The scales are equalitarian, emotional involvement, rejection of the homemaking role, excessive contact, physical health of the mother, lax discipline, co-operativeness, intrusiveness, ignoring, fostering dependency, financial stress, inconsistent discipline, autonomy, punishment, expressing affection, anxiety, perceiving child as a burden, dependency, concern about health, punitiveness, control, mood changes, achievement press, positive evaluation, enforcement, suppression of aggression, intelligence, withdrawal of relationship, use of fear to control, sociability, irritability and negative emotional state.

Ratings on the individual scale items were made on a continuum of 1-7 with a rating of 1 indicating that the behavior was "very much like the mother" and a rating of 7 indicating that the behavior was "little like the mother." The individual item scores were added to compute the total scale scores which indicate the presence of the behavior.

Inter-rater reliabilities derived from ratings of interview notes were reported to range from .75 to .95

with a median combined reliability of .85 (52). Construct validity of the conceptual scheme was supported in correlational studies of ratings of maternal behavior (50,55).

Preschool Attainment Record

The Preschool Attainment Record (Appendix A) was designed to assess the physical, social and intellectual functions of preschool age children with or without various types of handicaps (17). "The purpose of examination is to provide an assessment of children who are not readily accessible to direct examination because of sensory impairments, speech or language difficulties, emotional disturbances, neuromuscular embarrassments, resistance to examination, cultural problems, and the like" (18, p. 8).

Descriptive information regarding the child's usual behavior can be obtained from an informant familiar with the child and is scored for age standing according to item definitions. Observations of the child's performance may supplement the information obtained in the interview. The interviewer seeks to establish descriptions of the child's minimal, maximal and variable attainment performances on each item in the eight behavior categories and records the information on the Data Record and the Summary Profile.

The eight categories of developmental behavior included in the Record are: Ambulation, Manipulation, Rapport, Communication, Responsibility, Information,

Ideation, and Creativity. Each of these categories has one item for each six-month level from birth to seven years. Items are scored:

- a. + (credit value of 1) if the child's performance satisfies the item definition,
- b. + (credit value of .5) if the child's performance is intermittent or marginal, and
- c. - (credit value of 0) if the performance is unsatisfactory or not well established.

The Summary Profile of Items shows variability of performance by behavioral category and age progression by age level.

Scores obtained include a Raw Score, an Attainment Age and an Attainment Quotient. The Raw Score is the total of the values of items passed with a + or +. The Attainment Age in years is derived by dividing the total Raw Score by 16, the number of items per year. The Attainment Age in months is derived by multiplying the Raw Score by .75, the "month value" of each item. The Attainment Quotient is the Attainment Age divided by the child's age multiplied by 100.

The Preschool Attainment Record has not been normatively standardized although some standardization data are available for limited groups. Doll states that "We prefer to use this Record for the time being as a developmental inventory which is speculatively developmental but not statistically verified . . . as an standardized inventory, comparative studies can be made even without normative standardization" (16, p. 23).

The Denver Developmental Screening
Test (DDST)

The Denver Developmental Screening Test (DDST) (Appendix A) was developed as a screening device to assist in the early detection of developmental delays in pre-school age children (24). The test can be used by professional child care workers who are not trained in psychological testing but who need a guide to aid in the detection of significant developmental delays so that further diagnosis and treatment can be prescribed.

The DDST contains 105 items designated by a bar located under an age scale which extends from birth to six years so as to indicate the ages at which 25, 50, 75 and 90 per cent of the standardization population performed the item. The items are grouped in the behavioral categories of: gross motor, fine motor-adaptive (the use of hands and, as the child grows older, the ability to solve nonverbal problems), language (the ability to hear, and talk), and personal-social (the ability to perform tasks of self-care and to relate to others) (24).

The test items are presented to the child according to the standard procedure and scoring is on a pass or fail basis depending on whether or not the child's performance meets the item description. In some instances the examiner may rely on the parent report of the child's behavior. The examiner determines which items to administer by drawing a vertical line through the behavior categories at the child's chronological age and administers

those through which the line passes plus additional items to determine the point at which the child passes and fails all items in each category. The parent may administer an item if the child refuses to perform for the examiner.

Delays in development can be noted by items passed and failed in relation to the child's chronological age line. A developmental "delay" is defined as "any failure by a child on an item if he is older than the age at which 90% of the children pass the item" (24, p. 7). Test results can be categorized in each sector as:

- a. Normal--if the child passes at least one item intersected by his age line and if he has no "delay" on any item within that sector.
- b. Questionable--if the child is delayed in just one item and/or if he does not pass any item which is intersected by his age line, and
- c. Abnormal--if the child has two or more delays in the sector.

The test design does not allow for the computation of a developmental or mental age or quotient. However, a system for rating the child's total test performance was used for comparisons between categories and in a study of test validity and reliability (24, p. 4). The ratings and definitions used were:

- a. 1--normal performance and no developmental "delays" on any test item,
- b. 2--a "delay" on one test item or failure to pass at least one item in each category through which his chronological age line passed, and

- c. 3--two or more delays on items in any one sector.

Preliminary results of studies on test reliability and validity were reported in the test manual. A 95.8 per cent item agreement was reported in a test-retest reliability study. Reliability among examiners based on per cent of agreement on items passed or failed ranged from 80 to 95 with an average per cent agreement of 90. A Pearson product moment correlation of $r = .97$ was reported in a validity study in which DDST Ratings were compared with ratings on the Revised Yale Developmental Schedule (24).

Collection of Data

Family Information

The cumulative case file records for each child were used as the source of information regarding family members and family composition. These records contained family data forms, a description of the child's developmental history, audiological assessment reports, psychological evaluation reports, medical information and weekly notes recorded by the teacher of the deaf who was working with the family. Information regarding the age, educational level and occupation of the mother and father as well as information regarding the age, sex and family position of the hearing-impaired child was recorded from the information forms. Data concerning race, religion and family income were gathered through an interview by the

family worker. Social class ratings were obtained using case file information and case worker reports on home visitations. Ratings were made according to Warner's (61) system of classification. The following categories were used: lower-lower, upper-lower, lower-middle, and upper-middle.

Hearing Loss

All the children were tested in the audiological suite at the Mott Children's Health Center by the staff audiologist when they entered the Language Program. Further evaluations were completed as necessary and the most recent audiogram was used in making the ratings for this study. Routine play audiometry techniques were used with most of the children. However, distraction audiometry/physiological audiometry techniques were used with four of the children because they were unable to respond to the play audiometry techniques. Ratings of the hearing loss as mild, marked or severe were made using the guidelines in Table 4. When the degree of loss could not be determined it was categorized as unknown.

These classes of hearing handicap indicate the usual handicap of the average individual under the varying circumstances of everyday life.

TABLE 4.--Classes of Hearing Handicap.^a

Hearing Threshold Level dB (ISO)	Class	Degree of Handicap	Average Hearing Threshold Level for 500, 1000 and 2000 Hz in the Better Ear		Ability to Understand Speech
			More Than	Not more Than	
40	C	Mild Handicap	40 dB	55 dB	Frequent difficulty with normal speech
55	D	Marked Handicap	55 dB	70 dB	Frequent difficulty with loud speech
70	E	Severe Handicap	70 dB	90 dB	Can understand only shouted or amplified speech--or none.

^aAdapted from: Davis, Hallowell & Richard S. Silverman, eds., Hearing and Deafness, 3rd. Edition (New York: Holt, Rinehart and Winston, 1970).

7

Maternal Attitudes

The mothers of the hearing-impaired children were asked to complete the Attitude to Deafness Scale and the Parent Attitude Research Instrument during a routine weekly visit by the family worker. The mothers were informed that the information requested was part of a general research study, that their responses would be confidential, and that the family worker would not be aware of how the mother responded. The attitude scales were handed to the mother enclosed in an unsealed envelope and she was requested to return them in the sealed envelope. During the time that the mother was completing the scales the family worker interacted with the deaf child in another room or across the room. If the mother requested help, the family worker responded with a statement such as, "Respond according to how you feel." The sealed envelopes were returned to the program office by the family worker who wrote the family code number on the envelope after leaving the home.

Maternal Behavior

One week after the mother completed the attitude scales, the seven family workers completed the Maternal Behavior Inventory. Each worker rated the families he had been working with for the past three months. They received training and experience in rating sample behaviors before they were asked to complete the inventory. When the behavior statement implied interaction with a single child, the hearing-impaired child was the referent. All ratings

were reviewed by the case supervisor who was familiar with each mother and child and with the on-going mother-child relationship.

Developmental Level

The Denver Developmental Screening Test and the Preschool Attainment Record were administered to each child individually by a teacher of the deaf who had previous testing and diagnostic experience. A second test scoring was done by the child development instructor who observed each session. The child's mother and family worker brought the child to the testing room and remained as observers throughout the session. They were asked to participate only if the child was not co-operative or if the mother's report was necessary for the item scoring. Two of the children were tested in their homes with materials from the testing room. The test administrator did not feel that the change in environment influenced the test results. After the testing session, the family worker was asked to evaluate the child's performance and the mother's responses based on her knowledge of the child.

Items were presented following the format of the Denver Developmental Screening Test with the related items from the Preschool Attainment Record being inserted at appropriate times. Items were given a second time if the tester felt that the child had not been sufficiently attentative or motivated during the first presentation.

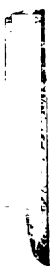
Standard materials were used except for a larger ball and 4" x 6" enlargements of the pictures on the Denver Developmental.

The scoring of items followed the criteria stated in the test manuals. When possible, the child's observed behavior was used as the basis for scoring, except in cases where it was impossible to observe the behavior or if the item required a response from the mother. Total test scores were computed according to test directions. An adjusted score to allow for the hearing impairment was derived by omitting the language items in the computation of the score.

The test results received a 1, 2, 3 rating based on the rating system reported in the validation studies of the Denver Developmental Screening Test. The Attainment Quotients on the Preschool Attainment Record were rated as follows: 100+ = 1, 80=99 = 2, 79 Below = 3.

Data Analysis

Computer analysis of the data was completed on the Michigan State University 3600 Computer. The Bastat Routine for Correlation Analysis was used. Statistical consultation was obtained through the Research Office in the College of Education at Michigan State University. A separate analysis was made including and excluding the four deaf mothers.



CHAPTER IV

FINDINGS

The first part of this chapter includes a descriptive summary of the maternal attitudes expressed on the Attitude to Deafness Scale and the Parent Attitude Research Instrument as well as ratings of the maternal behavior on the Maternal Behavior Inventory. Descriptive results of the performance levels of the hearing-impaired children on the Preschool Attainment Record and Denver Developmental Screening Test are also included. The results of the study in relation to the five hypotheses are reported in the second section.

Descriptive Results

The range, mean and mean item ratings of the mothers on the Attitude to Deafness Scale and the Parent Attitude Research Instrument are included in Table 5. Ratings on the Attitude to Deafness Scale ranged from 25 to 54, with a mean rating of 40.1. The average item rating was 1.6 which indicates that the mothers generally expressed disagreement with statements expressing a

TABLE 5.--Range and Mean of Maternal Attitude Scores.

Attitude	Range	Mean	Mean Item Rating
Attitude to Deafness	25-54	40.1	1.6
Authoritarian Control	39-61	49.4	2.0
Fostering Dependency	5-11	7.7	1.5
Seclusiveness of Mother	7-17	11.0	2.2
Suppression-Aggression	5-17	10.0	2.0
Excluding Outside Influence	5-18	10.1	2.0
Suppression of Sexuality	8-14	10.6	2.1
Hostility-Rejection	30-50	40.2	2.7
Marital Conflict	11-18	13.9	2.8
Rejects Homemaking Role	9-16	12.4	2.5
Irritability	10-20	14.2	2.8
Democratic	35-57	48.4	3.3
Equalitarianism	10-20	14.5	2.9
Encouraging Verbalization	10-20	16.5	3.3
Comradeship and Sharing	11-20	17.4	3.5

negative attitude to the handicap of deafness. Mean item ratings on the Parent Attitude Research Instrument indicate that mothers tended to agree with statements related to democratic attitudes and disagreed with statements regarding authoritarian control. The mean item rating on the Hostility-Rejection Scale is at the mid-point between agree and disagree.

The correlation matrix for the attitude scales are included in Table 6. Levels of significance were taken from Edwards (21). Correlation coefficients of .41 to .55 are significant at the .05 level of confidence and coefficients of .56 or above are significant at the .01

TABLE 6.--Correlation Matrix for Maternal Attitudes.

	Attitude to Deafness	Authoritarian Control	Fostering Dependency	Seclusiveness of the Mother	Suppression of Aggression	Excluding Outside Influence	Suppression of Sexuality	Hostility-Rejection	Marital Conflict	Rejection of Homemaking Role	Irritability	Democratic	Equalitarianism	Encouraging Verbalization	Comradeship and Sharing
Attitude to Deafness	1.00														
Authoritarian Control	.20	1.00													
Fostering Dependency	.20	.57**	1.00												
Seclusiveness of the Mother	.23	.65**	.49	1.00											
Suppression-Aggression	.24	.04	.39	.15	1.00										
Excluding Outside Influence	.31	.71**	.24	.17	.34	1.00									
Suppression-Sexuality	.17	.63**	.29	.08	.17	.60**	1.00								
Hostility-Rejection	.18	.08	.09	.30	.04	.20	.04	1.00							
Marital Conflict	.21	.07	.26	.20	.12	.15	.02	.75**	1.00						
Rejection-Homemaking Role	.17	.23	.16	.48*	.47*	.22	.01	.77**	.37	1.00					
Irritability	.35	.07	.04	.24	.18	.15	.03	.92**	.60**	.71**	1.00				
Democratic	.25	.33	.13	.07	.02	.43*	.35	.09	.12	.06	.20	1.00			
Equalitarianism	.08	.02	.01	.19	.14	.15	.29	.32	.46*	.04	.29	.70**	1.00		
Encouraging Verbalization	.21	.46*	.20	.20	.21	.53*	.41*	.02	.02	.10	.07	.73**	.22	1.00	
Comradeship and Sharing	.23	.13	.01	.22	.52*	.12	.08	.14	.24	.07	.05	.56**	.04	.01	1.00

*Significant at .05 Level

**Significant at .01 Level

level of confidence. There were no significant correlations between the Attitude to Deafness Scale and the scales on the Parent Attitude Research Instrument. On the Parent Attitude Research Instrument, the sub-scales were positively related to the summary scales at or above the .01 level of confidence, except for the sub-scale of Suppression of Aggression in the Authoritarian Control Scale. This scale was positively related to the Marital Conflict sub-scale within the Hostility-Rejection Scale.

