

A COMPARISON OF FAMILY INTERACTION
ON A HEALTH TO PATHOLOGY CONTINUUM

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CHAPTER I

SIGNIFICANCE OF THE FAMILY

Introduction

The family in our society has undergone many changes since colonial days, yet it has survived by adapting to ever-changing needs. Today, with increased industrialization, urbanization, and mobility, the family has shrunk in size from an extended family with many relatives to an isolated, nuclear family with only parents and offspring. This growing isolation has put more pressure on the family for satisfaction of needs and coping with crises, a responsibility that used to be shared with a larger group which, cumulatively, supplied extra resources and more experience. Some people think that the family, as it functions in the United States, will not survive much longer. However, in spite of mounting pressures and increased frequency of family break up, as evidenced by divorce rates, some families are very healthy and function well in our rapidly changing culture. There is a need to determine how it occurs

that some families "make it" and others do not.

The family is still the most vital and significant force in human development. This fact alone makes the family worthy of detailed and exhaustive study. For this thesis, the family is viewed as the basic system in our society. Each person within the family is a subsystem, and factors outside the family such as the community and state are designated as suprasystems. None of these systems are completely separate; they interrelate and overlap. The focus here is on interactions within the family system.

The first five years of life, those spent closest to the family, are considered most important to growth and development of the individual. A child begins to learn about himself and the world from his own family. He observes how they interact with him, among themselves, and with those outside the family. Motivation to learn is very high in a child below the age of two, because he is totally dependent upon his family for survival; he must be provided with food, clothing, shelter, and protection from harm. He is dependent upon them emotionally for life maintaining "strokes," physical touching and verbal recognition of him as a person.

He must learn how family members interact and how he fits into the existing family system in order to get his needs met. Once he finds his niche, family members strengthen his position by interacting in ways that reaffirm his role. How this role is assigned is very complex and is still being studied. Parents often attribute certain characteristics to the child and he interprets these as parental expectations and behaves accordingly to insure survival. He receives many recognition strokes for acting within the role and gradually he may see it as being his true nature. If he is to be the smart child, he may be given books and praised for thinking; if he is to be the dull one, he may be told he can't read and his opinion doesn't matter.

One way to study how family roles evolve and the family system stabilizes is to observe interactions between members of a family. During observation, certain patterns emerge which characterize interaction for that family. Families containing one or more schizophrenic members have been the focus of much observation and description of family functioning. Operationally, these families represent the dysfunctional range on a continuum of health to pathology

because they experience sufficient pain, or exhibit socially unacceptable behavior to a degree that they come, or are sent, for psychiatric treatment. Investigators began to notice interactional similarities among families of identified patients in the 50's, and recorded their observations.

Although there are now some criteria available to assess pathology, or what is dysfunctional, in a family system, little has been done to study healthy families and how they operate. It has been taken for granted that we all know what characterizes a healthy family--so it has been rarely defined or quantified. Also, healthy families are not as available for study. Much effort has been directed toward treatment of families with problems, and since healthy families are getting along, little need has been seen to study them. Many of the researchers in the field have been physicians who place heavier emphasis on pathology than health.

There is a need for research leading to accurate description of healthy families in our society. Only by doing this can we conceptualize and understand the total continuum from health to pathology. Having the range

clearly indentified will increase understanding of the specific ways in which dysfunctional families differ from healthy ones, and will guide in teaching dysfunctional families to adopt healthier patterns of interaction. This study concerned itself with description and quanitification of family interactional behaviors.

Statement of Problem

The problem of this study was to describe three types of family systems and then compare them interactionally on a continuum of health to pathology.

Purposes

The purposes of this study were to:

1. Identify characteristics of family systems in which there is no identifiable pathology (called Healthy).
2. Identify characteristics of family systems in which there is an identified Communicational Deficit.
3. Identify characteristics of family systems in which there is an identified Behavioral Disturbance.
4. Compare each type of family system with regard to the following selected criteria:

1. Structure of the Family (composed of structure, parental coalition, and closeness)

- II. Mythology
- III. Goal-directed Negotiation
- IV. Autonomy (composed of communication of self-concept, responsibility, invasiveness, and permeability)
- V. Family Affect (composed of expressiveness, mood and tone, conflict and empathy)
- VI. Global Health-Pathology Scale

Background and Significance

Nurses have always related to families of patients, but until recently this was accepted as a matter of course, and few recognized it as a valuable skill in the delivery of effective health care. The first nurses to become aware of the need for a family orientation to treatment were those in public health, who have the rare advantage of experiencing family interaction in its natural setting. In 1968, Mereness invited nurses to become involved in family therapy, saying, "the role of family therapist is one which nurses seem uniquely well equipped to accept, especially nurses who are already comfortable in the role of family visitor." (p. 257) With community acceptance established, she felt nurses should equip themselves with the necessary

skills and "seize this opportunity while it is still available to us." (p. 256)

In 1970, articles about general systems theory, and family-centered nursing began to appear in the journals. Black reported on a graduate program emphasizing family process at Catholic University. She reported that "students view the patient from the outset as a member of a living together or closely associated group of persons, and they see his problems, strengths, weaknesses, values, beliefs and roles as being inextricably bound up with those of that group. They now perceive the family as a system, with anything that affects part of the system likewise affecting the whole." (1970 p. 58) Haller, a clinical specialist doing primary therapy at a mental health clinic, gives a concise definition of the family system as a "mutually regulatory, natural grouping of persons with a history and a future together. This broad definition goes beyond the nuclear family and the extended family and includes other persons who are significant enough in a family's ongoing experience to exert a mutually responsive effect." (1974 p. 462)

Craven and Sharp described the effects of illness on family function. They expressed concern that in our specialized and fragmented health care system there is generally no one person who coordinates the total health care of the family. Not only is the patient's position in his family and community ignored, but often even the relationship of the affected part to the whole person. They feel that nurses can meet the need of decreasing family disruption during the crisis of illness by providing a link between the patient in the hospital and his family, being sensitive to the needs of both and helping them to resolve problems and express feelings. By taking a nursing history, the nurse can become alert to family patterns, and in her assessment identify strengths and unique aspects of the family that can be utilized in the recovery process (Craven and Sharp 1972). Robert Goldwyn, M.D., went one step further in discussing disease as a "family affair" by suggesting that even during hospitalization family members be taught to do some nursing care. He feels it would provide a psychological lift to the patient, and gradually increase the public awareness of the disease process, medical intervention, and thus how to cope with disease and infirmity in the home (1973).

Many case studies have been written to date illustrating family orientation in diverse nursing situations. In 1972 a description of a multidisciplinary crisis team appeared in the American Journal of Psychiatry (Rubenstein). The team did a study on rehospitalization versus family crisis intervention. The purpose of the program was to "mobilize family support and prevent or shorten rehospitalization of former inpatients." (p. 715) The team consisted of a psychiatrist, resident, nurse, and social worker. The following comments illustrate the nurse's role:

The nurse's home visit frequently becomes the front line of treatment . . . her presence in the home establishes immediate reassurance that the treating facility is ready to help . . . She is able to bring with her an awareness of the crisis as it is experienced in the context of the family system. She can bring needed medication and . . . is thus able to involve the family immediately in attempting to find solutions to the present dilemma, ruling out hospitalization for the patient. She can help identify and eliminate stresses that are contributing to the patient's symptoms. (p. 716)

Results of this study were that in six months, out of twenty-seven possible readmissions, only three were admitted. Preliminary results indicate that such a crisis team could be an important base for preventive care.

The director of the Arlington, Mass., Visiting Nurse Association, Tapia, has devised a system for assessing a

family's level of functioning, and correlated specific nursing skills to each level. She has defined five developmental levels of family functioning: (1) Chaotic or Infancy--alienated and barely meeting needs for security and physical survival, (2) Childhood--slightly above survival, (3) Adolescence--normal family with many conflicts and problems, (4) Adulthood--family with solutions to problems, and (5) Maturity--the ideal independent family (Tapia 1972).

The nurse's intervention and goals must be congruent with a family's current developmental level for maximum effectiveness. At level (1), she must focus on development of a trust relationship; at level (2), help define problems; at level (3), focus on finding solutions and making decisions; and at level (4), focus on prevention and planning. A level (5) family would not need the nurse, except during extreme or multiple crises if they became temporarily immobilized. The family level of functioning is indicative of family health, so changes in level indicate a measureable scale for growth, and a means for evaluating effectiveness of nursing intervention. Tapia's Complete "Model for Family Nursing" is given in Appendix A. This model is based on an existential view of man, and the concept that "health is a dynamic

term which encompasses all aspects of a person's life and being; physical, psychological, emotional, social, environmental, spiritual, and cultural." (p. 268)

In 1973, Savino and Saunders reported on working with abusive parents with group therapy and home visits. In this situation the nurse saw her "nonintrusive role model" position as unique among all the other disciplines involved in child abuse. In the home she could help parents recognize and accept normal developmental behaviors in the children, and demonstrate alternate solutions to problems--always being careful not to jeopardize the child's safety. In group therapy the effort is to meet the needs of very isolated, insecure, inadequate parents in order to take pressure off the child. Efforts are being made to rehabilitate parents, rather than put children in foster homes. (Savino and Saunders 1973).

This is a representative sample of available literature supporting the nurse's unique ability to relate to families. However, to function effectively, she needs tools for assessing a family's level of functioning. Studies to describe and quantify interactional characteristics of families and relate these to functional levels will greatly enhance her skill.

Hypothesis

The general hypothesis for this study was that on all dimensions measured there would be no significant differences among the three types of family systems represented.

Definition of Terms

For purposes of this study, the following terms have been defined:

1. Family system--a group of either biologically or socially related people living together as a family and having patterns of interaction that are predictable.
2. Suprasystems--systems larger and outside of the family with which there is a reciprocal exchange of information and energy.
3. Subsystem--persons within a family system, having their own uniqueness and experience in addition to those of the family.
4. Homeostasis--a state of balance within a system, which the system strives to maintain.
5. Healthy family--one in which no member is in psychiatric treatment or legal difficulty now, or during the two previous years.

6. Communicational deficit--a diagnosed perceptual learning disability.
7. Behavioral disturbance--a diagnosed psychiatric or emotional problem that requires inpatient treatment.
8. Dysfunctional family--one in which at least one member has developed behavioral or emotional symptoms requiring psychiatric treatment.

Limitations

For the purposes of this study, it was not possible to control the following variables:

1. The study has very limited application due to a small sample that was not randomly selected.
2. Because families were taken out of their natural setting, their behavior may have been affected in undetermined ways.
3. Because of the skills necessary to do the tasks, the whole family may not have been interviewed, only children above the age of six.

Delimitation

For purposes of this study, the following variable was controlled:

1. The entire sample population was socioeconomically homogeneous. All families were obtained through private institutions. The population was middle to upper-middle class, Caucasian, and predominantly Protestant (See Appendix B).

Assumptions

1. All behavior is learned and can be relearned.
2. Each family is its own unique system, though similarities can be found between families.

Summary and Overview

A need for scientific family research has been discussed. The implications for nursing are twofold. Since nurses already deal with family systems, precise information and skills will help them to render more effective services to patients. Also, because of direct family experience, nurses are in a unique position to become family therapists.

This study was conducted at the Timberlawn Foundation for research and education in psychiatry. The next chapter deals with the development of family research, and cites previous studies done at Timberlawn. Chapter III will detail methodology of the present study of family interaction.

Chapter IV deals with analysis of the data, and Chapter V contains conclusions as well as implications of this study and suggestions for future research.

CHAPTER II

REVIEW OF LITERATURE

Changing Focus: The Development of Family Research

This chapter explores the historical development of a family systems orientation toward psychiatric treatment and research as it is reflected in the literature. Most studies have been done with families of psychiatric patients; a search of the literature revealed only two healthy family studies, and no studies of families with a specific communicational deficit as defined in this study. The last section of this chapter deals with research at Timberlawn upon which this study is based.

Historical Development

Thinking in terms of family systems, and treating the family as an entity is relatively new. Modern psychiatric treatment, beginning with Freud's psychoanalysis, focused on the individual and the processes occurring within him. Gradually, investigators like Sullivan and Horney realized

that people needed to be treated as individuals within a social context. They began looking at interpersonal relationships.

In the 50's several things happened to begin changing the focus of psychiatric treatment from the individual in isolation to the individual in his social environment. One was the development of child-guidance clinics, which centered attention on the family as an entity (Beavers 1973). It was observed that families acted as a unit. Jackson (1954) developed his concept of "family homeostasis" to describe how he saw families functioning, and striving to maintain a tolerable balance. The identified patient came to be seen as a symptom reflecting larger family problems. Another influence was the discovery of the major tranquilizers which enabled many previously institutionalized patients to go back into the community and resume life with their families. Dealing with family systems became important of necessity. Investigators like Ackerman, Jackson, Haley, and Bowen began studying schizophrenic families in search of the etiology as well as effective treatment methods. In 1962, Jackson wrote "It is of considerable importance that some studies on schizophrenia have tacitly adopted a social-science

viewpoint by defining communications and perceptions, no longer merely as vehicles for the transferral of information, but as forms of conduct conducive to adjustment or maladjustment among interacting humans." (1969 p. 266)

Ackerman is considered the father of family therapy. He began by applying individual psychoanalytic therapy techniques to families and was concerned with transference phenomena. He identified the roles of persecutor, victim, and healer in family interaction, thus expanding psychodynamics beyond the individual to his family (1958). Ackerman expressed his belief that, "understanding of the patient's deeper mental distortions would be greatly enriched if the analytic therapist disciplined himself to systematic examination of the relations between the internal processes of the patient's mind and the concurrent processes of the patient's adaptation of his personality to specific family roles, as these are molded by his daily interaction with family members." (1958 p. 330) Haley (1959) focused on communication patterns in the family. He identified the "double-bind" seen in the relationship between schizophrenic children and their mothers, in which the mother gives the child two related but contradictory messages; he can neither

comment on it or leave the scene, and is punished no matter what response he makes, leaving him trapped, hurt, and confused. Bateson (1956) focused on communication distortion with schizophrenics, and became a meticulous observer of body language. Verbal and non-verbal levels of transmission were often diametrically opposed. Bowen (1960) focused on differentiation in family systems. He developed a scale showing characteristics of families that correspond to levels of differentiation on a percentage scale. Families that approach 60 or 70% show high ego differentiation or autonomy. Members of these families are very accepting of individual differences and have a clear idea of ego boundaries. At the other end of the scale are the dysfunctional families who do not accept differences and separateness but cling together fearfully as an "undifferentiated family ego mass."

A very complete work on the operation of family systems is Virginia Satir's book Conjoint Family Therapy (1964). She classified systems as open or closed and gave useful descriptions of each. Closed systems are those in which "everyone is supposed to have the same opinions, feelings, and desires whether or not this is true. In closed systems, honest

self-expression is impossible, and if it does occur, the expression is viewed as deviant or 'sick' or 'crazy' by the other members of the group or family." (p. 185) Differences are regarded as dangerous, and individuals must deaden awareness of self to remain in the system. Satir regards emotional or behavioral symptoms as a sign that the affected person lives in a closed system. In contrast, open systems permit honest expression of feelings and thoughts; differences are seen as natural; negotiation is used to resolve or accept differences; there is give and take; individuals can disclose themselves and grow without destroying themselves and others (1967).

Beavers (1970) stated that, in our rapidly changing culture, in order for successful adults to emerge from the family:

autonomy is the single most important phenomenon to be developed. If you have a family in an environment that is relatively unchanging, with the rules continued through generations, then you wouldn't look for autonomy to be the most important variable in the successful family. As a matter of fact, if we saw families that produced autonomous children in the middle ages, probably five out of six would have been put to death one way or another by the power structure, because there was a real social disutility in being autonomous, thinking for oneself, having one's own feelings. (p. 2)

Speer rejected homeostasis as a contemporary systems goal

because it suggested a static maintenance of balance, as opposed to stability with built-in opportunities for change. His concept is "morphogenesis," which he feels conveys the spontaneity that characterizes healthy families. His model has a flexible structure, open to growth and responsive to new stimulation (Beavers 1973).

Beavers (1970) also stated that, "the purpose of the family is to self-destruct." If autonomy has been achieved by members, and they have developed a lateral base of relationships outside the family, they will no longer be totally dependent on the objects within the family and can tolerate object loss, such as leaving home, or the death of a family member. Beavers said of the family:

At some given point it is supposed to dissolve, leaving the bonds between the primary pair. The bonds need to be loosening and lessening between the generations all the time, and if this can be tolerated, one has the capacity to experience loss, and this is due to the sense of being with one's self rather than emptiness.
(p. 10)

Parents who diminish autonomy for themselves and their children, and cling together in a mass, may appear "close," but they feel empty and alone as the energy of the family is spent in a closed system (entropy) with little provision for replenishment and sharing with the environment (negentropy).

These first theoretical papers were written by clinicians, based on their experiences with families of patients. Researchers then began to conduct studies on families, very early recognizing the complexity of the task. Ackerman wrote:

Inevitably in psychiatric research on the family there is the problem of instituting system and exactness into a field where pertinent clinical observations are of first importance and yet by their very nature are subjective, evaluative, and inexact; . . . on the one hand, there is the effort to make such study less impressionistic and less dependent on the study of single cases. On the other hand . . . in the search for measureable variables, the dynamic essence of the family phenomenon is lost. The striving for exactness rigidifies some research procedures in such a way as to take the very life from the family picture (1958 p. 323).

Review of Family Research

Most family studies have been conducted using one of four general conceptual frameworks: (1) the character of individual family members, emphasizing personality and affect, (2) family structure and role performance, (3) processes in the interchange between family members, and (4) emphasis on task efficiency and cooperation between members (Framo 1972 p. 17). For the purpose of this thesis, interactional research and techniques were reviewed.

In 1950, Bales devised his system of Interaction Process Analysis. He assumed that "a preponderance of positive reactions over negative reactions is a condition of equilibrium or maintenance of the steady state of the system and also that negative reactions tend to inhibit the behavior which preceded." (Lennard and Bernstein 1969 p.113) The distribution of positive and negative reactions was scored by coding each verbal and nonverbal behavior as it related to the preceding one into one of twelve categories such as: Shows Solidarity, Gives Suggestion, Gives Orientation, Asks for Opinion, Disagrees, Shows Antagonism, etc. Bales also had elaborate subcategories to describe types of behavior appropriate to each major category. Bales assumed that social interaction is based on problem solving, and that groups are then task oriented, which "creates strains leading to emotional-integrative problems; the groups then attempt to deal with these expressively positive and negative tensions in order to reintegrate back to the task. The flow back and forth between instrumental and expressive activities constitutes the essence of the Bales system." (Framo 1965 p. 438) Although this system has been used extensively to rate family interaction, it is a complex system, and many behaviors

observable in social, nonfamily, groups for which it was devised may not be observable in a family system with its private meanings, codes, and myths.

In 1951, Strodtbeck devised his Revealed Differences Technique (hereafter RDT). This tool, or modifications of it, has been used in many family studies. It consists of having each family member privately answer a questionnaire, or state his solution to several problem situations. The family is then brought together to discuss each problem and arrive at a group solution. The family discussion is recorded and coded for interactional variables such as agreement, yielding, interruption, and compromise (Winter and Ferreira 1969 p. 34). Strodtbeck originally used his technique to assess power structure in a married couple. In 1954, he applied it to a family triad of mother, father, and adolescent son. Each member independently answered questions related to probable parent-son relationships. From items answered differently, three were chosen in which mother and father paired against son, three in which son and father opposed mother, and three in which son and mother opposed father. The family was presented with the nine disagreement items and asked to agree on one alternative in each set which

best represented the thinking of the whole family. The family interaction of 48 families was audio taped and analyzed by Bales' categories. Strodbeck found that even when disagreements were "squarely joined," families tried to give the impression that they never disagreed in the first place (Framo 1965). This result was congruent with Wynne's (1958) concept of pseudomutuality based on clinical experience with families. Weakland (1960) also emphasized the importance of examining three-party family interaction, instead of parents only, as some studies with schizophrenic families had done.

In 1959, one of the two studies on healthy families appeared. Bachove and Zubaly (Framo 1965) studied role differentiation in nineteen normal families by comparing overt interactional patterns, using Bales' categories, and perceptual data, using Leary's Interpersonal Check List. The families were composed of father, mother, and male sixth-grader. The task consisted of problem situations and joint TAT (Thematic Apperception Test) stories about which family members were to agree. Results showed that, compared to the same study done with peer groups, the peer groups tended to agree and disagree far more than families. It was suggested that disagreement scores for families may have been diverted

into the tension category, and the low agreement scores suggested a tendency to hold to one's own opinion more in a family. Both a task leader, usually father, and a social-emotional leader, mother, emerged. Children exhibited most of the negative behavior, because they were prodded to perform by parents. The father was generally dominant overtly, but it was noticed that the mother exerted a subtle, manipulative dominance by delaying decisions. Levenson repeated the study, adding schizophrenic families. He found that the patients' mothers participated the most often, and showed the largest amount of negative emotional behavior. This finding lends support to the idea of role reversal between parents leading to disturbances in children, though he admitted that this was an oversimplification (Framo 1965).