There were few significant correlations between the sub-scales. Within the Authoritarian Control Scale, Secclusiveness of the Mother and Fostering Dependency were related at the .05 level of confidence and Suppression of Sexuality and Excluding Outside Influence were related at the .01 level of confidence. The sub-scale of Irritability was related to the other sub-scales in the Hostility-Rejection Scale. There were no significant correlations among the sub-scales in the Democratic Scale.

The general lack of correlations among sub-scales indicates that for the sample studied the sub-scales functioned independently and were not intrinsically related to one another.

Table 7 includes the scores on the Maternal Behavior Inventory. The mean scale scores ranged from 17.1 to 34.7. The behaviors of sociability and cooperativeness were rated as being characteristic of these

TABLE 7.--Mean and Range for Total Scale Scores and Mean Scale Rating.

Maternal Behavior	Mean Scale Rating	Mean Scale Score	Range of Scale Scores
Equalitarian	3.5	20.8	10-35
Emotional Involvement	4.3	25.9	18-33
Rejects Homemaking Role	4.0	23.9	13-35
Excessive Contact	3.0	17.9	7-26
Physical Health-Mother	4.9	29.1	13-42
Lax Discipline	3.8	22.9	9-36
Cooperativeness	3.0	18.2	9-30
Intrusiveness	4.9	29.6	8-33
Ignoring	5.4	32.4	19-41
Fostering Dependency	4.3	26.1	16-35
Financial Stress	5.3	31.6	10-42
Inconsistent Discipline	3.3	19.6	5-25
Autonomy	2.7	16.3	11-29
Punishment	5.1	30.4	9-39
Expressing Affection	2.9	17.1	6-35
Anxiety	4.2	25.1	15-32
Perceives Child as Burden	4.9	29.6	10-41
Dependency	4.6	27.8	9-38
Concern about Health	5.6	33.7	21-42
Punitiveness	5.8	34.7	10-35
Control	4.7	28.4	19-39
Mood Changes	4.6	27.5	14-36
Achievement Press	3.9	23.1	11-40
Positive Evaluation	3.1	18.4	7-34
Enforcement	4.2	25.1	12-35
Suppression of Aggression	4.7	28.1	15-26
Intelligence	3.4	20.4	8-31
Withdrawal-Relationship	5.2	31.4	8-42
Use of Fear to Control	5.0	29.8	8-38
Sociability	3.2	19.1	9-37
Irritability	5.7	34.4	8-42
Negative Emotional State	4.7	28.0	13-40

mothers. The mothers studied tended to have excessive contact with the child but also granted the hearing-impaired child autonomy. They also exhibited affection toward the child and appeared to have a positive evaluation of the child. Behaviors that were rated as being "very little like the mother" were concern about health of the child, punitiveness and irritability. Mothers were not seen as being ignoring or as withdrawing from the relationship with their child.

Scores on the Preschool Attainment Record (PAR) and Denver Developmental (DD) are in Table 8. Attainment Quotients received on the Preschool Attainment Record ranged from 38.4 to 134.6 with a mean of 83.2. Adjusted scores ranged from 43.1 to 147.4 with a mean of 90.8. The percentage of items passed on the Denver Developmental ranged from 8.2 or 9.1 on the adjusted score to 65.6 or 73.3 on the adjusted scores. The mean score was 38.9 and for the adjusted scores was 49.0. Correlation between the scoring by the two testers were .992 for the Preschool Attainment Record, .985 for the Adjusted Preschool Attainment Record, .996 for the Denver Developmental Screening Test and .975 for the adjusted score on the DDST.

Ratings of the scores for the Preschool Attainment Record were: nine children received a 1 rating, three received a 2 rating, and five received a 3 rating. On the Denver Developmental five children received a 1 rating,

TABLE 8.--Mean Scores on Preschool Attainment Record and Denver Developmental.

Case	Preschool Attainment Record	Preschool Attainment Record (adj.)	Denver Developmental	Denver Developmental Record (adj.)
1	61.7	74.0	36.4	43.5
2	50.5	57.4	16.2	23.8
3	93.2	101.5	34.4	50.0
4	102.4	106.5	50.0	65.0
5	105.6	109.3	56.5	73.3
6	87.8	95.4	40.0	52.2
7	123.5	140.8	64.0	68.4
8	134.6	147.4	65.6	72.7
9	52.5	62.1	24.4	33.3
10	93.8	107.1	40.6	60.0
11	38.4	43.1	8.2	9.1
12	108.1	115.6	59.4	72.7
13	71.3	71.5	35.3	43.5
14	66.6	70.3	28.6	39.1
15	99.0	112.0	50.0	57.9
16	84.2	85.8	40.5	56.0
17	41.5	42.9	12.2	12.5
Total	1414.7	1542.7	662.3	833.0
Mean	83.2	90.8	38.9	49.0

three received a 2 rating and nine received a 3 rating. The correlation coefficient between ratings on the Preschool Attainment Record and the Denver Developmental was .761.

The children did show a wide range in total developmental level of functioning. Adjusting the scores did not appear to change the relative position of the child within the group tested and intertester correlations were

lower but still significant. Ratings of the scores did result in different relative positions of children within the groups.

Hypotheses

Hypothesis I: There will be no significant relationships between the expressed attitudes of mothers of preschool hearing-impaired children and characteristics of the hearing-impaired child.

Attitudes expressed by mothers of preschool hearing-impaired children toward the handicapping condition of deafness were not related to descriptive characteristics of the hearing-impaired child (Table 9) nor to the developmental level of the child. (Appendix B; Table B-1.)

There were no significant relationships between the attitude scales and the sex of the child, the severity of the hearing loss or handicapping condition except for a significant correlation between the sub-scale of Encouraging Verbalization and the singular handicap of deafness.

Mothers of younger children expressed attitudes of hostility-rejection and democratic attitudes. Sub-scales indicating the same attitudes were Marital Conflict, Rejects Homemaking Role, Irritability and Equalitarianism.

Mothers who expressed attitudes of marital conflict and hostility-rejection had smaller numbers of children. Mothers with larger numbers of children expressed an attitude of seclusiveness of the mothers. Mothers of children holding first and only child positions in the

TABLE 9.--Correlation Coefficients Between Maternal Attitudes and Characteristics of the Hearing-Impaired Child.

Maternal Attitudes	Characteristics of Hearing-Impaired Child						
	Age	Sex	Severity of Loss	Handicapping Condition	Position in Family		
					Number of Siblings	Ordinal Position	Sibling Position
Attitude to Deafness	.20	.06	.01	- .04	.31	.31	.03
Authoritarian Control	.23	.13	.06	.00	.23	.14	- .02
Fostering Dependency	- .01	.25	- .29	- .01	.29	.41*	.40
Seclusiveness of the Mother	.04	.08	.11	.10	.56**	-	.00
Suppression of Aggression	- .01	- .20	.08	.00	- .20	.46*	- .35
Excluding Outside Influence	.25	.01	.14	- .06	.06	.07	- .11
Suppression of Sexuality	.33	.31	- .03	- .04	- .04	.03	.18
Hostility-Rejection	- .54*	- .25	.17	.09	- .52*	- .39	- .31
Marital Conflict	- .45*	- .19	.27	.02	- .60**	- .73**	- .70**
Rejection of Homemaking Role	- .46*	- .28	- .06	- .03	- .38	- .15	.04
Irritability	- .54*	- .29	.08	.11	- .40	- .29	- .25
Democratic	- .71**	.24	- .16	- .06	.07	- .12	- .29
Equalitarianism	- .68**	.03	- .23	- .46*	- .13	- .22	- .40
Encouraging Verbalization	- .38	.25	.03	.24	.05	- .10	- .10
Comradeship and Sharing	- .37	.19	- .14	.07	.26	.13	- .07

*Significant at .05 level

**Significant at .01 level

family expressed attitudes of marital conflict. When the deaf child held a higher ordinal position in the family the mother expressed attitudes of fostering dependency and suppression of aggression.

There were only two significant correlations between expressed attitudes toward family life and children and the developmental level of the hearing-impaired child. Mothers who agreed with the attitude statements regarding encouraging verbalization were mothers of deaf children who scored low on the Preschool Attainment Record (adjusted score) and who received low ratings (abnormal) on the Denver Developmental Screening Test.

The hypothesis was partially supported in that there were no significant relationships between the Attitude to Deafness Scale and characteristics of the hearing-impaired child. However, correlations between some of the attitude scales and the child's age, handicapping condition and family position do not support the hypothesis.

Hypothesis II: There will be no significant relationships between attitudes expressed by mothers of preschool hearing-impaired children and characteristics of the family.

Relationships between expressed maternal attitudes and age, education and occupation of the mother are shown in Table 10. None of the correlations between scores on the Attitude to Deafness scale and these variables were significant.

TABLE 10.--Correlation Coefficients Between Maternal Attitudes, Age, Education and Occupation of the Mother.

Maternal Attitudes	Age	Education	Occupation
Attitude to Deafness	.22	.36	.33
Authoritarian Control	-.33	-.12	-.24
Fostering Dependency	-.17	-.37	-.08
Seclusiveness of the Mother	.18	-.27	-.34
Suppression of Aggression	-.22	.45*	-.13
Excluding Outside Influence	-.32	-.01	.05
Suppression of Sexuality	-.47*	-.19	-.14
Hostility-Rejection	-.35	.27	-.13
Marital Conflict	-.56**	.06	-.08
Rejection of Homemaking Role	-.31	-.31	.00
Irritability	-.25	.43*	-.28
Democratic	.25	.34	-.35
Equalitarianism	-.07	-.11	-.38
Encouraging Verbalization	.41	-.04	-.19
Comradeship and Sharing	.10	.64**	-.13

*Significant at .05 Level

**Significant at .01 Level

Younger mothers expressed attitudes indicating marital conflict and approval of suppression of sexuality in the child. Mothers with higher educational levels scored significantly higher on the scale of suppression of aggression. Younger mothers expressed irritability with the marriage relationship and their children but also expressed an attitude favoring comradeship and sharing.

There were no significant relationships between the attitude measures and the maternal occupations of housewife, employment outside the home or community worker.

The relationships between expressed maternal attitudes and family characteristics of income level, social class, race and religion are shown in Table 11. There were no significant relationships between the Attitude to Deafness Scale and these variables. Mothers in the lower income group and in the lower social class expressed attitudes of authoritarian-control and seclusiveness of the mother. Lower class mothers also expressed an attitude favoring the fostering of dependency for their child. Encouragement of verbalization was related to white mothers. Catholic mothers expressed more marital conflict.

This hypothesis was partially supported, but the existence of some significant correlations would indicate that there are some relationships between expressed attitudes and the family characteristics.

TABLE 11.--Correlation Coefficients Between Maternal Attitudes and the Income Level, Social Class, Race and Religion of the Family.

Maternal Attitudes	Income Level	Social Class	Race	Religion
Attitude to Deafness	- .06	.30	.02	- .15
Authoritarian Control	- .46*	- .61**	.06	- .30
Fostering Dependency	- .18	- .49*	.06	- .23
Seclusiveness of the Mother	- .48*	- .66**	.12	- .35
Suppression of Aggression	- .23	- .20	- .38	.06
Excluding Outside Influence	- .21	- .04	.31	- .15
Suppression of Sexuality	.01	- .28	- .14	- .05
Hostility-Rejection	- .19	- .04	.38	.40
Marital Conflict	- .36	- .22	.27	.47*
Rejection of Homemaking Role	.20	.27	.18	.19
Irritability	- .16	- .03	.38	.36
Democratic	.11	.04	- .06	.26
Equalitarianism	.32	.28	.12	.08
Encouraging Verbalization	.27	.29	- .42*	.20
Comradeship and Sharing	.27	.01	.32	.24

*Significant at .05 level.

**Significant at .01 level.

Hypothesis III: There will be no significant relationships between the maternal behavior of mothers of preschool hearing-impaired children and characteristics of the hearing-impaired child.

Correlation coefficients between maternal behavior and characteristics of the hearing-impaired child are included in Tables 12 and 13.

No significant relationships were found between the sex of the hearing-impaired child or the severity of the hearing loss and scores on the Maternal Behavior Inventory.

Mothers of older children were seen as exhibiting behaviors characteristic of equalitarianism, sociability, encouragement of autonomy in the child and positive evaluation of the child.

Positive evaluation of the hearing-impaired child was associated with the child having deafness only, whereas mothers who were seen as ignoring their child and as perceiving their child as a burden had children with a multiplicity of handicapping conditions.

Maternal enforcement of rules and press for achievement were related to a larger number of siblings in the family. Behaviors of equalitarianism, excessive contact, cooperativeness, expressing affection, intelligence, achievement press and sociability were associated with the deaf child holding a later ordinal position. Mothers of deaf children in the first and second positions exhibited behaviors characteristic of ignoring, perceiving

TABLE 12.--Correlation Coefficients Between Maternal Behavior and Characteristics of the Child.