In 1965, Beavers, et al., conducted a study on communication patterns of mothers of schizophrenics. The purpose of the study was to investigate communication processes in family members of schizophrenics as compared with a control group of non-schizophrenics, to devise a means of scoring such communication objectively, and to minimize the effects of investigator bias. Natural mothers of nine schizophrenics and nine other, also hospitalized, emotionally ill persons

(diagnosed passive-aggressive personality) were interviewed without knowledge of the patient's diagnosis by either the interviewer or the two persons who scored the interview transcripts. The groups were matched on all selected criteria except diagnosis.

The hypothesis was that mothers of schizophrenics would differ from mothers of other psychiatric patients in their tendencies to communicate feelings in a quantitatively more ambiguous fashion. The hypothesis was based on the theory that schizophrenic patients have a severe inability to interpret adequately messages from the outside world due, at least partly, to many years of exposure to communication with paucity of meaning resulting from multiple conflictual messages, or from nonsensical, ambiguous, or inexact messages.

The technique used was an open-ended, semi-structured, 45-60 minute interview, focusing on feelings rather than historical data. The subject was asked about her feelings in five major areas: patient's birth, early childhood and adolescence, socialization and heterosexual contact, and the immediate interview. Scorable items consisted of responses to questions by the interviewer concerning the feeling state of the interviewee. Such responses were placed in one of

three categories: definite responses--clear and related to the question, evasions--did not clarify the feelings of the subject, or shifts of meaning or verbal context--the assumed meaning of previous statements was made untenable by a subsequent statement. Shifts were of two types: either the subject gave factual data indicating her feeling state, but when the interviewer attempted to confirm this, an entirely different feeling state was expressed; or, the subject gave a direct contradiction to the previous feeling state.

Results of this study showed that mothers of the schizophrenic patients produced a significantly smaller proportion of definite statements and a larger proportion of evasions or shifts . These results support the concept that family members of schizophrenic patients characteristically resort to ambiguous and obscure communication, which may be a significant factor in the production of the schizophrenic state. This study was significant because the researchers did not study two very diverse groups, such as hospitalized schizophrenics compared to a non-hospitalized healthy group, but used all hospitalized dysfunctional families having a similar "set," and could still discriminate between diagnostic category of offspring based on communication patterns of

the mothers.

Ferreira and Winter (1965) studied family interaction and decision-making with several types of families: normal (no identified problems) and abnormal (child with identified emotional problem). The abnormal group was subdivided into: schizophrenia-producing family, delinquency-producing family, or maladjusted family. A total of 125 families was tested (50 Nor, 15 Sch, 16 Del, and 44 Mal). Each person answered a neutral questionnaire of seven situations with ten alternatives each. The seven topics were: famous people, food preferences, films, countries to visit, favorite sports, magazines preferred, and selection of a two-tone color combination for next automobile. Families were rated on three variables: Spontaneous Agreement (those items which agreed prior to discussion), Decision Time (time in minutes needed to reach consensus during discussion), and Choice Fulfillment of the family group and individual members (how often what an individual wanted became what the family wanted). Results showed that normal families differed demonstrably from abnormal ones. Normal families had much greater Spontaneous Agreement, lower Decision Time, and higher Choice Fulfillment. Abnormal families tended to arrive at inappropriate solutions to

problems in terms of individual fulfillment, and take longer to do so. In a previous study, Ferreira (1963) investigated patterns of rejection and the expectancy of rejection in families. In healthy families, his findings suggested, a kind of talionic law prevailed, so that in a given relationship an individual tended to expect rejection in an amount equal to the amount of rejection he tended to display. "In the pathologic families, rather than an 'eye for an eye' attitude being displayed, the attitudes of 'two eyes for an eye' or 'no tooth for a tooth' are more prevalent." (Framo 1965 p. 429)

An interesting study contrasting the relationship of parents to their schizophrenic child with their relationship to a sibling was done by Schlomo in 1966 (Framo 1972). Family members were tested individually with the Wechsler-Bellevue test. Each triad, mother, father, and one child, was given a form of Wechsler subtest to do as a group. Measurements were a combination of the individual and group intelligence score, and Bale's analysis of the conversation coded blindly by two raters. Results showed parents equally dominant, and group efficiency the same with either child. However, the patient was more supportive of parents than

the sibling was, and there was greater parental discord when the patient was present than with the sibling.

An important study was done by Mishler and Waxler (1968) also using family triads. They used 49 families, some with normal children and some with schizophrenic children. The schizophrenic group was further subdivided into those with good or poor premorbid adjustment by use of the Phillips Scale of Premorbid Adjustment. Due to the fact that parents behave differently with male and female children, intrafamilial controls were imposed by having a well child of the same sex as the patient participate, or with normal families, two children of the same sex. The experimental task was RDT as used by Strodtbeck with triads--discussion of nine disagreement items. All parents participated twice, but different items were usually discussed the second time, as they were correlated with the sibling's answers.

Interaction was coded using a modification of Bales' method; in addition to the twelve categories, length of pauses, who speaks to whom, interruptions and outcome, acknowledgement of others, and affect were also coded. Coding was done from a typescript to insure accuracy, and an audio tape, to add the dimension of intonation. The many codes

were reduced to five conceptual domains for analysis: expressiveness, strategies of attention and person control, speech disruption, and responsiveness.

Regarding expressiveness, it was found that normal families had a high level, which was associated with disproportionately more positive feelings; good premorbid had a low level, which was associated with disproportionately more negative feeling; and the poor premorbid were in between regarding both expressiveness and affective quality.

Findings regarding control were that the clearest hierarchy of power and authority was seen in normal families. This was not associated with coercion; in fact, there was the "most evidence of direct attempts at interpersonal influence in that all members of these families, including the low status children, are more likely to use person-control strategies such as interruptions." (p. 285) In the schizophrenic families, control was more likely to be exerted indirectly, by use of extended pauses. This is a subtle means of control without responsibility--words fall flat, thus diminishing the value of the speaker, and decreasing the likelihood that he will speak again. In male schizophrenic families there was often a generational role reversal between father and son;

the patient and his mother took the high power positions deferring to one another, and the father was left somewhat outside the system. In female schizophrenic families, the daughter seemed most isolated, and the mother most powerful. The exercise of power in the schizophrenic families, especially the good premorbid, was usually impersonal and indirect. It was found that who had the power and how it was used was demonstrated most clearly in the presence of the patient.

A very unexpected finding occurred with speech disruptions. It was expected that more disruptions and deviations from orderly continuous speech would be found in schizophrenic than in normal families; the reverse was found. This suggests that there may be an optimum level of variability which is not disruptive to purposeful activity, and which provides opportunities for change, for the introduction of new information, and for movement and development within the group. This pattern contrasted the extremely controlled, ritualistic speech found in the schizophrenic families that neither provides new information nor permits the possibility of change.

Responsiveness, or acknowledging that something has been said by another, was found to be highest for normals and lowest for poor premorbid, who were relatively non-responsive. They behaved as though somewhat confused, and were concerned with discovering some rule that would tell them what to do.

The most surprising result of the study was that, especially with male families, the good premorbid were most different from the normals, contrary to expectations that poor premorbid would differ most reflecting the degree of pathology. Another unexpected finding was a lack of role differentiation in families: "Generalized family styles of interaction and family norms expressed in behavior appear to be stronger than intrafamily role differentials for the dimensions of behavior under study." (p. 289)

In 1962 Haley wrote "...The crucial differences in families would seem to reside in the sorts of transactions which take place between family members; the study of differences becomes a classification of communication patterns in the family." (Jackson 1969 p. 262) He cited four basic assumptions to family study:

(a) family members deal differently with each other than they do with other people, (b) the millions of responses which family members meet over time within a family fall into patterns, (c) these patterns persist within a family for many years and will influence a child's expectations of, and behavior with, other people when he leaves the family, and (d) the child is not a passive recipient of what his parents do with him but an active co-creator of family patterns. (p. 262)

Haley said that there is no precedent for family experiments since methods developed for individuals or for artificial groups do not apply to patterns of an ongoing system. He devised a coalition experiment for use with schizophrenic families (mother, father, diagnosed child). They sat at a round table, screened from one another by high partitions. Each person had two "coalition" buttons labeled for persons on left and right. There were also two "signal" buttons on left and right side. A "score" was tallied every time two people chose one another. That was the only way to score, and each person received the same score. The family was asked to communicate only through use of the signal buttons. A "game" consisted of three rounds of two minutes each. The object was to get the highest score. Each member could see his score accumulate in a window. A fourth round was played with the family talking. They were to decide who would win and try to arrange it. The conversation was recorded. The

experiment was done with 20 schizophrenic and 20 normal families. Results showed that, contrary to expectations, the normal families tended to be more like one another and the schizophrenic families showed a considerable range of variability. Schizophrenic families pushed buttons less, and spent more time not in coalition with anyone. Normal families shared coalition equally, and schizophrenic parents coalesced more to the exclusion of the child. The child in the schizophrenic group was more inconsistent and unresponsive than the normal child. In the last round, normal families planned who would win; schizophrenic families predicted it. Despite instructions to plan, the schizophrenic group succeeded only half of the time. The normal group succeeded most of the time. Haley acknowledged that his study was premature; "before one can experiment with differences between families, basic research on the methodology should be done." (Jackson 1968 p. 287)

Westley and Epstein (1969) conducted two long-term psychiatric-sociological studies designed to investigate the relationship between emotional health of college students and family organization. It should be noted that the study was done in a very conservative Canadian community. The first

pilot study was started in 1955 and took three years. This study was done to gather information on the healthiest students in order to hypothesize for a second study comparing healthy and emotionally disturbed students. The healthiest students were picked from high psychological test scores, Rorschach and TAT, and a psychiatric interview. Nine students and families were chosen. Five areas of measurement were devised. First was balance of power, from which five types of authority were distinguished: father-dominant, father-led, equalitarian [sic], mother-led, and mother-dominant. Second was psychodynamic organization. This included problem solution, or the family's ability to recognize and cope with emotional problems in or between members; and autonomy, referring to the degree to which members of a family respect, permit, and encourage private and independent emotional lives in the others. Third was division of labor, which was identified under four types: traditional, in which husband does almost no household tasks; balanced, where he is responsible for a small part; shared, where husband and wife share more tasks than either do alone; and unconventional, where husband takes responsibility for more tasks than does wife. The fourth factor was status and mobility experiences of the

father and mother during the course of their marriage as an indicator of status relationships within the family. Mobility was computed by comparing current education and occupation with those of their fathers. The fifth dimension was the institution of the family, or roles. Roles were measured in terms of the degree to which the husband and wife accepted and participated in their roles of worker, spouse, and parent. (Westley and Epstein 1969 pp. 26-31)

The large study began in 1958 and was completed in 1964. There were a total of 76 subjects. They were divided into three groups for tabulation of data — the 20 healthiest, the 20 least healthy, and 39 in-between. Emotional health was the major dependent variable. Specific data, and instruments used are detailed in The Silent Majority, 1969. Results showed that categories clearly differentiated between healthy and sick children. Those families with a low level of psychopathology tended to have emotionally healthy children. The authors interpreted "health" as:

a state of surplus energy, vitality, and awareness, as well as active attempts by an individual to master his environment. The healthy individual does more than adapt to his surroundings; he makes them adjust to him as well. (p. 38)

The basic framework used was Erickson's eight developmental

stages:

Our view is that an emotionally healthy individual is not one who does not have conflicts; rather he is one who has dealt and is dealing in a satisfactory manner with the conflicts inherent in each stage of development. (p. 48)

The importance of the father emerged from the study; all fathers of healthy or problem solving families enjoyed a spontaneous and warm relationship with their children, while only three of the fathers of "sick" children had this. Parents of emotionally disturbed children were completely unaware of disturbances despite symptoms such as effeminacy, depressive withdrawal, or relatively incapacitating psychosomatic symptoms. Conversely, families of healthy children seemed aware of even minute problems. Cases were found where parents suffered from severe pathology, but children were healthy. In these families, the parents had a warm supportive relationship which seemed to insulate children from the parents' pathology.