Maternal Behavior	Age	Sex	Severity of Loss	Handicapping Condition	Position in Family		
					Number of Siblings	Ordinal Position	Sibling Position
Equalitarian	-.42*	-.03	.17	.04	-.40	-.52*	-.26
Emotional Involvement	.13	.21	.06	-.11	.31	.26	.44*
Rejects Homemaking Role	.34	.23	.15	.00	.13	.10	.40
Excessive Contact	-.17	-.11	.16	.18	-.33	-.50*	-.43*
Physical Health-Mother	.01	.23	.15	-.14	-.05	.03	.26
Lax Discipline	.31	-.25	.05	.15	.30	.21	.28
Cooperativeness	-.29	-.23	-.08	-.18	-.33	-.46*	-.37
Intrusiveness	.22	.15	.12	.10	.11	.10	.14
Ignoring	.28	.15	.17	-.42*	.35	.52*	.50*
Fostering Dependency	.14	-.18	.32	-.02	.40	.38	.23
Financial Stress	-.07	.40	.13	.21	-.06	-.11	-.06
Inconsistent Discipline	.32	.30	-.02	.08	.34	.39	.32
Autonomy	-.44*	.00	-.21	-.27	.01	-.16	-.19
Punishment	.35	.03	-.02	.04	.26	.28	.16
Expressing Affection	-.32	-.07	.01	.05	-.31	-.55*	-.41*
Anxiety	.25	.30	.05	.22	.20	.12	.17
Perceives Child as Burden	.22	-.02	-.28	-.49*	.27	.47*	.46*
Dependency	.18	.01	.03	-.29	.06	.10	.38
Concern about Health	.02	.18	.15	.40	-.38	-.38	-.05
Punitiveness	.34	.34	-.08	-.14	.19	.36	.49*
Control	.07	.20	.03	.30	-.38	-.30	-.11
Mood Changes	.33	.33	-.21	.39	.37	.51*	.45*
Achievement Press	-.21	-.02	.25	.02	-.51*	-.57**	-.49*
Positive Evaluation	-.43*	.03	.31	.68**	.18	-.34	-.44*
Enforcement	-.26	.10	-.03	-.06	-.42*	.39	-.36
Suppression-Aggression	.10	.12	-.03	.31	.35	-.11	-.01
Intelligence	-.30	.02	-.10	-.19	-.37	-.50*	-.47*
Withdrawal of Relationship	.38	.34	.05	.29	.15	.37	.40
Use of Fear to Control	.34	.18	-.15	-.02	.31	.41*	.14
Sociability	-.50*	-.37	.07	.14	-.40	.61**	.62**
Irritability	.32	.22	-.10	-.20	.32	.41*	.28
Negative Emotional State	.36	.22	.14	-.01	.29	.42*	.48*

*Significant at .05 Level.

**Significant at .01 Level.

TABLE 13.--Correlation Coefficients Between Maternal Behavior and Developmental Characteristics of the Child.

Maternal Behavior	PAR	PAR-A	PAR-R	DD	DD-A	DD-R
Equalitarian	-.11	-.17	.02	-.10	-.08	.24
Emotional Involvement	.24	.22	-.23	.28	.22	-.07
Rejects Homemaking Role	.10	.12	-.16	.07	.06	.15
Excessive Contact	-.31	-.31	.40	-.23	-.24	-.06
Physical Health-Mother	.40	.37	-.42*	.36	.31	-.23
Lax Discipline	.05	.00	.01	.10	.01	-.09
Cooperativeness	-.22	-.23	.17	-.07	-.06	-.06
Intrusiveness	-.25	-.22	.27	.15	-.20	.36
Ignoring	.51*	.52*	-.53*	.52*	.49*	.10
Fostering Dependency	-.05	-.12	.19	.02	.01	.11
Financial Stress	-.13	-.16	.23	-.12	-.15	.36
Inconsistent Discipline	.06	.05	-.01	.02	-.07	.11
Autonomy	.18	.16	-.35	.12	.20	-.22
Punishment	-.04	.01	.08	-.03	-.05	.18
Expressing Affection	-.23	-.26	.23	-.16	-.12	.16
Anxiety	.11	.14	-.03	.24	.16	.08
Perceives Child as Burden	.40	.41	-.43*	.49*	.44*	-.11
Dependency	.66**	.63**	-.68**	.65**	.61**	-.35
Concern about Health	.06	.08	-.14	.09	.09	-.30
Punitiveness	.18	.23	-.16	.14	.13	.07
Control	-.11	-.05	.08	-.06	.00	-.01
Mood Changes	.45*	.44*	-.32	.48*	.42*	-.04
Achievement Press	-.33	-.28	.29	-.20	.19	.03
Position Evaluation	-.57**	-.60**	.57**	-.62**	-.60**	.37
Enforcement	-.17	.12	.16	-.17	-.08	-.09
Suppression-Aggression	-.14	.17	-.05	.21	.23	.04
Intelligence	.12	-.09	.06	-.12	-.05	-.26
Withdrawal-Relationship	.39	.43*	-.38	.30	.25	-.16
Use of Fear to Control	.03	.07	.11	.04	-.01	-.19
Sociability	-.15	-.17	.09	-.11	-.10	-.20
Irritability	.18	.22	-.15	.14	.12	.07
Negative Emotional State	.40	.40	-.35	.40	.31	.01

*Significant at .05 level.

**Significant at .01 level.

the child as a burden, mood changes, use of fear to control, irritability and negative emotional state.

In families where the hearing-impaired child was the first child, the mother was seen as exhibiting behavior characteristic of emotional involvement, ignoring, punitiveness and perceiving the child as a burden. These mothers were seen as being sociable, having mood changes and expressing a general negative state. When the deaf child occupied a middle or last position the mother exhibited excessive contact, affection, positive evaluation, a press for achievement and a level of intelligence for dealing with the child.

Mothers of children with high developmental levels exhibited behaviors indicating a positive evaluation of the child whereas when the child had a lower developmental level the mothers tended to ignore the child and expressed dependency upon others to make decisions or care for the child. These relationships were found for all the developmental scores and ratings except the rating of the Denver Developmental Screening Test.

This hypothesis was partially supported in that there were no significant relationships with some of the behavior scales, but significant relationships were found between some of the behavior scales and characteristics of the hearing-impaired child.

Hypothesis IV: There will be no significant relationships between the maternal behavior of mothers of preschool hearing-impaired children and characteristics of the family.

Tables 14 and 15 include the correlation coefficients for the relationship between maternal behavior and characteristics of the mother and family.

Younger mothers rejected the homemaking role, had mood changes and exhibited a negative emotional state. In relationships with their hearing-impaired child they were emotionally involved, tended to ignore the child, used inconsistent discipline, were punitive, and perceived the child as a burden. Older mothers exhibited excessive contact, expressed affection, pressed for achievement, enforced rules, were sociable and appeared to have an intelligent approach to problems.

There were no significant relations with education or occupation except that mothers who were involved in activities outside of the home engaged in behaviors that would grant the child more autonomy.

Mothers in the lower income categories were equalitarian and evaluated their handicapped child in a positive manner. They also expressed concern about finances and their own physical health. Mothers at higher income levels were more likely to control their hearing-impaired child and used punishment to discipline them.

Lower class mothers were concerned about financial problems and exhibited mood changes.

TABLE 14.--Correlation Coefficients Between Maternal Behavior and Age, Education and Occupation of the Mother.

Maternal Behavior	Age	Education	Occupation
Equalitarian	- .33	- .09	.17
Emotional Involvement	.49*	.10	.27
Rejects Homemaking Role	.49*	.10	- .25
Excessive Contact	- .47*	.14	.36
Physical Health-Mother	.32	.02	.32
Lax Discipline	.22	.10	.01
Cooperativeness	- .25	.25	.08
Intrusiveness	.39	.25	.04
Ignoring	.48*	.06	- .02
Fostering Dependency	.35	.02	.16
Financial Stress	.30	.06	.13
Inconsistent Discipline	.43*	.16	- .19
Autonomy	- .13	- .23	- .45*
Punishment	.38	.20	.02
Expressing Affection	- .49*	.07	.14
Anxiety	.32	.36	.14
Perceives Child as Burden	.53*	.26	.10
Dependency	.33	.14	.20
Concern about Health	- .29	.24	- .06
Punitiveness	.44*	.19	.04
Control	- .36	.14	- .24
Mood Changes	.55*	.16	.30
Achievement Press	- .53*	.24	.05
Positive Evaluation	- .26	- .35	- .08
Enforcement	- .56**	- .05	.10
Suppression-Aggression	- .17	.10	.16
Intelligence	- .63**	.13	- .11
Withdrawal-Relationship	.33	.15	.13
Use of Fear to Control	.25	.20	.09
Sociability	- .55*	.05	.03
Irritability	.40	.09	.10
Negative Emotional State	.54*	.11	.18

*Significant at .05 level.

**Significant at .01 level.

TABLE 15.--Correlation Coefficients Between Maternal Behavior and the Income Level, Social Class, Race and Religion of the Family.

Maternal Behavior	Income Level	Social Class	Race	Religion
Equalitarian	.45*	.16	- .10	.45*
Emotional Involvement	.26	.21	- .53*	.01
Rejects Homemaking Role	-.27	- .17	- .51*	- .21
Excessive Contact	.21	.10	.06	.34
Physical Health-Mother	.50*	.31	- .05	- .06
Lax Discipline	-.05	- .08	- .32	.01
Cooperativeness	-.02	.16	- .19	.10
Intrusiveness	-.26	- .05	- .26	- .03
Ignoring	-.13	.09	- .14	- .49*
Fostering Dependency	.18	.29	- .22	.10
Financial Stress	.65**	.67**	- .42*	.22
Inconsistent Discipline	-.06	- .12	- .39	- .09
Autonomy	.10	- .13	- .16	- .03
Punishment	-.57**	- .31	.06	- .19
Expressing Affection	.12	.00	- .18	.27
Anxiety	.04	.17	- .50*	- .31
Perceives Child as Burden	-.16	.19	- .22	- .34
Dependency	.27	.40	- .41*	- .11
Concern about Health	-.05	- .16	- .39	- .17
Punitiveness	-.16	- .05	- .27	- .27
Control	-.48*	- .36	- .05	- .35
Mood Changes	.28	.45*	- .22	- .33
Achievement Press	-.35	- .22	.18	.02
Positive Evaluation	.44*	.09	.22	.57**
Enforcement	-.14	- .20	.42*	.09
Suppression-Aggression	-.01	.31	.19	- .15
Intelligence	-.18	- .29	- .02	.05
Withdrawal-Relationship	-.09	- .09	.03	- .28
Use of Fear to Control	-.24	- .06	.04	- .12
Sociability	.12	.02	.10	.55*
Irritability	-.29	- .16	.10	- .19
Negative Emotional State	.22	.29	.21	- .25

*Significant at .05 level.

**Significant at .01 level.

White mothers enforced rules more than the two Negro mothers. The two negro mothers tended to reject the homemaker role, and were emotionally involved with their child. The negro mothers also expressed concern about finances and anxiety about the child.

Protestant mothers were equalitarian, sociable and placed positive evaluations on their child. Catholic mothers tended to be ignoring of the child.

The relationships found indicate partial rejection of the hypothesis. However, some scales were not significantly related and indicate partial support for the hypothesis.

Hypothesis V: There will be no significant relationships between attitudes expressed by mothers of preschool hearing-impaired children and maternal behavior.

Correlation coefficients between maternal behavior and the Attitude to Deafness Scale are in Appendix B, Table B-2. Table 16 includes significant correlations.

Mothers who expressed a negative attitude toward deafness were seen as being equalitarian in their relationship with their hearing-impaired child as well as granting him autonomy and indicating a positive evaluation toward him.

Mothers who expressed a more positive attitude toward the handicap of deafness were seen as being irritable and having mood changes. They perceived their child as a burden and were anxious yet ignoring in their behavior toward the child. They also used punishment and fear to

TABLE 16.--Significant Correlations Between Attitudes to Deafness and Maternal Behavior.

	Correlation Coefficients
Positive Correlations	
Ignoring	.54*
Punishment	.63**
Anxiety	.46*
Perceives Child as Burden	.49*
Punitive	.45*
Mood Changes	.50*
Use of Fear to Control	.76**
Irritability	.57**
Negative Correlations	
Equalitarian	-.68**
Autonomy	-.45*
Positive Evaluation	-.43*

control the child and were regarded as exhibiting a punitive approach to discipline.

Relationships between maternal behavior and the Authoritarian-Control Scale are included in Table 17. Mothers concerned about financial stress expressed attitudes of authoritarianism, seclusion of the mother, suppression of sexuality and fostering dependency in the child. Mothers with concern about their own physical health also expressed attitudes favoring authoritarian control of their hearing-impaired child.

The behaviors of excessive contact, lax discipline, cooperativeness, expressing affection, concern about child's health, achievement press, withdrawal of

TABLE 17.--Correlation Coefficients Between Authoritarian Attitudes and Maternal Behavior.