Findings suggested that the mother most influences the balance of autonomy-dependency. Her consistency in dealing with the children, her mode of discipline, whether directional or constructive, her participation in their activities, her spontaneity, or lack of it, in her relationships with them all

seemed to be a part of the way in which autonomy and dependency were manifested in the daily life of the family.

In terms of authority, the father-led families had the healthiest children. "The father, secure in his identity and position in the family, and feeling warm and affectionate toward his wife, takes the initiative in the solution of emotional problems. This initiative makes for a problem-solving family." (p. 36) Problem solving ability and autonomy were regarded as the two most critical factors influencing emotional health in our society:

Autonomy seems to be essential to the development of satisfactory ego identity, for one must be permitted to consider oneself a separate person, and to experience oneself as such, to find an identity. Without such autonomy it seems likely that the child would be unable to solve the basic problem of separation from his family of orientation and would remain overdependent. (p. 88-9)

The most important factors in the parents relationship seemed to be that they got their needs met satisfactorily, permitting and supporting their own identity and sense of worth. Frequent and satisfactory sexual relations between parents was related to emotional health of children. Since the parents met each other's needs, they did not use children to live out their needs; and since they were happy, they could meet children's needs and foster positive

self-images. A significant positive correlation was also found between the emotional health of the mother and the degree to which the family participated in activities involving others, such as community services, sports, and visiting. There was also a statistically significant association in children between participation in high school activities and emotional health.

An interesting finding regarding social status that girls who married up the scale tended to be emotionally healthy and marry healthy men. They tended to have satisfying emotional and sexual relationships with their husbands, and had healthy sons. For girls who married down the scale, the opposite was true. This might reflect that the healthy girl was in tune with the culture and was strong and attractive enough to try for a higher-status man. When she succeeded, her self worth was reaffirmed by community approval, continued high status, and a positive relationship. Another significant finding was that in emotionally healthy families, family tasks and responsibilities were balanced among all family members. Lastly, participation in the care and rearing of the child by the parent of the opposite sex was critical to the development of identity.

One other instrument needs to be described. Riskin and Faunce (1970) developed and tested a set of family interaction scales, utilizing a "microanalytic" technique. This technique was used to code basic units of speech, defined as all the sounds uttered by one person until another person made a sound, either verbal or vocal. Each of these speeches was scored on the basis of a tape recording and a written transcript on eight dimensions: (1) speaker and spoken to, (2) interruptions noted, (3) speech judged as "clear" or "unclear," (4) on "same topic" or "different topic," (5) whether it was a commitment or not, (6) whether an agreement or disagreement, (7) whether of high or low intensity, and (9) whether it was friendly or attacking. The task used in the study was taken from Watzlawick's (1966) structured family interview. The family was asked to "plan something you could all do together as a family; all of you please participate in the planning." (p. 507) The interviewer then left the room and the family had ten minutes to complete the task. Highly accurate transcripts were made of the first five minutes of family interaction. From this, the first and third blocks of 80 speeches were analyzed. Previous work indicated that this was sufficient data for meaningful analysis. The goal of the project

was to determine whether and how the scale categories discriminated among different types of families. In this ambitious study of 44 families, there were five groups: multiproblem families, families with two or three labeled problems, families with child-labeled problems (acting-out or under-achieving), families with unlabeled but observable problems, and healthy families. The results were rather complicated, but did discriminate between some groups. There is evidence that the scores for the 125 variables derived from the scales do convey clinically meaningful information. As a test, eleven people were able to match blindly four groupings of content-free variable scores against descriptions, of the five family groups. The matchings were accurate to a degree far greater than chance by Kendall's coefficient of concordance ($P < 0.0005$). (p. 532) Also, clinical descriptions, verified by therapists, have been constructed on the basis of a detailed study of the families' scores on the 125 variables. The most significant finding was that unclear communication does seem to be associated with severe pathology. This tool captures the "atmosphere" of the family, but it is extremely complex, cumbersome, and time-consuming.

Family research is in its infancy, and many investigators

have been critical of the studies. Framo (1972) wrote that "little specific investigation of early ideas has been done by investigators working out research methods. Instead, they have tested derivatives of them or premises about people based upon them." (p. 17) Methods have been criticized on grounds that they put families in an artificial setting, and give them tasks that may not reveal "real" patterns of interaction. Investigators agree that extensive basic research on family groups is needed. Until the vital elements of family dynamics are defined, and their relationship to pathology established, there is no basis for attributing causality to any behaviors identified in studies.

Current Interactional Family Studies at Timberlawn Foundation

With these and many other works as a foundation, the Timberlawn research team in 1970 proposed an intensive study of healthy families. Lewis, Gossett, and Phillips (1971) state:

If the interactional dimensions of healthy family systems can be defined, one may then be able to focus with precision upon those parameters which discriminate health or adaptiveness from pathology or maladaptiveness which might well open the door to the possibility of intervention prior to the onset of complex, resistant patienthood. Although studies attempting to define the interactional dimensions of healthy family systems are admittedly broad

in scope, they have the advantage of minimizing the tendency to focus prematurely on a specific hypothesis generated by clinical leads from pathological families.
(p. 1)

Members of the research team conceptualize psychopathology in quantitative rather than qualitative terms; they describe the differences between healthy functioning and pathological functioning as a series of points on continua rather than as a specific quality a system has or does not have. As a preliminary study, the team devised an interactional videotape instrument based on previous research and clinical experience which was used with a group of patient families and a group of healthy families. During the videotape, each family was asked to do five ten-minute tasks: discuss main problems, plan something together, marital testing and discussion of the "greatest source of pain" in the marriage (parents only), discuss family closeness, and discuss family strengths. The videotaped interaction was rated by judges on a ten-point Health-Pathology scale. If inter-rater reliability proved to be high, the healthiest families could be studied in depth. The study results will be detailed in Chapter III. Inter-rater reliability was high; raters were able to distinguish between healthy and dysfunctional families with no overlap.

Results from this study were used in designing the healthy family study, which began in 1970. The videotape technique was used, but the tasks were altered; they were given a more positive orientation and put in a different sequence. It was found that putting the "family strengths" discussion last did not have the fortifying effect expected; in fact, families often could identify no strengths and focused on weaknesses. It was also found that during the "plan something" section, all families showed their highest level of spontaneity and positive affect. So the family strengths discussion was put first. A "loss" section was added as the second task. The marital section remained, but was changed to open discussion of "the best and worst in the marriage." The closeness section remained the fourth task, and the tape ended with the "plan something" section.

In addition to the global health rating, W. R. Beavers devised the Beavers-Timberlawn Family Evaluation Scale used for rating specific interactional aspects of family functioning: family structure, mythology, goal-directed negotiation, autonomy, and family affect. Several categories have more specific subscales. The five year study is not yet complete, but from available data, several interesting findings have

emerged. From health records kept by the families for six months, as part of the study, a positive correlation has been found between physical health of the family (based on number of days out of 180 in which all members were well) and the ability of the family to discuss death directly and in personal terms when responding to the "threat-of-loss" stimulus during videotaping (Lewis, et al., 1974). Lewis summarized tentative conclusions about the families: First, the strongest coalition in a healthy family is between the parents, and this is acknowledged by all family members. Second, power is shared but not democratically distributed; that is, it rests in the hands of the parents, and this is accepted comfortably by everyone as the power is not used arbitrarily. Third, communication within the family is clear, but spontaneous, with minimal intrusion. Fourth, these families tend to produce autonomous children who can form lateral relationships and separate from the family. (Lewis 1973)

This study revealed an interesting difference from the findings of Westley and Epstein (1969) regarding family structure; they found father-led families to be healthiest and Timberlawn found an egalitarian structure in the healthiest families. This means power was shared equally by parents,

and, much like the flowing motion of ballet, each had different but complementary areas of functioning that were necessary, accepted, and acknowledged by both. Leadership passed easily between them depending on the situation; there was no one-up and one-down feeling apparent.

This study yielded very positive results from one type of family. Further studies are planned using different types of families, of varied social classes and cultural backgrounds.

CHAPTER III

METHODOLOGY

A Study of Family Interaction

The present study was conducted at Timberlawn Foundation. All data were collected by the professional research staff; this researcher served as a rater only. This chapter deals with the methodology used: sampling methods and population characteristics, setting and videotape procedure, rating scales, raters, and treatment of data.

A descriptive-quantitative research design was chosen for its compatibility with the philosophy of the research team regarding psychopathology, and its utility regarding interpretation of the behavioral data to be collected. The differences between healthy functioning and pathological functioning are seen as a series of points on a distribution curve rather than 'something' a system either has or has not. All variables chosen to evaluate family functioning were expected to be present to some degree in all families, based

on the literature, previous research, and clinical experience. It is believed that the degree to which a family utilizes these important functional skills is associated with that family's health or pathology. The interactional behaviors observed in this study were converted to numbers by raters using subscales representing continua from health to pathology. The data were of an ordinal nature; that is, a value judgement was made that behaviors found at one end of each subscale were more "healthy" for families in our society than behaviors exhibited at the other end.

Purposes

The purposes of this study were to identify characteristics of three types of family systems; (1) those with no identifiable pathology (called healthy), (2) those with an identified communicational deficit, (3) and those with an identified behavioral disturbance; and then (4) to compare these family systems with regard to selected criteria which describe family functioning.

Hypothesis

The hypothesis was that, on all dimensions measured, there would be no significant differences among the three

types of family systems studied.