Maternal Behavior	Attitudes				
	Authoritarian Control	Fostering Dependency	Seclusiveness of Mother	Suppression-Aggression	Excluding Outside Influence
Equalitarian	-.28	-.20	-.39	.34	-.30
Emotional Involvement	-.20	.00	-.04	.07	-.28
Rejects Homemaking Role	-.11	-.06	.09	.03	-.31
Excessive Contact	-.20	.13	-.26	.42*	-.26
Physical Health-Mother	-.43*	.24	-.19	.24	-.28
Lax Discipline	.24	-.04	-.04	.41*	.10
Cooperativeness	-.28	.24	.36	.62**	-.30
Intrusiveness	-.20	.10	-.01	.20	-.32
Ignoring	.11	-.06	.22	.38	.23
Fostering Dependency	-.11	.18	-.31	.29	.04
Financial Stress	-.38*	.44*	-.44*	.08	-.36
Inconsistent Discipline	.21	.13	.13	.02	.06
Autonomy	-.01	-.09	.16	.04	-.18
Punishment	.18	.29	.34	.09	.03
Expressing Affection	-.12	-.04	-.23	.55*	-.30
Anxiety	-.14	.24	.05	.19	-.22
Perceives Child as Burden	-.09	.01	-.06	.11	-.04
Dependency	-.22	.23	-.24	.17	.00
Concern about Health	.09	-.08	-.01	.41*	-.07
Punitiveness	-.11	.27	.12	.32	-.19
Control	.15	-.01	.08	.28	.01
Mood Changes	-.21	.10	-.04	.38	-.02
Achievement Press	.08	-.08	-.02	.48*	.00
Positive Evaluation	-.16	.18	-.12	.03	-.13
Enforcement	-.05	.16	.03	.04	-.10
Suppression-Aggression	-.18	-.30	-.36	.15	.23
Intelligence	.16	.21	.07	.32	-.08
Withdrawal-Relationship	.14	.25	.26	.48*	.15
Use of Fear to Control	.15	-.18	.19	.23	.17
Sociability	-.13	.22	-.29	.44*	-.22
Irritability	-.08	.26	.33	.40	.02
Negative Emotional State	-.05	-.14	.04	.33	.22
					-.14

*Significant at .05 Level.

**Significant at .01 Level.

relationship and sociability were exhibited by mothers who disagreed with the suppression of aggression in the child.

Mothers who expressed an attitude of hostility-rejection (Table 18) did not show mood changes but were achievement oriented for their child and made attempts to suppress his aggression. Lack of marital conflict was related to excessive contact with the child, cooperativeness with the worker, expressing affection, concern about the child's health, control of the child and a social, intelligent mother. Whereas expression of marital conflict was related to concern about the physical health of the mother, ignoring the child, punitiveness, mood changes, withdrawal of relationship and negative emotional state.

Mothers who rejected the homemaking role were irritable, used punishment with their child and were inconsistent in their discipline. Mothers who did not reject the homemaking role were suppressive of the child's aggression.

Mothers who expressed an attitude of irritability also exhibited mood changes.

Mothers expressing democratic attitudes and encouraging verbalization in their child did not have financial stress (Table 19). Mothers who granted the child autonomy did not express agreement with democratic attitudes, equalitarianism or comradeship and sharing.

TABLE 18.--Correlation Coefficients Between Attitudes of Hostility-Rejection and Maternal Behavior.

Maternal Behavior	Attitudes			
	Hostility-Rejection	Marital Conflict	Rejection Homemaking Role	Irritability
Equalitarian	.28	.39	.31	.33
Emotional Involvement	-.14	-.30	-.04	-.22
Rejects Homemaking Role	-.19	-.25	-.34	-.15
Excessive Contact	.25	.47*	.21	.12
Physical Health-Mother	-.37	-.44*	-.15	-.32
Lax Discipline	-.21	-.08	-.13	-.18
Cooperativeness	.36	.56*	.28	.28
Intrusiveness	.05	.07	-.18	-.17
Ignoring	-.28	-.49*	-.12	-.32
Fostering Dependency	-.10	-.04	.03	-.15
Financial Stress	-.05	-.16	.06	-.02
Inconsistent Discipline	-.36	-.33	-.46*	-.37
Autonomy	-.10	-.03	.03	.12
Punishment	-.16	-.12	-.44*	-.30
Expressing Affection	.22	.50*	.18	.18
Anxiety	-.18	-.12	-.08	-.40
Perceives Child as Burden	-.11	-.26	-.03	-.22
Dependency	-.20	-.37	.10	-.10
Concern about Health	.28	.42*	.16	.18
Punitiveness	-.23	-.42*	-.34	-.31
Control	.32	.45*	.10	.12
Mood Changes	-.41*	-.45*	-.18	-.49*
Achievement Press	.44*	.69*	.22	.16
Position Evaluation	.22	.21	.22	.32
Enforcement	.25	.35	.10	.12
Suppression-Aggression	.41*	.26	.45*	.22
Intelligence	.24	.49*	.04	.21
Withdrawal-Relationship	-.29	-.43*	-.37	-.35
Use of Fear to Control	-.17	-.18	-.31	-.34
Sociability	.38	.59*	.34	.39
Irritability	-.24	-.31	-.44*	-.34
Negative Emotional State	-.36	-.55*	-.11	-.40

*Significant at .05 level.

**Significant at .01 level.

TABLE 19.--Correlation Coefficients Between Democratic Attitudes and Maternal Behavior.

	Attitudes			
	Democratic	Equalitarianism	Encouraging Verbalization	Comradeship and Sharing
Equalitarian	.30	.12	.37	.07
Emotional Involvement	.05	- .13	.28	- .12
Rejects Homemaking Role	.09	- .09	.32	- .14
Excessive Contact	- .13	- .08	- .03	- .16
Physical Health-Mother	.28	- .05	.25	.38
Lax Discipline	- .25	- .36	.17	- .41*
Cooperativeness	.14	.28	.28	- .40
Intrusiveness	- .07	- .02	.16	- .38
Ignoring	- .06	.05	- .16	.02
Fostering Dependency	- .05	- .20	.25	- .24
Financial Stress	.42*	- .15	.65**	.27
Inconsistent Discipline	.04	- .09	.28	- .19
Autonomy	.56**	.47*	.21	.49*
Punishment	- .26	- .05	- .21	- .28
Expressing Affection	.12	.11	.23	- .16
Anxiety	- .08	.01	.02	- .24
Perceives Child as Burden	- .07	.13	.00	- .34
Dependency	.03	- .19	.19	.03
Concern about Health	- .05	.29	.06	- .38
Punitiveness	- .08	- .06	.03	- .16
Control	- .16	.32	- .33	- .31
Mood Changes	.00	- .08	- .03	.14
Achievement Press	- .16	.27	- .22	- .40
Positive Evaluation	.28	- .14	.31	- .41*
Enforcement	- .03	.27	- .37	.14
Suppression-Aggression	- .25	.04	- .39	- .10
Intelligence	.09	.40	- .11	- .10
Withdrawal-Relationship	- .15	.02	- .29	.03
Use of Fear to Control	- .26	- .07	- .27	- .16
Sociability	.14	.18	.12	- .03
Irritability	- .09	.08	- .25	.04
Negative Emotional State	- .11	- .27	- .01	.06

*Significant at .05 level.

**Significant at .01 level.

Mothers expressing an attitude of comradeship and sharing were seen as being lax in discipline and as having a positive evaluation of the child.

Lack of significant relationship between some scales would indicate that there seems to be no significant relation between the maternal attitudes studied and the maternal behaviors observed. Thus, the hypothesis is partially supported. However, the significant correlations reported give some indication that there may be some relationships between these attitudes and behaviors.

CHAPTER V

DISCUSSION, CONCLUSIONS AND IMPLICATIONS

Discussion of Findings

Attitudes of Mothers of Preschool Hearing-Impaired Children

As a group, the mothers studied disagreed with statements expressing a negative attitude toward the handicapping condition of deafness. They expressed agreement with democratic attitudes toward family life and children and tended to disagree with an authoritarian-control attitude. The mean item rating on the Hostility-Rejection scale was midway between disagree and agree for the group studied although individual scores on this scale did show a wide range.

There were no significant correlations between the Attitude to Deafness Scale and the scales on the Parent Attitude Research Instrument. This finding would tend to support the idea of Neuhaus (42) that attitudes toward disability cannot be classified with other parental attitudes. However, other studies have related attitudes

toward disability to other attitudes and personality characteristics which would suggest overlapping and interaction of these attitude constructs (13,29). Rokeach (46) presents some variables related to attitude definition that may explain some of the confusion regarding attitudes and the conflicting results of current research studies. He makes a distinction between attitude generality and specificity and between attitude toward object and attitude toward situation. An attitude object is always encountered within the context of a situation about which there is also an attitude. The instruments used in this study were not clearly defined along the object-situation nor the specificity-generality dimension and the conceptual over-lapping or differentiation of attitude universes is not clear. Therefore, it is impossible to state a firm conclusion regarding the lack of relationships found.

The attitudes expressed by mothers of preschool hearing-impaired children toward the disability of deafness were not related to characteristics of the child, the mother or the family. This finding does not agree with that reported by Horowitz, Rees and Horowitz (29) who concluded that increased age and education of adults was related to attitudes expressed toward the deaf. Neuhaus reported a decrease in acceptance with an increase in age for the deaf child (42). This finding cannot be directly compared with the present study because this sample included only preschool age children. However, it

is important to note that in both studies the mothers of young hearing-impaired children were generally accepting of the disability of deafness.

Mothers in the lower income groups and with lower social class rankings expressed attitudes of authoritarian-control, seclusiveness, and an attitude favoring the fostering of dependency in their children. The mothers who expressed an attitude of encouraging verbalization were white mothers. Mothers with a higher educational level expressed attitudes favoring the suppression of aggression in their child. These findings are in general agreement with other studies relating attitudes to socio-economic variables (54).

Younger mothers expressed attitudes of hostility-rejection especially on the sub-scales of Marital Conflict and Irritability. The same attitudes were expressed by mothers in families where the hearing-impaired child was young, was the first child and had few siblings. However, younger mothers also expressed an attitude of comradeship and sharing and an equalitarian attitude in relation to their young deaf child. These findings would tend to support the idea that the young mother with a young deaf child and small family expressed attitudes of marital conflict and irritability while also holding attitudes of equalitarianism and comradeship and sharing. These mothers are in the beginning stages of the family life cycle and attempting to cope with the marriage relationship as well

as a handicapped child, and may be expressing the stress this places on their family as well as the attitudes they would like to achieve in their family situation.

Behaviors of Mothers of Preschool Hearing-Impaired Children

As a group, the mothers were rated as being cooperative and sociable. They were viewed as expressing affection toward their hearing-impaired child, as granting him a positive evaluation and autonomy although, they also tended to limit his behavior through excessive contact. In general, the mothers were not punitive, irritable, or ignoring of their hearing-impaired child. They did not seem to withdraw from the relationship with the child or show excessive concern about his health.

Income and age of the mother appeared to be the most important family variables related to maternal behavior toward the hearing-impaired child. Lower income mothers tended to be concerned about finances, their own physical health and exhibited mood changes. However, they were also equalitarian and placed a positive evaluation on their deaf child. These behaviors would appear to express concern about self and limited resources which places additional strain upon the mother. However, these concerns did not seem to interfere with her positive evaluation of the deaf child, and she did not perceive him as a burden.

The age of the mother appeared to be an important factor in that younger mothers exhibited behavior characteristics of perceiving the child as a burden, ignoring the child and the use of punitive, inconsistent discipline. Younger mothers also exhibited more mood changes, rejected the homemaking role and exhibited a general negative emotional state. It appears that the mother's age may contribute to her ability to respond to the handicapped child in a positive manner and that younger mothers have more difficulty in dealing with their handicapped child and their role as a mother.

Characteristics of the hearing-impaired child that were related to maternal behavior were developmental level, age of the child, handicapping condition and position in the family. Children with higher developmental levels and singular handicap of deafness received positive evaluations from their mother whereas children with lower developmental levels and a multiplicity of handicapping conditions tended to be ignored and were perceived as a burden. Mothers of children with lower developmental levels were also more dependent upon others to make decisions concerning the care of the child. Thus it appears that the child's disability and general developmental level is related to different maternal behaviors directed toward the child.

Mothers of older children were seen as engaging in behaviors that would further the development of their

child in that they were seen as encouraging autonomy and as positively valuing their child.

Mothers exhibited more difficulty in dealing with younger hearing-impaired children in that they exhibited behaviors characteristic of ignoring, perceived the child as a burden and used fear to control the child's behavior. These mothers also exhibited a negative emotional state and mood changes. These behaviors were also characteristics of the mothers when the first child in the family was hearing impaired or when there were a small number of children in the family. When the deaf child held a later family position the mother was more equalitarian, cooperative and achievement oriented. Behaviors exhibited by the mothers would tend to support the idea that the young mother with a hearing-impaired child has difficulty in interaction with her child especially when he is the first child and/or there are a small number of children in the family. When the deaf child occupies a later family position and the mother is older, behaviors appear to be more supportive of the child.

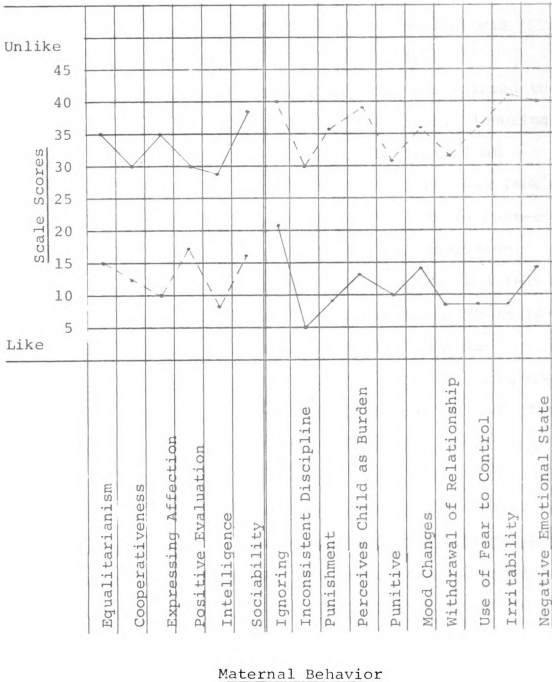
Relationship Between Attitude and Behavior

Mothers who expressed a negative attitude to deafness were seen as exhibiting equalitarian behaviors toward their child. They were also seen as granting him autonomy and a positive evaluation. Whereas mothers with a positive attitude toward deafness were seen as behaving in an anxious, ignoring, punitive manner and using punishment and

fear to control the child. These mothers were also irritable, exhibited mood changes and behaved as though they perceived the child as a burden. Related findings are presented graphically in Table 20 using the highest and lowest Attitude to Deafness Scale scores.

Several interpretations regarding these findings are possible. Mothers of deaf children may express attitudes that are socially acceptable and yet behave toward the child in a punitive, inconsistent, distant and negative manner. Thus, there would appear to be in this study a discrepancy between attitude and behavior. Another interpretation would be that mothers who were actually controlling their deaf child through punishment and fear and were able to detach themselves from the relationship through ignoring and withdrawal could hold positive attitudes toward the disability because their behaviors gave them a feeling of effectiveness in dealing with their child. There is no research base to support either interpretation and further research is needed.

The other attitude scale scores for the mother with a positive attitude to deafness were: Authoritarian-Control - 48, Hostility-Rejection - 43, and Democratic - 51. Attitude scores for the mother with the most negative attitude to deafness were Authoritarian-Control - 49, Hostility-Rejection - 30, and Democratic - 55. The scores are very similar for the Authoritarian Control Scale and the Democratic Scale but are quite different for



Maternal Behavior

- Mother who expressed a positive attitude to deafness.
 - - Mother who expressed a negative attitude to deafness.

Figure 6.--Maternal Behavior Scores of a Mother with a Positive Attitude to Deafness and a Mother with a Negative Attitude to Deafness.

the Hostility-Rejection Scale. Within the Hostility-Rejection Scale the sub-scale of Marital Conflict was related to maternal behavior most frequently.

The expression of marital conflict was related to concern about the physical health of the mother, ignoring the child, punitiveness, mood changes, withdrawal of relationship and negative emotional state. Whereas lack of marital conflict was associated with excessive contact with the child, cooperativeness, expressing affection, concern about the child's health, sociability and intelligence. Although no conclusions can be drawn, there is enough overlapping between these maternal behavior variables and those that were significant in the attitude to deafness-maternal behavior relationship to warrant further investigation concerning the interrelatedness of these variables.

The other relationships reported are scattered and do not present an organized pattern of relationships.

Mothers who expressed attitudes of authoritarian-control exhibited concern about financial stress, were concerned about their own health, were suppressive of sexuality in the child and fostered the dependency of the child. Mothers expressing democratic attitudes encouraged verbalization and did not have financial stress.

Ross (47) and Barsch (4) point out that the relationship between attitude and behavior is very complex and

that further research is needed. Considerations that complicate the study of the relationships are:

1. Parents verbal description of behavior and attitudes may be discrepant from actual behavior and attitudes.
2. Other variables such as personality factors, interpersonal family dynamics and cultural environment need to be controlled or incorporated into the studies.
3. One underlying attitude may influence a great variety of behaviors and behavioral referents for an attitude may be widely discrepant.
4. The specificity or generality of attitude and behavior conceptualizations influences comparability.

Rokeach (46) attributes the lack of progress in understanding the attitudes-behavior relationship to the fact that most research ignores the cognitive and affective aspects of attitudes. An additional factor is the limited conceptualization of the behavioral component. He views behavior as a function of the interaction between two attitudes--the attitude toward object and the attitude toward situation. These two attitudes interact with differing degrees of importance with respect to one another and if only one is focused on there is bound to be some inconsistency between attitude and behavior or a lack of

dependence of behaviors on attitude. Ignoring that an attitude object is always encountered within some situation, about which we also have an attitude, has resulted in unjustified interpretation and conclusions regarding lack of relationship between attitudes and behavior.

Another related problem is that ". . . where there is a negative correlation between a given attitude and behavior there is always the possibility that some other attitude that was not measured may be congruent with the behavior" (46, p. 128).

Conclusions

General conclusions that can be drawn from the study are:

1. Maternal attitudes to the disability of deafness were not related to characteristics of the child or to family characteristics, nor were they related to the other attitude measures used. Maternal attitude to deafness does not appear to be influenced by physical or social variables and appears to function independently from other attitude variables.
2. Negative attitudes toward deafness expressed by the mothers were significantly related to maternal behaviors of equalitarianism, positive evaluation of the deaf child and granting the child autonomy. Maternal behaviors of punishment, punitiveness, use of fear to control, ignoring the

child, anxiety about the child, perceiving the child as a burden as well as behaviors of irritability and mood changes were related to the expression of more positive maternal attitudes toward the handicapping condition of deafness.

3. Attitudes of Hostility-Rejection and the subscales of Marital Conflict, Rejection of the Homemaking Role and Irritability were expressed by mothers who were younger and who had a deaf child who was a first child in the family. They also expressed an attitude favoring comradeship and sharing.
4. Sex of the child, severity of the hearing loss and handicapping condition were not related to either the expressed maternal attitudes or the observed mother's behavior except for a more positive evaluation by the mother of a child with a singular handicap and the perception by the mother of the multiply handicapped child as a burden.
5. Maternal behaviors indicating mood changes, negative emotional states, perception of the child as a burden, punitiveness, ignoring, inconsistent discipline and emotional involvement were related to younger mothers and mothers with

- younger hearing-impaired children occupying first sibling positions in the family.
6. Mothers in the lower income and social class categories expressed attitudes along the authoritarian dimension and exhibited behaviors indicating concern about their own health and financial stress. However, they were equalitarian in their behavior and expressed positive evaluations regarding their handicapped child.
 7. Mothers expressing agreement with attitude statements regarding marital conflict were concerned about their own health, exhibited mood changes and a negative emotional state. They also tended to ignore the hearing-impaired child, were punitive and tended to withdraw from the relationship. Mothers who did not express marital conflict were cooperative, sociable and expressed concern and affection toward their hearing-impaired child.
 8. In general, mothers who expressed democratic attitudes did not exhibit behaviors characteristic of financial stress and did not grant their deaf child autonomy.

Limitations of the Study

1. The sample was a small, purposive, non-random sample and generalizations cannot be made regarding a broader population.
2. Only mothers of preschool children and preschool children were studied. Exclusion of variables related to the father of the child may ignore very important dimensions of the total family relationship and limit the conclusions regarding the mother-child relationship.
3. The focus on the preschool age group ignores changes of attitude and behavior over time (42, 55) and views attitudes and behaviors at a time of great flux.
4. Behavioral observation ratings were made by several different raters and the reliability of these ratings was not ascertained. This may have influenced the maternal behavior scores. However, special training sessions were held and reliability checks of the ratings were conducted.

Implications for Research and Action Programs

Implications for further research are:

1. Further studies are needed concerning the development and use of instruments designed to measure attitudes and behaviors with clearer conceptual

organization and definition along the specificity-generality and object-situation dimensions. Special emphasis needs to be placed on the development of value free instruments.

2. Further studies are needed with samples varying in family composition and at various stages in the family life cycle with the deaf child occupying various positions within the family.
3. Future investigations should include consideration of the dynamics of the family interaction including aspects of the marriage relationship and interaction with the non-handicapped children in the family as well as with the handicapped child.
4. Future studies should consider the use of more comprehensive personality measures to provide a broader perspective for viewing attitudes and their relationship to behavior.
5. Intensive case studies are needed in order to define the salient personality, family, attitudinal and behavioral variables and to develop systems regarding the organization and inter-relatedness of these variables.
6. Future studies should employ more complete analysis of the data in order to gain insight into the complexity of the relationships among the variables.

Implications for action programs are:

1. Programs concerned with the education of young hearing-impaired children and their parents should be aware of the complexity of the parent-child relationships and seek to understand the on-going family dynamics so that early intervention can be as effective as possible.
2. The relationships found between expressed maternal attitudes toward deafness and maternal behavior indicate that mothers with positive attitudes engage in more controlling behaviors than mothers with negative attitudes. Professionals need to be aware of how the mother perceives her role and what behaviors are possible for her to perform and are effective in dealing with her handicapped child before making generalized recommendations regarding the use of child-rearing techniques.
3. The uniqueness of the handicapped child, his abilities and limitations need to be considered when principles of guidance and child-rearing approaches applicable to normal children are being applied to the hearing handicapped child.
4. Training programs for professionals and child care aides should include consideration of the attitudes of the trainee as well as the family as they seek to change or improve parent-child and/or teacher-child interaction.

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APPENDICES

APPENDIX A

TEST INSTRUMENTS

FAMILY LIFE AND CHILDREN

Read each of the statements below and rate them as follows:

<u>A</u> strongly agree	<u>a</u> mildly agree	<u>d</u> mildly disagree	<u>D</u> strongly disagree
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Indicate your opinion by drawing a circle around the "A" if you strongly agree, around the "a" if you mildly agree, around the "d" if you mildly disagree, and around the "D" if you strongly disagree.

There are no right or wrong answers, so answer according to your own opinion. It is very important that all questions be answered. Many of the statements will seem alike but all are necessary to show slight differences of opinion.

Mother Form

- | | | | | |
|---|---|---|---|---|
| 1. A good mother should shelter her child from life's little difficulties. | A | a | d | D |
| 2. Children should be taught about sex as soon as possible. | A | a | d | D |
| 3. People who think they can get along in marriage without arguments just don't know the facts. | A | a | d | D |
| 4. Parents should not have to earn the respect of their children by the way they act. | A | a | d | D |
| 5. The woman who want lots of parties seldom make good mothers. | A | a | d | D |
| 6. Most mothers are content to be with children all the time. | A | a | d | D |
| 7. A child has a right to his own point of view and ought to be allowed to express it. | A | a | d | D |
| 8. If a parent is wrong he should admit it to his child. | A | a | d | D |
| 9. A child should be taught to avoid fighting no matter what happens. | A | a | d | D |

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|-----|---|---|---|---|---|
| 10. | Most mothers can spend all day with the children and remain calm and even-tempered. | A | a | d | D |
| 11. | Parents who are interested in hearing about their children's parties, dates, and fun help them grow up right. | A | a | d | D |
| 12. | A child should learn that he has to be disappointed sometimes. | A | a | d | D |
| 13. | It is very important that young boys and girls not be allowed to see each other completely undressed. | A | a | d | D |
| 14. | If a couple really loves each other there are very few arguments in their married life. | A | a | d | D |
| 15. | Parents should adjust to the children some rather than always expecting the children to adjust to the parents. | A | a | d | D |
| 16. | A good mother should develop interests outside the home. | A | a | d | D |
| 17. | One of the worst things about taking care of a home is a woman feels that she can't get out. | A | a | d | D |
| 18. | Children should not be allowed to disagree with their parents, even if they feel their own ideas are better. | A | a | d | D |
| 19. | It's best for the child if he never gets started wondering whether his mother's views are right. | A | a | d | D |
| 20. | A child should be taught to fight his own battles. | A | a | d | D |
| 21. | Children will get on any woman's nerves if she has to be with them all day. | A | a | d | D |
| 22. | Children would be happier and better behaved if parents would show less interest in their affairs. | A | a | d | D |
| 23. | A child should be protected from jobs which might be too tiring or hard for him. | A | a | d | D |
| 24. | Sex play is a normal thing in children. | A | a | d | D |
| 25. | Sometimes it's necessary for a wife to tell off her husband in order to get her rights. | A | a | d | D |
| 26. | Children should learn to compromise and adjust to the demands of their parents. | A | a | d | D |
| 27. | Too many women forget that a mother's place is in the home. | A | a | d | D |
| 28. | Most young mothers don't mind spending most of their time at home. | A | a | d | D |
| 29. | A child's ideas should be seriously considered in making family decisions. | A | a | d | D |
| 30. | A child should be encouraged to look for answers to his questions from other people even if the answers contradict his parents. | A | a | d | D |

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| 31. | Children should not be encouraged to box or wrestle because it often leads to trouble or injury. | A | a | d | D |
| 32. | Raising children is an easy job. | A | a | d | D |
| 33. | If parents would have fun with their children, the children would be more apt to take their advice. | A | a | d | D |
| 34. | Children have to face difficult situations on their own. | A | a | d | D |
| 35. | Sex is one of the greatest problems to be contended with in children. | A | a | d | D |
| 36. | Almost any problem can be settled by quietly talking it over. | A | a | d | D |
| 37. | There is no reason parents should have their own way all the time, any more than that children should have their own way all the time. | A | a | d | D |
| 38. | A mother can keep a nice home and still have plenty of time left over to visit with neighbors and friends. | A | a | d | D |
| 39. | One of the bad things about raising children is that you aren't free enough of the time to do just as you like. | A | a | d | D |
| 40. | Children should be discouraged from telling their parents about it when they feel family rules are unreasonable. | A | a | d | D |
| 41. | The child should not question the thinking of his parents. | A | a | d | D |
| 42. | It's quite natural for children to hit one another. | A | a | d | D |
| 43. | Mothers very often feel that they can't stand their children a moment longer. | A | a | d | D |
| 44. | Laughing at children's jokes and telling children jokes usually fail to make things go more smoothly. | A | a | d | D |
| 45. | Children should be kept away from all hard jobs which might be discouraging. | A | a | d | D |
| 46. | Children are normally curious about sex. | A | a | d | D |
| 47. | It's natural to have quarrels when two people who both have minds of their own get married. | A | a | d | D |
| 48. | It is rarely possible to treat a child as an equal. | A | a | d | D |
| 49. | A good mother will find enough social life within the family. | A | a | d | D |
| 50. | Most young mothers are pretty content with home life. | A | a | d | D |
| 51. | When a child is in trouble he ought to know he won't be punished for talking about it with his parents. | A | a | d | D |
| 52. | A good mother can tolerate criticism of herself, even when the children are around. | A | a | d | D |

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|-----|--|---|---|---|---|
| 53. | Most parents prefer a quiet child to a "scrappy" one. | A | a | d | D |
| 54. | A mother should keep control of her temper even when children are demanding. | A | a | d | D |
| 55. | When you do things together, children feel close to you and can talk easier. | A | a | d | D |

ATTITUDE TO DEAFNESS SCALE

Read each of the statements below and then rate them as follows:

<u>A</u>	<u>a</u>	<u>d</u>	<u>D</u>
strongly	mildly	mildly	strongly
agree	agree	disagree	disagree

Indicate your opinion by drawing a circle around the "A" if you strongly agree, around the "a" if you mildly agree, around the "d" if you mildly disagree, and around the "D" if you strongly disagree.