Sampling Methods and Study Population

Due to the comparative nature of this study, stratified random sampling was used when possible. This means that criteria for the strata were specified, and a random sample of subjects meeting the criteria was identified. From that sample, a subsample was taken randomly to form the study population. This was done for the Healthy and the Behavioral Disturbance groups. For the Communicational Deficit group, stratified sampling was used. A subsample could not be drawn randomly from the stratified sample because only twelve families were available, and all were needed. All study participants were volunteers. The total number of families was thirty-six. For all groups, family members over six years old participated. Families were selected as follows:

1. Healthy Families

Twelve families who volunteered for the Timberlawn Healthy Family Study were used. These were selected from a total sample of thirty-three families by the research staff using a table of random numbers. (Ostle 1963 p. 544) The families were all members of a large local church who

responded to the urgings of the church staff and an informal talk by a member of the research team. Stated reasons for participating were diverse, and underlying reasons were not solicited. The criteria for selection were that the family be intact, with no family member currently, or during the previous two years, in psychiatric treatment or legal difficulty, and the oldest child in mid-adolescence. Those who fulfilled these requirements were further screened by the church staff for any known emotional difficulties.

2. Families with an Identified Communicational Deficit

These twelve families each contained a child diagnosed as having a perceptual learning disability by staff at the Dean Memorial Learning Center (hereafter DMLC), which is a private non-profit facility for the evaluation and remediation of children with learning disabilities. There is no adequate definition for this disability, other than the operational one of selection criteria used. These were that the child be between first and twelfth grade, had problems manifest after school entrance, had hearing and visual acuity intact, had no hard neurological findings, had access to an adequate school system, had minimum WISC score of 90, had been referred to DMLC for inadequate school performance, and

had biological parents who had not been divorced (to match the "healthy" families). Families who met these criteria were asked to participate in the study; of twenty-one, twelve consented. Some self-selection occurred within this group, since those families having more acute problems refused to participate, citing either their own discomfort or difficulties the child was having which they felt would be highlighted by videotaping.

3. Families with an Identified Behavioral Disturbance

These twelve families each contained an adolescent in residential treatment at Timberlawn Psychiatric Hospital (hereafter TPH). The patients' families were asked to come for testing as part of the early weeks of evaluation. Sampling was done by taking seventy consecutive admissions to the adolescent unit at TPH. Although this private hospital is separate from Timberlawn, the patient records were available to the research staff, and the videotape protocol was available to the clinical staff. Twelve families of this group were selected from the total sample of seventy by use of a random numbers table (Ostle 1963 p. 544) by the research staff.

Setting and Procedure

All data were collected at TF in the same setting and using the same procedure. Testing took about two hours of the family's time: 50 minutes for five 10-minute tasks and 30-40 minutes for several other tasks which will be described. A videotape was made of family interaction, with the family's written consent, during the tasks. To control for families responding differently to various researchers, the directions for the tasks were recorded on audio tape, so that each family heard exactly the same directions in the same tone of voice. To control for the distraction of video equipment, the family met in a room with a one-way mirror; the equipment was in the next room. Family members were seated in a horseshoe arrangement behind a small, low table. The only equipment in the room was a tape recorder in the corner and two microphones on the table. At the end of videotaping, each family was shown a short section of the tape.

Video Instrument

Two of the study tasks have been used by other investigators, and three were developed at TF. The five 10-minute tasks for the videotape were as follows: (1) Family Strengths,

(2) Loss, (3) Marriage, (4) Closeness, and (5) Plan Something. Directions for each task were given twice, in different words, but will only be described once here.

Prior to the first task, each family member completed the Family Characteristics Inventory (see Appendix C), a 50-question Lickert-type questionnaire. The family was escorted to the videotape studio. Directions began after the family was settled, and had been told they would begin in ten seconds. The directions were that:

The first task is concerned with family strengths. Earlier, each of you filled out the form having to do with family characteristics. Although you may find some of those items helpful in this discussion, please do not restrict yourself to those characteristics. You now have ten minutes to discuss among yourselves what is strong about your family. (Repeat) Please begin.

Ten minutes later, a buzzer sounded, and the female voice said, "That completes the time allotted for this discussion; that's all the time we have for this discussion."

The second task focused on the family's ability to deal cognitively and empathically with a threat-of-loss stimulus. Directions were: "The next task involves your family listening to a taped episode in the life of another family. We would like you to listen intently to this, because upon its completion we would like you as a family group to

construct an ending to this story." The two minute vignette presented a hospital drama in which family members (sobbing and crying) were visiting a gravely ill family member who did not respond to them (only stertorous breathing was heard). When the doctor arrived and was asked whether the loved one would live or die, he led them to another area and said he couldn't be certain, there was evidence of damage, and he would do the best he could (others cry). The directions then resumed: "During the next ten minutes we ask that your family construct an ending to this story. We are not interested in a particular right or wrong ending, but just that your family construct an ending. Please begin." All tasks were ended by the buzzer and the same statement of completion.

The third task was done by parents only. Children were asked to leave the studio. At that time each of them, with a staff member, privately responded to the Closeness Board, which served as a stimulus for the fourth task. The Closeness Board was a large pegboard with holes arranged in a loose spiral pattern in an effort to minimize an equidistant arrangement of pegs. Peg dolls, male and female, of various sizes were used to represent family members. Each family member was asked to place the dolls on the board to represent how

close he felt to other family members. Each person was told that the information would not be shared with other family members, but that he might share it if he wished.

Meanwhile, parents heard directions for the third task: "While the children are occupied elsewhere, we ask that the two of you approach a task together. We wish you would discuss what has been the best and the worst about your marriage. (Repeat) Please begin." At the end of the task, parents used the Closeness Board separately.

The fourth task was done by the whole family. They were instructed: "Each of you has now had the opportunity to respond to the Closeness Board. During the next ten minutes, we would like you as a family to discuss closeness in your family. (Repeat) Please begin."

The fifth task, like the second, involved family negotiation; the family was asked to reach an agreement:

Your final task as a family involves planning something together. During the next ten minutes we ask that you plan a family activity. The activity should be something that you might actually do as a family, and it should involve all members of the family. Although the activity might take hours, days, or weeks to accomplish, we ask that it involve as a minimum, at least one hour of time. (Repeat) Please begin.

At the end of this task, family members were thanked for

their participation, and a member of the research team met with them, to answer questions briefly, and show part of the tape. The rating tool is described next.

The Beavers-Timberlawn Family Evaluation Scale

The family interaction was rated on the Beavers-Timberlawn Family Evaluation Scale (See Appendix D) developed by W. R. Beavers, M.D., and members of the research team at Timberlawn. Beavers' paper (1974) on development of the Scales reported, "a synthesis of the available data concerning family systems in the form of a set of rating scales, evolved over a three-year period of working with both disturbed and asymptomatic families." (p. 2) "A series of variables were developed that are thought to be present in all family systems and are critical in the quality of function of those systems." (p. 1) A study was done at TF using these Scales with a group of twelve healthy families and a group of thirty-three patient families. Two hypotheses were tested:

"(1) that the rating scales would correlate positively with a global health/pathology rating scale; and (2) that measures of family system competence would correlate significantly with degrees of disturbance found in individual offspring of those families who had a child as an identified patient in a psychiatric hospital. (p. 1)

Both hypotheses were confirmed, which supports the view that:

"the quality of family systems is related to the functioning ability of children of that family; that the variables used in the scale. . . are indeed significant in predicting family function; and that the specific variables may assist clinicians in their efforts to alter family systems beneficially. (p. 1)

The Scales are divided into six major categories, with several subscales in three of the categories. Each family was rated on a total of fourteen variables measured on five-point scales with several defined points on each continuum.

The Scales are:

- I. Structure of the Family. This category was divided into subscales:
 - A. Structure. Beavers states (1973), "The continuum of family power moves from the low end of such poorly defined, delicately balanced interaction that little or nothing can change or develop; up the curve of organization to rigid, inflexible holding of power by one member who is recognized and accepted as dominant. In the most flexible family structures, power is shared and competence in relating develops from experiencing generous and benign leaders." (p. 6)
 - B. Parental Coalitions. The range is from a strong coalition between parents to a weak parental coalition, to a parent-child coalition, where generational boundaries are ignored.
 - C. Closeness. The range is from closeness with distinct ego boundaries, to isolation, and then to amorphous, and indistinct boundaries between members. Beavers states, "Members of these disturbed families behave as if human closeness is found by thinking

and feeling just like one another; therefore, individuation is tantamount to rejection and exclusion." (p. 14)

- II. Mythology. Family myths, after Ferreira, are defined as "a series of fairly well-integrated beliefs shared by all family members, concerning each other and their mutual position in the family life, beliefs that go unchallenged by everyone involved in spite of the reality distortions which they may conspicuously imply." (Beavers 1973 p. 30) The scale measures the degree to which the family's mythology seems congruent with reality.
- III. Goal-Directed Negotiation. This scale refers to the family's overall efficiency in negotiation and problem solving, and is rated from extremely efficient to extremely inefficient.
- IV. Autonomy. Beavers states, "the autonomous person knows what he feels and thinks, and he takes responsibility for his personal activity. He interacts with others with a reasonably clear notion of where his skin ends and the other person's skin begins; that is, he has ego boundaries." (p. 12) Autonomy was rated on four subscales:
 - A. Communication of Self-Concept. This "I"-ness is "the ability of individual family members to express themselves clearly as feeling, thinking, acting, valuable and separate individuals." (p. 13) This scale ranged from very clear to very unclear.
 - B. Responsibility. The range is from family members regularly voicing responsibility for their own past, present, or future actions, to members rarely acknowledging responsibility.
 - C. Invasiveness. This scale rates the degree to which family members speak for one another or make "mind-reading" statements. The range extends from many invasions, or "verbal rape," to no evidence of invasions.

D. Permeability. This scale rates the degree to which members are open and responsive to others in the family. The range extends from very open, implying flexibility, to unreceptive, in which parallel discussions produce ritualized encounters in which no negotiation occurs." (p. 19)

V. Family Affect. Beavers states, "the feeling tone of the family . . . is related to the underlying assumptions of family members regarding the probable outcome of interpersonal encounter." (p. 25) When this assumption is of an affiliative response, there is a warm joyful, optimistic feeling tone; when the assumption is of an oppositional response, the feeling tone may be pessimism, or even cynicism. Affect was rated on four subscales:

A. Expressiveness. Overt expression of feelings was rated from open and direct to no expression of feeling.

B. Mood and Tone. Feeling tone was rated from warm, affectionate and optimistic to cynical, hopeless, and pessimistic. Warmth was defined as "human need, honestly expressed, with the recognition of the limits of the other person." (p. 27)

C. Conflict. Every family has some conflict. This scale represents the degree of apparent irresolvable conflict. The range extended from severe conflict with serious impairment of group functioning to little, or no, conflict.