There are no right or wrong answers. Answer according to your own opinion. It is very important to answer all questions.

ATTITUDE TO DEAFNESS SCALE

- | | Agree | | Disagree |
|--|-------|---|----------|
| | A | a | d D |
| 1. The deaf generally have a less mature personality than the hearing. | A | a | d D |
| 2. In general, deaf people are more neurotic than those who hear. | A | a | d D |
| 3. It is impossible to really get "close" to a deaf person. | A | a | d D |
| 4. Deaf people somehow seem sadder and more wrapped up in themselves than hearing people. | A | a | d D |
| 5. The deaf do not seem to be bothered by ordinary life events any more than hearing people. | A | a | d D |
| 6. Because of his need to be pitied, it is particularly important that the deaf person have someone very tolerant to whom he can talk. | A | a | d D |
| 7. Deaf people also seem to have more than the usual number of other physical complaints. | A | a | d D |
| 8. Deaf people show personality characteristics which frequently make them seem odd. | A | a | d D |
| 9. A person who is deaf is as apt to be born a leader as anyone else. | A | a | d D |

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|-----|--|---|---|---|---|
| 10. | Deaf people seem to be overly polite and to lack spontaneity. | A | a | d | D |
| 11. | Most deaf people feel that they are worthless. | A | a | d | D |
| 12. | Most deaf people are dissatisfied with themselves. | A | a | d | D |
| 13. | The deaf have as many interests as the hearing have. | A | a | d | D |
| 14. | The deaf adult is not quite as mature or "grown-up" as the hearing adult. | A | a | d | D |
| 15. | It's difficult to understand the deaf because they keep so much to themselves. | A | a | d | D |
| 16. | It must be bitterly degrading for a deaf person to depend so much on others. | A | a | d | D |
| 17. | On the whole, deaf children seem to be less intelligent than hearing children. | A | a | d | D |
| 20. | You should not expect too much from a deaf person. | A | a | d | D |
| 21. | A deaf person is constantly worried about what might happen to him. | A | a | d | D |
| 22. | A deaf person is not afraid to express his feelings. | A | a | d | D |
| 23. | Deaf people are more easily upset than people who can hear. | A | a | d | D |
| 24. | The deaf are prone to have more fears about the world than the hearing. | A | a | d | D |
| 25. | The deaf are usually on their guard with people. | A | a | d | D |

MATERNAL BEHAVIOR INVENTORY

Name of Mother _____ Case No. _____

Name of Rater _____ Date _____

Please rate this mother on the behaviors listed. You should describe the mother's characteristic behavior with the infant you are visiting on items that describe mother-child interaction. In order to determine individual differences, you are asked to use the seven point scale given below.

<u>Scale</u>	<u>Interpretation</u>
1	Very much like this mother
2	
3	Somewhat like this mother
4	
5	
6	Little like this mother
7	

Please use the points between the descriptions freely to describe intermediate degrees of the characteristic or when you cannot decide which of the two descriptions apply.

A review of a few tendencies of raters may help you in making accurate ratings:

1. There is a general tendency of raters, especially those who are ego-involved with the persons they are rating, to rate them in a positive direction. An attempt to be accurate and objective may reduce this tendency.
2. There is a tendency to give average or intermediate scores and to avoid extreme ratings. The extreme ratings should be used when applicable.
3. There is a tendency to describe a person according to a general attitude. However, a person probably does not have all positive characteristics nor all negative characteristics. Thus it is necessary to make an independent judgment of each trait.

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|-----|--|---|---|---|---|---|---|---|
| 1. | Does the mother play games with the child in an informal way? | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 2. | Does the mother continually need to bring the attention of the child back to herself during the visit? | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 3. | Does the mother express a preference for activities other than homemaking? | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 4. | Is the mother very much interested and involved in the child's behavior? | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 5. | Is she in need of medical or dental attention? | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 6. | Does she let the child get away with misbehavior without punishment? | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 7. | Does the mother seem to share the visit? | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 8. | Does the mother seem to be training the child to think of himself as the mother's possession? | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 9. | Does she often comment on how much extra work or trouble the child is? | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 10. | Does she often do things for the child he could do for himself? | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 11. | Is the family income unpredictable or irregular? | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 12. | Does she punish for a thing one day and ignore it the next? | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 13. | Is the mother willing to let the child work alone with no interference by the mother? | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 14. | Does the mother punish the child because of his eating or sleeping habits? | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 15. | Does the mother often hug or kiss the child? | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 16. | Does she seem upset when the child cries or complains? | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 17. | Does the mother complain of great difficulty in caring for the child? | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 18. | Does the mother seek support and reassurance from the visitor? | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 19. | Is she quite fearful of the child catching a cold? | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 20. | Does she take an "it serves you right" attitude toward any of the child's accidents or upsets? | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 21. | Has she many rules for the child? | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

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|-----|--|---|---|---|---|---|---|---|
| 22. | Does she show changes in cheerfulness or gloominess within or between sessions? | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 23. | Does the mother seem to be pushing the child to perform tricks or say verses? | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 24. | Does the mother think the child is attractive in appearance by her standards? | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 25. | Does this mother insist the child do certain things even when the child resists? | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 26. | Does the mother strongly disapprove of the child fighting with other children? | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 27. | Does she have a wide range of interests? | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 28. | Does the mother remain cold and distant from the child for an extended period of time after he misbehaves? | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 29. | Does the mother threaten punishment to control the child? | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 30. | Does there seem to be more verbal communication with this mother than with others? | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 31. | Does the mother speak to the child in a harsh, unsympathetic, or cross tone of voice? | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 32. | Does she typically seem gloomy? | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 33. | Does the mother attempt to talk with the child on his level? | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 34. | Does the mother keep the child with her around the home at all times and in all situations? | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 35. | Does she frequently complain of being tired in connection with housekeeping activities? | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 36. | Does the mother have a tendency to play, talk, and generally interact with the child during the session? | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 37. | Does she fatigue easily? | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 38. | Is the mother unable to say no to anything the child wants? | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 39. | Is this mother sensitive and considerate of others? | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 40. | Does the mother seem to think that she should be able to direct what he will think or say at any time? | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 41. | Does she tend to leave the situation during the session as though she is glad the baby is in someone else's hands? | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

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|-----|--|---|---|---|---|---|---|---|
| 42. | Does the mother wish to help the child with difficult problems during the visit? | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 43. | Is she worried about whether she can get things for her children that are usual for most children? | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 44. | Does her mood determine whether or not she enforces a rule? | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 45. | Does the mother encourage the child to play by himself or without supervision by the mother? | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 46. | Does the mother spank the child when he is negativistic? | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 47. | Does the mother hold the child in her arms to comfort and console him? | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 48. | Does she seem upset when the child refuses to perform? | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 49. | Does the mother talk about the tension and anxiety of child-rearing? | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 50. | Does she seem unable to handle even minor cries or illnesses alone? | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 51. | Does she show real concern over minor illnesses or insignificant defects? | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 52. | Does she talk in a negative vein about friends, husband, or associates? | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 53. | Are many objects, places, or things forbidden for the child? | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 54. | Does she show signs of emotional lability in her home situation? | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 55. | Does the mother seem to demand more achievements than the child easily attains? | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 56. | Does the mother think the child is intelligent in ways she likes? | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 57. | Does the mother enforce rules without exceptions? | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 58. | Does the mother disapprove of rough active play of the child? | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 59. | Is she mentally alert and responsive? | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 60. | Does the mother speak to the child in a cold, impersonal voice when he displeases her? | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 61. | Does the mother expect complete submission to her will? | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 62. | Does she converse about the husband and family events in an easy, sociable way? | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

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|-----|--|---|---|---|---|---|---|---|
| 63. | Does the mother frequently make critical or derogatory remarks to the child? E.g., He is "bad" or "stupid." | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 64. | Does she typically seem detached and inwardly absorbed? | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 65. | Does the mother enjoy spending time with the child? | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 66. | Does the mother tend to avoid having anyone else care for the child and seem to be anxious to resume care of the child after the tutoring session? | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 67. | Does she ever use phrases which indicate a feeling that she feels held down or "shut-up" in the home? | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 68. | Is the mother eager to quiet and comfort the crying child? | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 69. | Does she seem lacking in endurance and resistance to disease? | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 70. | Does the mother give mild or weak punishments that do not impress the child? | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 71. | Does she perceive the problems of the visitor in working with her baby? | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 72. | Does the mother seem to think that she should know what the child is thinking or doing at all times? | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 73. | Would she be willing to have others assume most of the responsibility for care of the child? | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 74. | Does the mother seem reluctant to have the child perform certain tasks because it will be upsetting to him? | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 75. | Is she worried about providing food and clothes for her children? | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 76. | Are her orders or directions changed frequently or quickly? | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 77. | Does the mother permit the child to make his own decisions about his activities, where he will go, etc.? | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 78. | Does the mother spank the child when he cries or is emotionally upset? | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

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|-----|---|---|---|---|---|---|---|---|
| 79. | Does the mother often smile or speak in soothing tones to the child? | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 80. | Does she seem tense during the session? | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 81. | Does the mother feel caring for the child is a burden rather than a joy? | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 82. | Does she ask the visitor to make decisions for her? | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 83. | Is she concerned greatly about the child's growth? | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 84. | Does she show tendencies toward an open attack on the baby when in conflict? | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 85. | Does the mother insist the child be polite to adults? | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 86. | Does she show changes in tension and relaxation within or between sessions? | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 87. | Does the mother try to teach the child language? | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 88. | Does the mother think the child has a desirable emotional disposition? | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 89. | Does the mother follow up an initial order by further reminders? | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 90. | Does the mother try to put a stop to any display of anger or temper by the child? | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 91. | Is the mother's speech "standard English?" | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 92. | Is the mother slow to forgive the child after a conflict? | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 93. | Does the mother believe the stubborn will of the child must be broken? | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 94. | Does the mother converse freely about her own reaction to events and her opinions, attitudes, and feelings? | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 95. | Does the mother lose her temper with the child? | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 96. | Does she occasionally fail to show adequate awareness of what is going on around her? | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 97. | Does the mother tend to reduce emphasis upon age and role differences between mother and child? | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 98. | Does this mother complain about housework? | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

99.	Are there signs she doesn't feel free to leave the child in the care of others and to be separated from him?	1	2	3	4	5	6	7
100.	Does the mother have frequent and close physical contact with the child?	1	2	3	4	5	6	7
101.	Does she have many complaints about her health?	1	2	3	4	5	6	7
102.	Does the mother find excuses for the child's misbehavior?	1	2	3	4	5	6	7
103.	Is her handling of husband or relatives indicative of sensitivity to their problems?	1	2	3	4	5	6	7
104.	Does the mother's approval of the child seem to be strictly dependent upon the degree to which he adapts his thinking and actions to her wishes?	1	2	3	4	5	6	7
105.	Does she fail to show much beyond polite interest in the child during the session?	1	2	3	4	5	6	7
106.	Does the mother see the child as weak, helpless, and as needing excessive help, care and support?	1	2	3	4	5	6	7
107.	Is it necessary for her to work so as to alleviate the financial strain?	1	2	3	4	5	6	7
108.	Are her rules for the child unclear or inconsistent?	1	2	3	4	5	6	7
109.	Does the mother seem to be tolerant of separation of the child from herself?	1	2	3	4	5	6	7
110.	Is the mother's punishment severe?	1	2	3	4	5	6	7
111.	Does the mother praise the child for his behavior or in other ways express her love and approval?	1	2	3	4	5	6	7
112.	Does she seem afraid that the child is being upset?	1	2	3	4	5	6	7
113.	Does the mother talk primarily about problems she has in caring for the child?	1	2	3	4	5	6	7
114.	Does she mention friends, husband, in-laws, or relatives in a way which indicates she must have people to rely on?	1	2	3	4	5	6	7
115.	Is she concerned greatly about the child's weight?	1	2	3	4	5	6	7

- | | | | | | | | | |
|------|--|---|---|---|---|---|---|---|
| 116. | Does she describe the child critically in such a way as to indicate she is gaining satisfaction from the criticism? | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 117. | Does the mother give frequent orders or directions to the child? | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 118. | Does she vary between warmth and reserve in her discussion of how she and her child are getting along? | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 119. | Does she teach the child to do things he can't do during your visit? | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 120. | Does the mother typically approve of the child's behavior? | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 121. | Does the mother supervise the child's behavior and tell him when he is amiss? | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 122. | Does the mother disapprove of any expression of anger directed against herself or the visitor and suppress it immediately? | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 123. | Does her conversation reflect good judgment and understanding? | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 124. | Does she refuse to talk to or play with the child as a response to misbehavior? | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 125. | Does the mother use fear of punishment as the primary method of controlling the child? | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 126. | Does she try to establish friendly social relations with the visitor? | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 127. | Does the mother have abrupt or harsh handling of the child? | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 128. | Does she seem to be unresponsive at times? | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 129. | Does the mother tend to avoid a directive, commanding role? | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 130. | Does the mother wish to keep the child closely attached to herself? | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 131. | Does this mother seem to reject the role of homemaker? | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 132. | Does the mother spend a great amount of time with the child? | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 133. | Does she have frequent colds or other minor illnesses? | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 134. | Does the mother give in to the child if he resists or protests? | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 135. | Does she avoid talking or socializing when it might be disturbing to the session? | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