D. Empathy. This scale was used to rate the degree of sensitivity to, and understanding of other's feelings within the family. The range extended from consistent empathetic responsiveness to grossly inappropriate response to feelings.

VI. Global Health-Pathology Scale. This is the scale that was tested in previous TF research. The rater is to give his evaluation of the total family interaction on a scale from one (healthiest) to ten (most pathological).

These are the scales used in the present study.

Global Health-Pathology was the only ten-point scale; all others were rated from one through five with half-point increments--in effect, nine-point scales. Descriptions of behaviors likely to be seen along the continua were marked under the whole numbers on the scales; there were five, four, or three such descriptions depending on the complexity of the variable. To emphasize the independence of each scale, and minimize the "halo" effect, the direction of flow was reversed occasionally; that is, on some scales five was the healthiest score, and on others, one was healthiest. Each family received a number score on each of the fourteen variables. Each family received a set of scores from each rater.

The unique Timberlawn videotape instrument has distinct advantages over other instruments reported in the literature. First, non-verbal or "body language" is lost with other methods that use only audio tapes or written transcripts. Second, many techniques involve very "hypothetical" tasks, which, though they stimulate discussion, may not really get to where the family is living as do these tasks that deal with everyday concerns, such as: loss, planning, closeness, strengths, and feeling. Third, families are given minimal

instruction stimuli, which would seem to allow discussion and negotiation to occur more in their usual style than would be possible if the tasks centered on questionnaire disagreements or games. Regarding the instrument, the Beavers-Timberlawn Family Evaluation Scale, it is clear, concise, and can be used effectively by raters with very little orientation. It is so much less cumbersome and complex than either the Bales or the Riskin and Faunce methods, that they can scarcely be compared in terms of time and energy invested. Yet, the results using the Beavers' Scales correlate significantly with those using the "microanalytic" technique.

Raters

There were two raters for this study; one was a third-year psychiatric resident at TPH, and the other was this researcher. Both raters were trained by a member of the Timberlawn research staff, V. A. Phillips. Orientation to the scales was done individually and took about ten hours. The purpose of training was to familiarize raters with the videotape method and Scales used, not to teach them what behaviors to rate or how to interpret them.

After training, each rater viewed and rated the thirty-six 50-minute videotapes; ratings were based on the entire tapes. Each tape was rated immediately after viewing; rating took about ten minutes. Total time for viewing and rating was about forty hours. Each rater viewed and rated the tapes independently, usually in sets of three or four tapes at one time. Rating was done blind; neither rater knew which type of family was being seen. The thirty-six videotapes were randomized using Ostle's table (1963 p. 544). In order to account for the possibility of rating more accurately as raters gained experience, both raters viewed the tapes in the same random order.

Inter-rater Reliability and Validity

The sample for the preliminary family study at Timberlawn (Lewis, Gossett, and Phillips 1971) consisted of 23 families; the 12 study families each had an adolescent in residential treatment at TPH, and the 11 control, or healthy, families volunteered from a local church. The groups were demographically homogeneous. The videotape instrument was described in Chapter II. The basic question explored was whether raters would agree about the relative degree of health

of a family system after viewing a brief section of the family's interaction. Other questions studied were: whether interrater reliability varied with the nature of the task, what degree of presumed expertness was needed by the rater, whether family self-ratings would correlate with the ratings of presumed experts, whether raters would agree on the relative health of a marital system after viewing a brief interaction, and what relationship exists between independent ratings of marital health and total family health.

Thirteen raters participated in the study. They covered a wide range of expertise, from psychiatrist to housewife. The raters met in pairs and rated a segment from the videotape of each of the 23 families. Segments of a tape were in different randomized order for each pair of raters. Each rater was in a separate room. A ten-point health-pathology rating scale was used. (See Fig. 1)

FIGURE 1

Pathological					Healthy				
10	9	8	7	6	5	4	3	2	1
Extreme		Moderate		Mild	Mild		Moderate		Extreme

Raters were instructed to circle the number which most closely fit his judgement of the family's overall health. Each was asked to write down any observations used in formulating his judgements. Tapes were made with the five-minute segments of 23 families, in random order, with a minute between each segment. Rating for one segment of all tapes took between two and one half hours and five hours, depending on whether the segments were five or ten minutes long. One rater, an experienced family therapist, made ratings on the basis of the entire hour long tape. Since the scale was ordinal, numerical ratings were converted to rank orders, and the Spearman Rank Order Coefficient was used. The first result was that each pair of raters, viewing the same segments independently, agreed with high reliability concerning the relative degree of health reflected by a particular family. The second result was that correlation coefficients were high for all three tasks used (strengths, main problems, closeness) yet the tasks were quite different. This finding "lends support to those family investigators who suggest that any segment of family interaction will render representative data; that assessments are not dependent on the particular task with which the family is presented." (p. 6) The third

result was that even the least expert raters (housewives) were able to assess levels of global health, though at a less significant level. The fourth result was that a significant positive correlation was found between the clinician's rating of family health and the family's own appraisal as reflected in the Family Characteristics Inventory. The fifth result was that when two raters independently viewed five minutes of the marital section, there was high inter-rater reliability as well as a significant correlation between marital and family health ratings. "This supports the clinical concept that relative marital health of the parents is correlated positively with total family health." (p. 8)

Gossett, Lewis, and Phillips also reported data supporting the validity of rater judgements in this study (1971). Potential validity of the technique was discussed from four positions. First, families containing a patient rated themselves as less healthy than non-patient families. Second, the raters were able to separate patient from non-patient families on a scale of health to pathology with no overlap. Third, ratings made on only five minutes of the tape correlated significantly with ratings based on the entire fifty-minute tape. Fourth, all four of the adolescents diagnosed

as psychotic were located in the six patient families judged by raters to be most disturbed.

Inter-rater reliability was shown to be high for the Global Health-Pathology scale only. Data is still being collected on reliability for the Beavers subscales. It is hoped that the raters for this study will demonstrate high inter-rater reliability on these subscales.

Transcripts were made for one segment of the tape on twelve of the families. Microanalysis according to Riskin and Faunce (1970) was done with these segments. The result was a significant correlation of family systems competence at three levels of study: clinical picture, rating on Global Health-Pathology scale, and microanalysis. Results show that these very different methods of assessing family health are correlated.

Procedure for Treatment of Data

Due to limitations of sample size, and lack of randomness, statistical comparisons will be based on measures of central tendency, and the dispersion of the three groups on all variables measured. The means and standard deviations for each of the three groups will be put into table form for

each of the Beavers' subscales. A graph will also be constructed to display the data.

This rater's data will be used in construction tables and graph due to familiarity with the data sample size. A decision was made to not combine both data, since a small sample (twelve in each group) diminishes the statistical power of the measures. Using one set of data increases the utility of a sample.

Both raters' data will be used to compute the Product-Moment Correlation Coefficient (Ferguson 1971). This test will give the degree of correlation, if the two sets of data. This correlation yields the inter-rater reliability between two independent raters. If the level is high, it adds support to the reliability of the instrument used. This data will be shown in a table showing the degree, direction, and significance level of the correlations.

Lastly, data from the Global-Health-Pathology instrument will be rank-ordered in table form for visual comparison of the two sets of data. Raw data will appear in the

CHAPTER IV

ANALYSIS OF DATA

Introduction

This chapter deals with the statistical analysis of data obtained from the present study, and a discussion of the findings. Prior to analysis of the data, scores on several of the Beavers subscales had to be inverted for consistency of the data. Subscales having 5 as the healthiest score (Structure, Parental Coalition, Invasiveness, and Conflict) were inverted by subtracting the recorded score from 6 so that all raw data reflected a range of scores from 1 as healthiest, to 5 as the most pathological. Raw data are shown in Appendix E.

Family Data and Findings

For each of the three types of families, Healthy, Communicational Deficit (called Learning Disabled) and Emotionally Disturbed (called Patient), the group mean score and standard deviation were computed for each of the 14 variables.

(13 Beavers subscales and Global Health-Pathology Scale).

The mean was used as the measure of central tendency for each group, and the standard deviation illustrates the variance of scores around the mean. Tables 1 through 15 illustrating these data, and the Sum of the Subscales, are located in Appendix E. To facilitate visual comparison, the subsample mean scores are graphed in Figure 2.

On the graph, since the healthiest score is 1, the means falling closest to the baseline illustrate greater health, and those falling nearest the top illustrate more pathology. Referring to Figure 2, the first finding is that the Patient group of families was clearly differentiated from both the Healthy and the Learning Disabled groups of families on all variables. The next observation is that the Healthy and Learning Disabled groups were quite closely related, and evenly matched, on some variables; and at only one point, Structure, did the Learning Disabled group mean score exceed the Healthy group mean score. The scales used, Beavers-Timberlawn and Global-Health-Pathology, are reproduced in Appendix D.

For this study, it was hypothesized that there would be no significant differences, on any of the study variables,

FIGURE 2. GROUP MEAN SCORES FOR EACH SUBSAMPLE ON EACH STUDY VARIABLE.