- | | | | | | | | | |
|------|---|---|---|---|---|---|---|---|
| 136. | Does the mother seem to be unaware of the fact that a child has a mind of his own and that he should be able to do his own thinking without forceful intrusion by the mother? | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 137. | Does she tend to overlook the needs of the child? | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 138. | Does the mother tend to anticipate the child's needs excessively and shelter him from even normal effort? | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 139. | Is the mother uncertain about meeting the monthly bills--rent, utilities, etc.? | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 140. | Is the mother inconsistent in his discipline? | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 141. | Does the mother seem willing to give the child freedom of action? | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 142. | Does the mother spank the child in order to get him to cooperate with her own or the visitor's instructions? | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 143. | Does the mother immediately respond to any need of the child for attention, care, or sympathy? | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 144. | Does she seem disturbed about the child's development or abilities? | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 145. | Does the mother show few signs of enjoying the child's activities? | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 146. | Does she expect others to care for her rather than assuming an adult, independent role? | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 147. | Is she concerned greatly about the child's diet? | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 148. | Does the mother seem punitive and unkind? | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 149. | Does the mother set firm limits to the child's freedom of movement in the home? | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 150. | Does she show changes in patience and frustration tolerance within or between sessions? | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 151. | Does she urge the child to perform in the tutoring situation? | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 152. | Is there an absence of fault finding in the mother's behavior relative to the child? | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 153. | Is the mother consistent and firm in her rules and prohibitions for this child? | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

- | | | | | | | | | |
|------|---|---|---|---|---|---|---|---|
| 154. | Does the mother's ideal seem to be a quiet, passive child rather than an active aggressive one? | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 155. | Does she have an intelligent interest in the study's method and goals? | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 156. | Does the mother wait for the child to make up with her after a conflict rather than trying to restore the relationship herself? | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 157. | Does the mother see the child's negativism as a rebellion which must be crushed? | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 158. | Does she have a variety of skills in social contacts which indicate effort directed toward the establishment of friendly relationships with others? | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 159. | Is the mother antagonistic, resentful or quarrelsome? | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 160. | Does she typically seem dull and lacking in emotionality? | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 161. | Does the mother tend to relate to the child as an equal? | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 162. | Does the mother have intense emotional and behavioral involvement with the child? | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 163. | Is the mother physically healthy? | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 164. | Is the mother lax in her discipline with this child? | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 165. | Does this mother seem cooperative overtly? (Exclude officiousness, interventions, self-abasing cooperation.) | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 166. | Does this mother ignore or reject her child? | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 167. | Does this mother tend to baby her child or foster dependency in him? | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 168. | Does this mother seem to be subject to financial strain? | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 169. | Does the mother think the child should be free to act independently and be allowed to work or play apart from the parents? | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 170. | Does the mother believe in punishment as an effective method of influencing the child's behavior? | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 171. | Does the mother openly express her love and affection for the child? | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

172.	Does this mother appear overtly anxious during the session?	1	2	3	4	5	6	7
173.	Does the mother perceive the child more as a burden and inconvenience than a source of happiness?	1	2	3	4	5	6	7
174.	Is she a dependent mother?	1	2	3	4	5	6	7
175.	Does this mother seem to be preoccupied with her child's health?	1	2	3	4	5	6	7
176.	Does this mother try to control her child?	1	2	3	4	5	6	7
177.	Does she show mood swings?	1	2	3	4	5	6	7
178.	Does the mother concern herself about the child's achievement?	1	2	3	4	5	6	7
179.	Does the mother tend to have a positive evaluation of the child as a person?	1	2	3	4	5	6	7
180.	Does this mother enforce rules and regulations?	1	2	3	4	5	6	7
181.	Does this mother have high intelligence?	1	2	3	4	5	6	7
182.	Does this mother withdraw her love from the child when he misbehaves?	1	2	3	4	5	6	7
183.	Does the mother attempt to use fear as a way of controlling and teaching the child?	1	2	3	4	5	6	7
184.	Does this mother tend to be a social person?	1	2	3	4	5	6	7
185.	Is the mother irritable with the child?	1	2	3	4	5	6	7
186.	Does she tend toward negative emotional states?	1	2	3	4	5	6	7

SCORING SHEET FOR MATERNAL BEHAVIOR INVENTORY

Scale No.	Page No.	Name						Total
		1	2	3	4	5	6	
1.	Equalitarian	1	33	65	97	129	161	
2.	Emotional Involvement	2	34	66	98	130	162	
3.	Rejection of Homemaking Role	3	35	67	99	131		
4.	Excessive Contact	4	36	68	100	132		
5.	Physical Health of Mother	5	34	69	101	133	163	
6.	Lax Discipline	6	38	70	102	134	164	
7.	Cooperativeness	7	39	71	103	135	165	
8.	Intrusiveness	8	40	72	104	136		
9.	Ignoring	9	41	73	105	137	166	
10.	Fostering Dependency	10	42	74	106	138	167	
11.	Financial Stress	11	43	75	107	139	168	
12.	Inconsistent Discipline	12	44	76	108	140		
13.	Autonomy	13	45	77	109	141	169	
14.	Punishment	14	46	78	110	142	170	
15.	Expressing Affection	15	47	79	111	143	171	
16.	Anxiety	16	48	80	112	144	172	
17.	Perceives Child as a Burden	17	49	81	113	145	173	
18.	Dependency	18	50	82	114	146	174	
19.	Concern about Health	19	51	83	115	147	175	
20.	Punitiveness	20	52	84	116	148		
21.	Control	21	53	85	117	149	176	
22.	Mood Changes	22	54	86	118	150	177	
23.	Achievement Press	23	55	87	119	151	178	
24.	Positive Evaluation	24	56	88	120	152	179	
25.	Enforcement	25	57	89	121	153	180	
26.	Suppression of Aggression	26	58	90	122	154		
27.	Intelligence	27	59	91	123	155	181	
28.	Withdrawal of Relationship	28	60	92	124	156	182	
29.	Use of Fear to Control	29	61	93	125	157	183	
30.	Sociability	30	62	94	126	158	184	
31.	Irritability	31	63	95	127	159	185	
32.	Negative Emotional State	32	64	96	128	160	186	

To score: Transfer the number circled for each item in the appropriate box above. If item is marked Not Rateable (NR) or Not Observable (NO) record the letters in the appropriate box above.

Please Note:

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University Microfilms



PRESCHOOL ATTAINMENT RECORD

RESEARCH EDITION

BY EDGAR A. DOLL, Ph.D.

Name..... Sex.....
Last First
Residence..... Phone..... Descent.....
Guardian..... Relationship.....
Family Physician.....
Informants..... Role(s).....

ENVIRONMENTAL NOTES

Social-Economic.....
Cultural-Linguistic.....

Date	Year	Mo.	Day
Born	Year	Mo.	Day
Life Age	Years	Mos.	Days
Mental Age			
Intelligence Quotient			Test
PAR Raw Score*			
PAR Attainment Age††			
PAR Attainment Quotient*			

FAMILY DATA

FATHER Name..... Age..... Occupation..... Education.....
Remarks.....

MOTHER Name..... Age..... Occupation..... Education.....
Remarks.....

SIBLINGS (in order of birth)
1. Name..... Age..... Occupation..... Education.....
Remarks.....
2. Name..... Age..... Occupation..... Education.....
Remarks.....
3. Name..... Age..... Occupation..... Education.....
Remarks.....

OTHERS (in home with relationship)
Name..... Age..... Occupation..... Education.....
Remarks.....
Name..... Age..... Occupation..... Education.....
Remarks.....

REFERRAL NOTES

Vision.....
Hearing.....
Speech.....
Orthopedic.....
Health.....
Behavior.....
Emotional.....
Other.....

*"Raw Score" is the total number of items successfully passed allowing half credit for \pm scores.
†"Attainment Age" in years is determined by dividing raw score by 16 (16 items per year).
††"Attainment Age" in months is determined by multiplying Raw Score by .75 (8 items per 6 months interval).
*"Attainment Quotient" is determined by dividing Life Age into Attainment Age and multiplying by 100.

AMBULATION

Score Basis‡	Item Score*	Item Number and Item	Life Age Mean
_____	_____	* ¹ Sits unsupported5
_____	_____	⁹ Stands alone	1.0
_____	_____	¹⁷ Walks about	1.5
_____	_____	²⁵ Runs freely	2.0
_____	_____	³³ Balances standing	2.5
_____	_____	⁴¹ Climbs about	3.0
_____	_____	⁴⁹ Jumps (1), random	3.5
_____	_____	⁵⁷ Hops around	4.0
_____	_____	⁶⁵ Circles formally	4.5
_____	_____	⁷³ Skips, alternate feet	5.0
_____	_____	⁸¹ Jumps (2), pattern	5.5
_____	_____	⁸⁹ Follows leader	6.0
_____	_____	⁹⁷ Dances in pattern	6.5
_____	_____	¹⁰⁵ Rides play vehicles	7.0

MANIPULATION

Score Basis‡	Item Score*	Item Number and Item	Life Age Mean
_____	_____	* ² Reaches, arms5
_____	_____	¹⁰ Grasps, fingers	1.0
_____	_____	¹⁸ Marks, random	1.5
_____	_____	²⁶ Unwraps coverings	2.0
_____	_____	³⁴ Disassembles, takes apart	2.5
_____	_____	⁴² Assembles, puts together	3.0
_____	_____	⁵⁰ Throws objects	3.5
_____	_____	⁵⁸ Catches objects	4.0
_____	_____	⁶⁶ Copies square	4.5
_____	_____	⁷⁴ Blows nose	5.0
_____	_____	⁸² Copies triangle	5.5
_____	_____	⁹⁰ Fastens shoes	6.0
_____	_____	⁹⁸ Colors drawings	6.5
_____	_____	¹⁰⁶ Pastes cut-outs	7.0

‡Use R for interview data report; use O for observed performance; use T for tested performance.

*Use + for full success; use ± for half success; use - for no success; note NO for no opportunity.

*Superscript Numbers are the item numbers; these may be cross referenced with both "Summary and Profile" and "Specific Item Definitions", page 22 of the Manual.

IDEATION

Score Basis‡	Item Score*	Item Number and Item	Life Age Mean
		*7Resists unfamiliar5
		¹⁵ Identifies familiar	1.0
		²³ Gestures for communication	1.5
		³¹ Matches familiar things	2.0
		³⁹ Counts 2	2.5
		⁴⁷ Compares (1) size	3.0
		⁵⁵ Counts 3	3.5
		⁶³ Compares (2) texture	4.0
		⁷¹ Counts 4	4.5
		⁷⁹ Compares (3) weight	5.0
		⁸⁷ Names colors	5.5
		⁹⁵ Beats rhythm	6.0
		¹⁰³ Counts 13	6.5
		¹¹¹ Tells hour	7.0

CREATIVITY

Score Basis‡	Item Score*	Item Number and Item	Life Age Mean
		*8Demands attention5
		¹⁶ Tests for curiosity	1.0
		²⁴ Transfers; rearranges	1.5
		³² Explores surroundings	2.0
		⁴⁰ Tears apart	2.5
		⁴⁸ Dramatizes (1) stories	3.0
		⁵⁶ Builds; puts together	3.5
		⁶⁴ Draws spontaneously	4.0
		⁷² Moulds with plastics	4.5
		⁸⁰ Dramatizes (2) music	5.0
		⁸⁸ Paints imaginatively	5.5
		⁹⁶ Invents stories	6.0
		¹⁰⁴ Solos; goes alone	6.5
		¹¹² Experiments; modifies	7.0

‡Use R for interview data report; use O for observed performance; use T for tested performance.

‡Use + for full success; use ± for half success; use – for no success; note NO for no opportunity.

*Superscript Numbers are the item numbers; these may be cross referenced with both "Summary and Profile" and "Specific Item Definitions", page 24 of the Manual.

RESPONSIBILITY

Score Basis‡	Item Score*	Item Number and Item	Life Age Mean
_____	_____	* ⁵ Nurses, breast or bottle5
_____	_____	¹³ Chews semi-solids	1.0
_____	_____	²¹ Rests; voluntary relaxation	1.5
_____	_____	²⁹ Minds; obeys	2.0
_____	_____	³⁷ Conserves materials	2.5
_____	_____	⁴⁵ Takes care	3.0
_____	_____	⁵³ Gets drink	3.5
_____	_____	⁶¹ Dresses self	4.0
_____	_____	⁶⁹ Toilets self	4.5
_____	_____	⁷⁷ Cleans up	5.0
_____	_____	⁸⁵ Respects property	5.5
_____	_____	⁹³ Conforms to customs	6.0
_____	_____	¹⁰¹ Cooperates with others	6.5
_____	_____	¹⁰⁹ Observes routines	7.0

INFORMATION

Score Basis‡	Item Score*	Item Number and Item	Life Age Mean
_____	_____	* ⁶ Recognizes (a) few5
_____	_____	¹⁴ Recognizes (b) many	1.0
_____	_____	²² Recognizes (c) use	1.5
_____	_____	³⁰ Recognizes (d) his	2.0
_____	_____	³⁸ Fondles to show regard	2.5
_____	_____	⁴⁶ Knows sex	3.0
_____	_____	⁵⁴ Tells name	3.5
_____	_____	⁶² Names objects	4.0
_____	_____	⁷⁰ Knows day-night	4.5
_____	_____	⁷⁸ Names coins	5.0
_____	_____	⁸⁶ Knows age	5.5
_____	_____	⁹⁴ Knows A.M.-P.M.	6.0
_____	_____	¹⁰² Knows Right-Left	6.5
_____	_____	¹¹⁰ Knows address	7.0

‡Use R for interview data report; use O for observed performance; use T for tested performance.