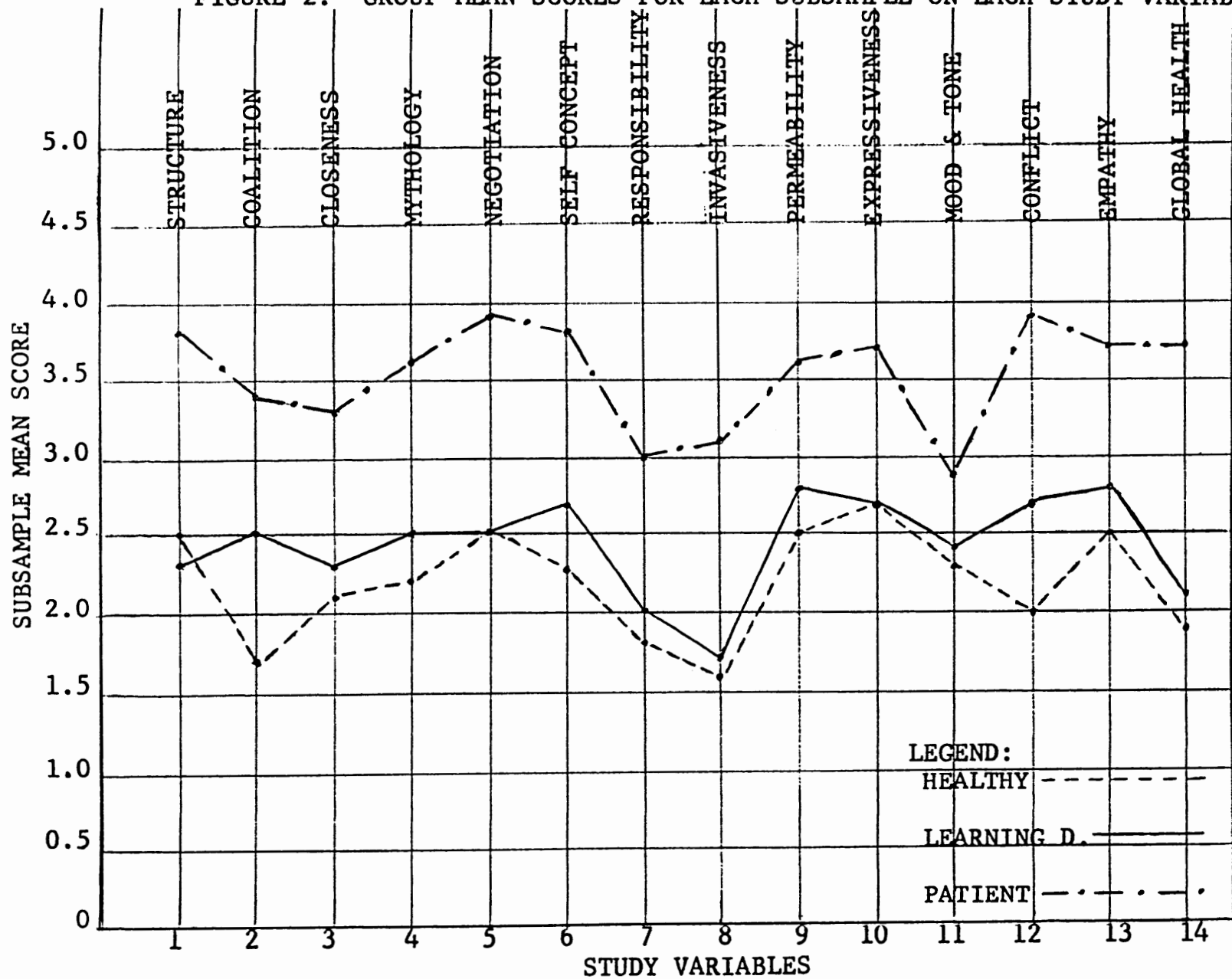


TABLE 16. VARIANCE OF SUBSAMPLE MEAN SCORES FOR EACH VARIABLE WITH SIGNIFICANCE LEVELS

<u>Variable</u>	<u>Subsamples Compared*</u>	<u>Variance**</u>	<u>Significance Level</u>
1. STRUCTURE	H and LD	.00	--
	H and PT	2.76	.01
	LD and PT	3.18	.005
2. COALITION	H and LD	1.71	.05
	H and PT	3.79	.005
	LD and PT	2.01	.05
3. CLOSENESS	H and LD	.49	--
	H and PT	3.11	.005
	LD and PT	2.75	.01
4. MYTHOLOGY	H and LD	.54	--
	H and PT	2.43	.05
	LD and PT	2.06	.05
5. NEGOTIATION	H and LD	.00	--
	H and PT	3.12	.005
	LD and PT	3.27	.005
6. SELF-CONCEPT	H and LD	.71	--
	H and PT	2.76	.01
	LD and PT	2.45	.05
7. RESPONSIBILITY	H and LD	.58	--
	H and PT	3.13	.005
	LD and PT	2.91	.005

*
H = Healthy families
LD = Learning Disabled families
PT = Patient families

** Value of t with 22 df. Significance levels from Table B. (Ferguson 1971 p. 450)

TABLE 16. (Continued) VARIANCE FOR SUBSAMPLE MEAN SCORES
FOR EACH VARIABLE WITH SIGNIFICANCE LEVELS

<u>Variable</u>	<u>Subsamples Compared*</u>	<u>Variance**</u>	<u>Significance Level</u>
8. INVASIVENESS	H and LD	.29	--
	H and PT	2.99	.005
	LD and PT	3.10	.005
9. PERMEABILITY	H and LD	.56	--
	H and PT	2.22	.05
	LD and PT	1.70	.05
10. EXPRESSIVENESS	H and LD	.00	--
	H and PT	2.23	.05
	LD and PT	2.23	.05
11. MOOD & TONE	H and LD	.20	--
	H and PT	1.33	--
	LD and PT	1.67	--
12. CONFLICT	H and LD	1.42	--
	H and PT	3.84	.005
	LD and PT	2.81	.005
13. EMPATHY	H and LD	.56	--
	H and PT	2.34	.05
	LD and PT	1.83	.05
14. GLOBAL HEALTH	H and LD	.40	--
	H and PT	3.49	.005
	LD and PT	3.30	.005
15. SUM OF SUB- SCALES	H and LD	.60	--
	H and PT	3.14	.005
	LD and PT	2.79	.01

among the three types of family systems represented. The degree of variance between the group mean scores for each subsample, when compared separately with the other two subsamples, is given in Table 16. The degree of variance indicates whether or not the null hypothesis can be rejected, and if so, at what level of statistical significance. A detailed description of the findings on each variable follows:

1. STRUCTURE

This subscale measured the apparent structure of the family on a continuum extending from Egalitarian Leadership at the healthy end (1) to Chaos at the pathological end (5). Chaos was characterized by leaderlessness; no one had enough power to structure the interaction. The mid-range extended from Marked Dominance, where control was close to absolute with no negotiation--dominance and submission being the rule (2), through Moderate Dominance (3), to Led where there was a tendency toward domination and submission, but most interaction was through respectful negotiation (4). Egalitarian Leadership (5) was shared by both parents, changing with the nature of the interaction. The Learning Disabled group had the highest mean score on this variable, 2.3. The Healthy

group was next, with 2.5, putting both groups in the area between Moderate Dominance and Led. The Patient group scored 3.8, or Marked Dominance; control was close to absolute. The variance between the Healthy and Learning Disabled groups was not statistically significant. The variance between the Healthy and Patient groups was significant at the .005 level; the Learning Disabled and Patient group variance was significant at the .01 level. Thus, the null hypothesis was rejected on the Structure variable for both Healthy and Learning Disabled groups when each was compared to the Patient group.

2. PARENTAL COALITION

This subscale measured the apparent relationship structure of the family on a continuum from Strong parental coalition (1) through Weak parental coalition (3) on to Parent-Child coalition (5). The Healthy group, with a 1.7 score, fell in the area between Strong and Weak parental coalition. The Learning Disabled group, with a score of 2.5, fell half a point above the mid-range Weak parental coalition, and the Patient group, with a score of 3.4 fell half a point below the mid-range. This was the only variable on which all three groups varied significantly from one another. The

Healthy group varied from the Patient group at the .005 level and the Learning Disabled group varied from both Patient and Healthy groups at the .05 level. Thus, the null hypothesis was rejected on the Parental Coalition variable for all groups.

3. CLOSENESS

This subscale measured the apparent closeness of family members on a continuum from Closeness with distinct boundaries among members (1), through mid-range Isolation and distancing (3), to Amorphous, vague, and indistinct boundaries among members (5). The Healthy group scored 2.1, and the Learning Disabled group scored 2.3. Both groups fell between healthy Closeness and mid-range Isolation. The Patient group scored 3.3, which was marked by Isolation. There was no significant variance between the Healthy and Learning Disabled groups. Between Healthy and Patient groups the variance was significant at the .005 level, and between Learning Disabled and Patient groups at the .05 level. Thus, the null hypothesis was rejected on the Closeness variable for both Healthy and Learning Disabled groups when compared to the Patient group.

4. MYTHOLOGY

This subscale measured the apparent congruence between

a family's concept of how it functioned as a group and reality, on a continuum extending from Very Congruent (1) to Very Incongruent (5). The Healthy group scored 2.3 or Mostly Congruent. The Learning Disabled group scored 2.5, a little closer to the mid-range. The Patient group scored 3.6, which placed them between the mid-range and Somewhat Incongruent Mythology. There was no significant variance between Healthy and Learning Disabled groups. Variance was significant for both Healthy and Learning Disabled groups, at the .05 level, when compared to the Patient group. Thus, the null hypothesis was rejected on the Mythology variable for both Healthy and Learning Disabled groups when compared to the Patient group.

5. GOAL-DIRECTED NEGOTIATION

This subscale measured the family's overall efficiency in negotiation and problem solving on a continuum extending from Extremely Efficient (1) to Extremely Inefficient (5). Both Healthy and Learning Disabled groups scored 2.5, which was between the mid-range and Good Efficiency. There was wide variance between these two groups and the Patient group which scored 3.9, or Poor Efficiency. This variance was significant

at the .005 level. Thus, the null hypothesis was rejected on the goal-directed negotiation variable for both Healthy and Learning Disabled groups when compared to the Patient group.

6. COMMUNICATION OF SELF-CONCEPT

This subscale measured the clarity of disclosure of individual thoughts and feelings on a continuum from Very Clear (1), through Somewhat vague and hidden (3), to Hardly anyone is ever clear (5). The Healthy group scored 2.3, on the area between Very clear and mid-range vagueness. The Learning Disabled group scored 2.7, close to the mid-range. The Patient group scored 3.8, which was between the mid-range and Hardly anyone is ever clear. The variance between Healthy and Learning Disabled groups was not significant. Variance between Healthy and Patient groups was significant at the .01 level, and Learning Disabled and Patient groups at the .05 level. Thus, the null hypothesis was rejected on the Communication of Self-Concept variable for both Healthy and Learning Disabled groups when compared to the Patient group.

7. RESPONSIBILITY

This subscale measured the degree to which family members took responsibility for their own past, present, and

future actions on a continuum from Regularly able to voice responsibility (1), through Sometimes voicing responsibility, but also blaming or speaking in third person or plural (3), to Rarely voicing responsibility for individual actions (5). The Healthy group scored 1.8 and the Learning Disability group 2.0, which placed them between Regularly and Sometimes taking responsibility. The Patient group scored 3.0, right at the mid-range. There was not significant variance between Healthy and Learning Disabled groups, but both of these groups varied from the Patient group at the .005 level of significance. Thus, the null hypothesis was rejected on the Responsibility variable for both Healthy and Learning Disabled groups when compared to the Patient group.

8. INVASIVENESS

This subscale measured the degree to which members spoke for one another, or made "mind-reading" statements, on a continuum extending from No evidence of invasions (1), through Occasional invasions (3), to Many invasions (5). Healthy and Learning Disabled groups scored 1.6 and 1.7 respectively, which fell between No evidence of and Occasional invasions. The Patient group scored 3.1, at the mid-range of Occasional invasions. There was no significant variance

between Healthy and Learning Disabled groups, but both groups varied from the Patient group at the .005 level. Thus, the null hypothesis was rejected on the Invasiveness variable for the Healthy and Learning Disabled groups when compared to the Patient group.