*Use + for full success; use ± for half success; use - for no success; note NO for no opportunity.

*Superscript Numbers are the item numbers; these may be cross referenced with both "Summary and Profile" and "Specific Item Definitions", page 24 of the Manual.

RAPPORT

Score Basis†	Item Score*	Item Number and Item	Life Age Mean
_____	_____	* ³ Regards; responds5
_____	_____	¹¹ Attends (1); briefly	1.0
_____	_____	¹⁹ Initiates actions	1.5
_____	_____	²⁷ Discriminates; chooses	2.0
_____	_____	³⁵ Complies; cooperates	2.5
_____	_____	⁴³ Plays (a), beside	3.0
_____	_____	⁵¹ Plays (b), with	3.5
_____	_____	⁵⁹ Plays (c), cooperatively	4.0
_____	_____	⁶⁷ Attends (2); concentrates	4.5
_____	_____	⁷⁵ Sings harmoniously	5.0
_____	_____	⁸³ Helps, simple tasks	5.5
_____	_____	⁹¹ Plays (d), pretend	6.0
_____	_____	⁹⁹ Plays (e) competitively	6.5
_____	_____	¹⁰⁷ Plays (f) rule games	7.0

COMMUNICATION

Score Basis†	Item Score*	Item Number and Item	Life Age Mean
_____	_____	* ⁴ Babbles inarticulately5
_____	_____	¹² Vocalizes non-verbally	1.0
_____	_____	²⁰ Imitates; echoes	1.5
_____	_____	²⁸ Invites responses	2.0
_____	_____	³⁶ Speaks familiar words	2.5
_____	_____	⁴⁴ Talks in phrases	3.0
_____	_____	⁵² Converses in sentences	3.5
_____	_____	⁶⁰ Relates in paragraphs	4.0
_____	_____	⁶⁸ Describes and shares	4.5
_____	_____	⁷⁶ Recites; reproduces	5.0
_____	_____	⁸⁴ Prints first name	5.5
_____	_____	⁹² Copies familiar words	6.0
_____	_____	¹⁰⁰ Reads short sentences	6.5
_____	_____	¹⁰⁸ Adds to 10	7.0

†Use R for interview data report; use O for observed performance; use T for tested performance.

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*Superscript Numbers are the item numbers; these may be cross referenced with both "Summary and Profile" and "Specific Item Definitions", page 24 of the Manual.

SUMMARY AND PROFILE

SCORES

Name _____ In Years _____ In Months _____
 LA _____ MA _____
 Date _____ TAA _____
 Examiner _____ *AQ _____
 IQ _____

Age in Years	0 to .5	.5 to 1.0	1.0 to 1.5	1.5 to 2.0	2.0 to 2.5	2.5 to 3.0	3.0 to 3.5	3.5 to 4.0	4.0 to 4.5	4.5 to 5.0	5.0 to 5.5	5.5 to 6.0	6.0 to 6.5	6.5 to 7.0	Items Passed by Category
Age in Months	0-6	6-12	12-18	18-24	24-30	30-36	36-42	42-48	48-54	54-60	60-66	66-72	72-78	78-84	
Ambulation	1Sits	9Stands	17Walks	25Runs	33Balances	41Climbs	49Jumps (1)	57Hops	65Circles	73Skips	81Jumps (2)	89Follows Leader	97Dances	105Rides Vehicles	
Manipulation	2Reaches	10Grasps	18Marks	26Unwraps	34Disassembles	42Assembles	50Throws	58Catches	66Draws Square	74Blows Nose	82Draws Triangle	90Fastens Shoes	98Colors to Line	106Cuts and Pastes	
Report	3Regards	11Attends (1)	19Initiates	27Discriminates	35Completes	43Plays Beside (a)	51Plays With (b)	59Plays Coop. (c)	67Attends (2)	75Sings	83Helps	91Plays Pretend (d)	99Plays Compet. (e)	107Plays (f)	
Communication	4Babbles	12Vocalizes	20Imitates	28Invites	36Speaks	44Talks	52Converses	60Relates	68Describes	76Recites	84Prints	92Copies	100Reads	108Adds	
Responsibility	5Nurses	13Chews	21Rests	29Minds	37Con-serves	45Takes Care	53Gets Drink	61Dresses Self	69Toilets Self	77Cleans Up	85Respects Property	93Con-forms	101Coop-erates	109Ob-serves R.	
Information	6Recog-Few (a)	14Recog-Many (b)	22Recog-Use (c)	30Recog-His (d)	38Fondles	46Knows Sex	54Tells Name	62Names Objects	70Knows D-N	78Names Coins	86Knows Age	94Knows A.M.-P.M.	102Knows R-L	110Knows Address	
Ideation	7Resists	15Identifies	23Gestures	31Matches	39Counts 2	47Comp-Size (1)	55Counts 3	63Comp-Texture (2)	71Counts 4	79Comp-Weight (3)	87Names Colors	95Beats Rhythm	103Counts 13	111Tells Hour	
Creativity	8Demands	16Tests	24Transfers	32Explores	40Tears	48Drama-tizes S. (1)	56Builds	64Draws	72Moulds	80Drama-tizes M. (2)	88Paints	96Invents Stories	104Solos	112Expor-iments	
Items Passed by Age Periods															
Raw Score**															

DENVER DEVELOPMENTAL SCREENING TEST

Cross-Section Norms

NAME _____

BIRTH DATE _____

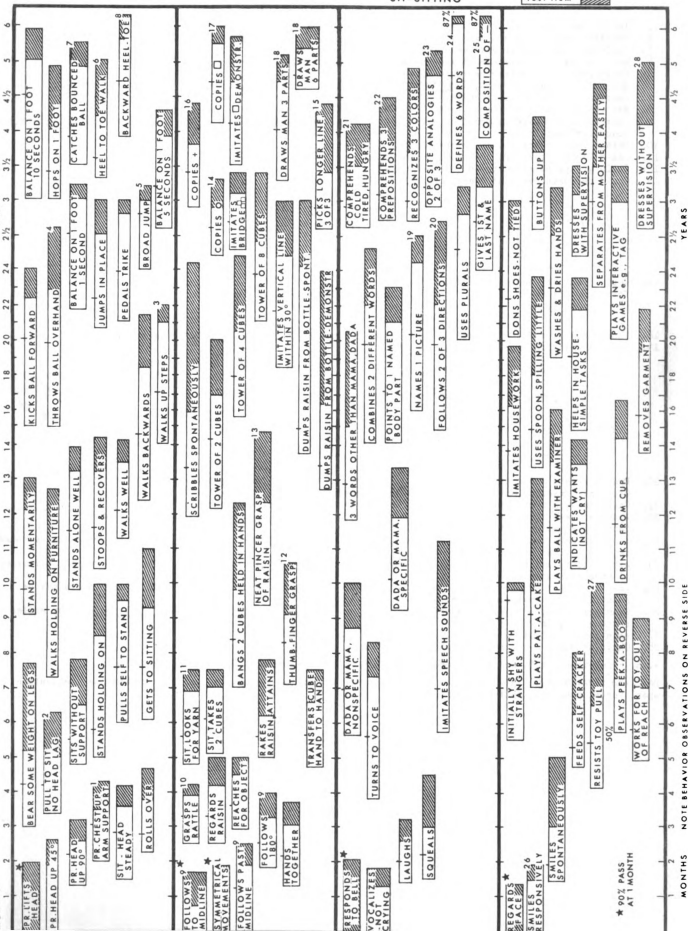
Pr=PRONE
Sit=SITTING

PERCENT OF CHILDREN PASSING

25 50 75 90
Test Item

YEARS

MONTHS

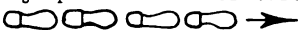



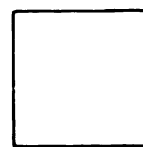
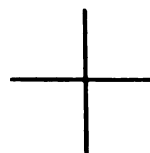
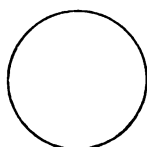
* 90% PASS AT 1 MONTH

YEARS

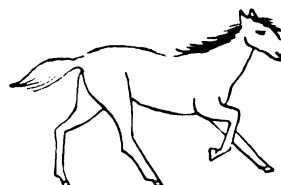
MONTHS NOTE BEHAVIOR OBSERVATIONS ON REVERSE SIDE

DIRECTIONS

1. Infant, when prone, lifts chest off table with support of forearms and/or hands.
2. Examiner grasps child's hands, pulls him from supine to sitting, child has no head lag.
3. Child may use wall or rail only, not person, may not crawl.
4. Child throws ball overhand 3 feet to within examiner's reach.
5. Child performs standing broad jump over width of test sheet.
6. Ask child to walk forward,  heel within 1 inch of toe.
7. Examiner bounces ball to child, child must catch with hands (2 of 3 trials).
8. Ask child to walk backwards,  toe within 1 inch of heel.
9. Examiner moves yarn in arc from side to side 1 foot above baby's head. Note if eyes follow 90° to midline (past midline; 180°).
10. Infant grasps rattle when touched to his finger tips.
11. Child looks after yarn dropped from sight over table's edge.
12. Child grasps raisin between thumb and index finger.
13. Child performs overhand grasp of raisin with tips of thumb and index finger.



14. Copy: Pass any enclosed form. Do not demonstrate. Do not name form.
15. "Which line is longer?" (Not bigger.) Turn paper upside down, repeat (Pass 3 of 3).
16. Pass crossing lines, any angle.
17. Have child copy first. If fail, demonstrate. Pass figure with 4 square corners.
18. When scoring, symmetrical parts count as one (2 arms or 2 eyes count as one part only).
19. Point to picture and have child name it.



20. Examiner asks child to: "Give block to Mommie, put block on table, put block on floor" (2 of 3).
Caution: Examiner not to gesture with head or eyes.
21. Child answers 2 of 3 questions: "What do you do when you are cold? hungry? tired?"
22. Examiner asks child to: "Put block on table, under table, in front of chair, behind chair."
Caution: Examiner not to gesture with head or eyes.
23. Examiner asks child: "Fire is hot, ice is _____. Mother is a woman, dad is a _____. A horse is big, a mouse is _____." (Pass if 2 of 3 are correct.)
24. Ask child to define 6: ball; lake; desk; house; banana; curtain; hedge; pavement. Any verbal indication of understanding is passed.
25. Examiner asks: "What is a spoon made of? a shoe made of? a door made of?" (No other objects may be substituted.) Must pass all 3.
26. Examiner attempts to elicit a smile by: smiling, talking or waving to infant, do not touch, baby smiles responsively in 2 or 3 attempts.
27. When child is playing with toy, pull it away from him. Pass if he resists.
28. Child need not be able to tie shoes or button in the back.

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DATE AND BEHAVIORAL OBSERVATIONS (how child feels at time of the evaluation, relation to examiner, attention span, verbal behavior, self-confidence, etc.):

APPENDIX B

TABLES

TABLE B-1.--Correlation Coefficients Between Maternal Attitudes and Developmental Level of the Hearing-Impaired Child.

	Preschool Attainment Record	Preschool Attainment Record (adjusted score)	Preschool Attainment Record Rating	Denver Developmental	Denver Developmental (adjusted score)	Denver Developmental Rating
Attitude to Deafness Scale	.14	.18	.05	.19	.10	.03
Authority	.05	.06	.04	.04	.01	.18
Fostering Dependency	.04	.04	.02	.15	.04	.15
Seclusiveness of Mother	.19	.17	.07	.27	.23	.17
Suppression of Aggression	.18	.18	.21	.02	.10	.11
Suppression of Sexuality	.33	.32	.20	.19	.24	.36
Excluding Outside Influence	.25	.27	.18	.16	.16	.15
Hostility	.30	.30	.07	.27	.17	.18
Marital Conflict	.25	.25	.09	.18	.14	.03
Rejection of Homemaking Role	.04	.06	.10	.04	.12	.01
Irritability	.29	.30	.03	.31	.18	.23
Democratic	.23	.27	.02	.23	.14	.27
Equalitarian	.03	.04	.28	.00	.09	.07
Encouraging Verbalization	.37	.41*	.26	.33	.32	.42*
Comradeship and Sharing	.01	.03	.09	.10	.02	.14

*Significant at .05 level

**Significant at .01 level

TABLE B-2.--Correlation Coefficients Between Attitude to Deafness Scale and Maternal Behavior.

Maternal Behavior	Attitude to Deafness
Equalitarian	- .68**
Emotional Involvement	.28
Rejects Homemaking Role	- .08
Excessive Contact	- .13
Physical Health-Mother	- .23
Lax Discipline	- .13
Cooperativeness	- .21
Intrusiveness	.35
Ignoring	.45*
Fostering Dependency	.07
Financial Stress	- .04
Inconsistent Discipline	.20
Autonomy	- .45*
Punishment	.63**
Expressing Affection	- .28
Anxiety	.46*
Perceives Child as Burden	.49*
Dependency	.03
Concern about Health	- .39
Punitiveness	.45*
Control	- .08
Mood Changes	.50*
Achievement Press	.09
Positive Evaluation	- .43*
Enforcement	.01
Suppression-Aggression	.17
Intelligence	- .12
Withdrawal-Relationship	.35
Use of Fear to Control	.76**
Sociability	- .27
Irritability	.57**
Negative Emotional State	.32

*Significant at .05 level.

**Significant at .01 level.

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