9. PERMEABILITY

This subscale measured the degree to which members were open, receptive, and permeable to the statements of others on a continuum extending from Very open (1), through Moderately open (2), and Frequently unreceptive (4) to Unreceptive (5). The Healthy group scored 2.5, which was close to Moderately open, and the Learning Disabled group scored closer to the mid-range with 2.8. The Patient group scored 3.6 which approached Frequently unreceptive. There was no significant variance between Healthy and Learning Disabled groups, but both groups varied significantly from the Patient group at the .05 level. Thus, the null hypothesis was rejected on the Permeability variable for both Healthy and Learning Disabled groups when compared to the Patient group.

10. EXPRESSIVENESS

This subscale measured the apparent feeling tone of

the family's interaction on a continuum from Unusually warm, affectionate, humorous, and optimistic (1), through Polite without impressive warmth or affection (2), Overtly hostile (3), and Depressed (4), to Cynical, hopeless, and pessimistic (5). The Healthy group scored 2.3, and the Learning Disabled group 2.4, which was the area between Polite and Overtly hostile. The Patient group scored 2.9, or Overtly hostile. This scale showed the least amount of variance among the three groups, and none of the variances were statistically significant. Therefore, the null hypothesis was confirmed on the Mood and Tone variable for all three groups.

12. CONFLICT

This subscale measured the degree of seemingly unresolvable conflict in the family on a continuum from Little or no conflict (1), through Some evidence of conflict without impairment of group functioning (3), and with moderate impairment of group functioning (4), to Severe conflict with severe group function impairment (5). The Healthy group scored 2.0, which showed Some evidence of conflict without impairment. The Learning Disabled group scored 2.7, which was close to Definite conflict with slight impairment. The Patient group

scored 3.9 which was characterized by Definite conflict with moderate impairment. The Healthy and Learning Disabled groups showed wider variance than usual on this scale, but it was just below statistical significance. Both Healthy and Learning Disabled groups varied from the Patient group at the .005 level of significance. Thus, the null hypothesis on the Conflict variable was rejected at the .005 level for both Healthy and Learning Disabled groups when compared to the Patient group.

13. EMPATHY

This subscale measured the apparent degree of sensitivity to and understanding of each other's feelings within the family on a continuum from Consistent empathic responsiveness (1), through Mostly empathic responsiveness despite resistance (2), Attempted empathic involvement, but failed to maintain it (3), and Absence of any empathic responsiveness (4), to Grossly inappropriate responses to feelings (5). The Healthy group scored 2.5, between Mostly empathic and Attempted empathy. The Learning Disabled group scored 2.8, closer to the mid-range. The Patient group scored 3.7, which fell between Attempted empathy and Absence of empathic

response. Variance between the Healthy and Learning Disabled groups was not significant, but both groups varied from the Patient group at the .05 level. Thus, the null hypothesis was rejected on the Empathy variable for both Healthy and Learning Disabled groups when compared to the Patient group.

14. GLOBAL HEALTH-PATHOLOGY SCALE

This scale measured the family's apparent overall degree of Health (1) or Pathology (10) on a 10 point continuum. Since this was a 10 point scale, being compared to 5 point scales, these group mean scores were divided by two for presentation on the graph. The Healthy group scored 3.8 (1.9), the Learning Disabled group 4.2 (2.1), and the Patient group 7.3 (3.7). The variance between Healthy and Learning Disabled group was not significant, but both groups varied from the Patient group at the .005 level. Thus, the null hypothesis was rejected on the Global Health-Pathology Scale for both the Healthy and Learning Disabled groups, when compared to the Patient group.

15. SUM OF THE SUBSCALES

This variable is not shown on Figure 2, but was calculated in order to compare the results of the 13 Beavers

subscales to the results of the Global Health-Pathology Scale, which has been tested previously and found to yield high inter-rater reliability. If results of these two scales are similar, it means that the more detailed Beavers subscales are measuring the same functional behaviors as the Global scale. Variance between Healthy and Learning Disabled groups was not significant, but both groups varied from the Patient group significantly, though at different levels; the Healthy group varied at .005 and the Learning Disabled group at the .01 level. Thus, the null hypothesis was rejected on the Sum of the Subscales for both Healthy and Learning Disabled groups when compared to the Patient group. These results are almost identical to those on the Global Health-Pathology Scale.

In summary, the null hypothesis, which predicted no significant differences among the three types of families studied, was rejected for 13 of the 14 variables studied. All variables, except Mood and Tone, showed statistically significant variance at least at the .05 level, and often at the .005 level, for both Healthy and Learning Disabled groups when compared to the Patient group. Significant variance between Healthy and Learning Disabled groups occurred on only

one subscale, Parental Coalition, at the .05 level. These results show that Patient families can be clearly separated from both Healthy and Learning Disabled families by use of the Beavers-Timberlawn Family Evaluation Scale and the Global Health-Pathology Scale, with very high agreement (.005) between the two scales. Since only one rater's results have been graphed and discussed, inter-rater reliability must be addressed in order to confirm the significance of these findings.

Inter-Rater Reliability

Inter-rater reliability is important in deciding the value of the present study, as well as a further test of the reliability of the scales used, the Beavers-Timberlawn Family Evaluation Scale and The Global Health-Pathology Scale. Inter-rater reliability was obtained by computing the Pearson Product-Moment Correlation Coefficient (Ferguson 1971 p. 99) using both raters' data. The results are displayed in Table 17. Referring to the table, it is evident that the two independent raters agreed at statistically significant levels on all but four variables. The variables will be discussed in order of significance.

TABLE 17

Inter-Rater Reliability with Study Variables Shown in Descending Order of Significance Using the Pearson Product-Moment Correlation Coefficient

<u>Study Variables</u>	<u>Correlation Between Raters</u>	<u>Significance Level*</u>
1. (5) Goal-directed Negotiation	.685	.005
2. (1) Structure	.446	.005
3. (15) Sum of Subscales	.443	.005
4. (14) Global Health- Pathology	.433	.005
5. (6) Self-Concept	.413	.01
6. (3) Closeness	.407	.01
7. (12) Conflict	.357	.025
8. (13) Empathy	.338	.025
9. (4) Mythology	.307	.05
10. (11) Mood and Tone	.306	.05
11. (7) Responsibility	.300	.05
12. (10) Expressiveness	.247	--
13. (8) Invasiveness	.214	--
14. (2) Parental Coalition	.202	--
15. (9) Permeability	-.166	--

* (Ferguson 1971 p. 457)

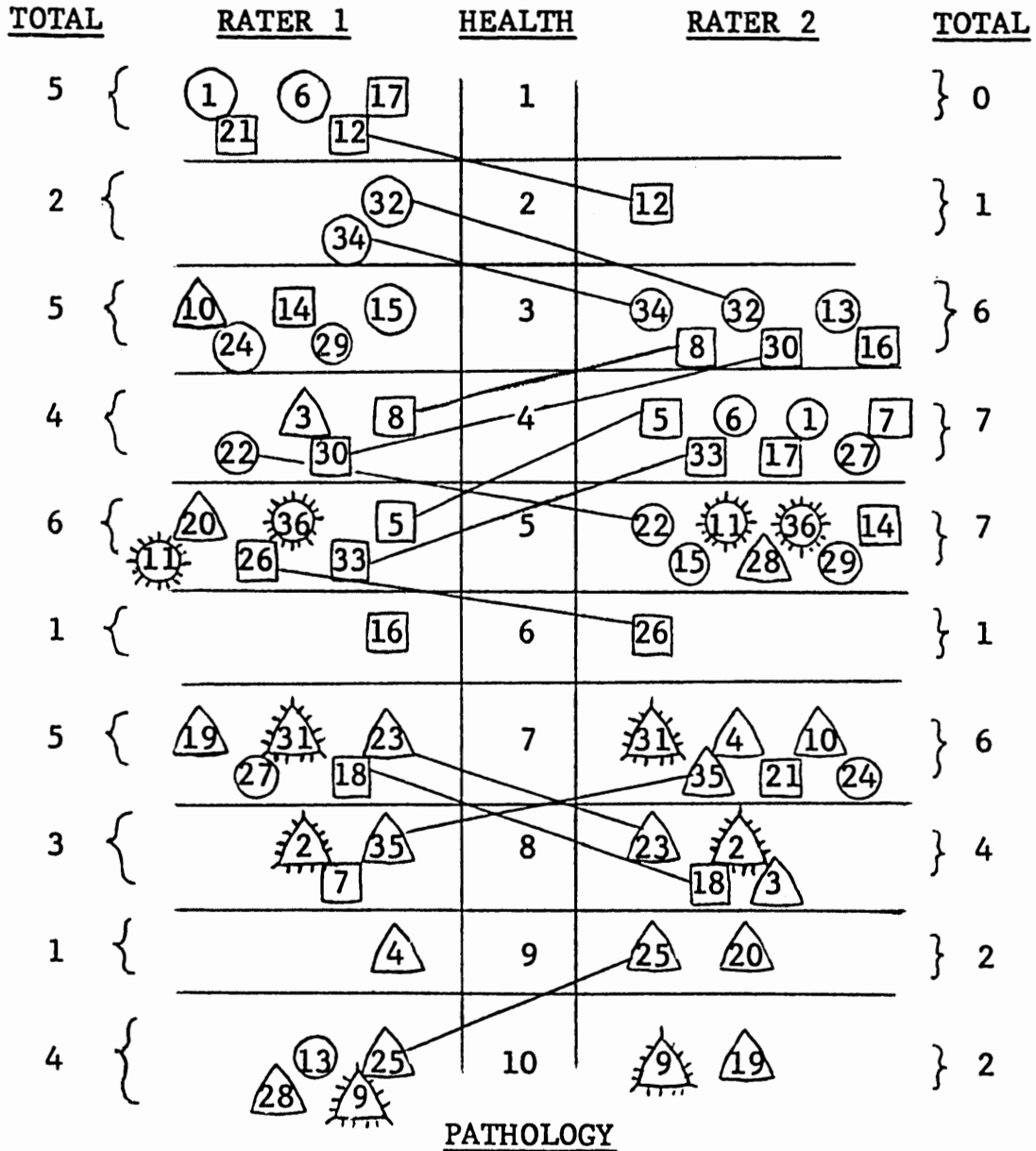
Four variables had inter-rater reliability at the .005 level of significance: Goal-directed Negotiation, Structure, Sum of the Subscales, and Global Health-Pathology. Highest inter-rater reliability was obtained for the Goal-directed Negotiation variable (.685). This probably occurred because problem solving behavior was easily observed; it was task oriented, and one could see by the results of the discussion how efficient the process was for a given family. The variable next in significance was Structure (.446), which again was rather task oriented; it was usually easy to see who the family members looked to as leader.

The Sum of the Beavers subscales and the Global Health-Pathology Scale were .446 and .443 respectively. In order to confirm the reliability of these two instruments, it was crucial to get high correlation between raters on these two summary variables. The significance was that, although raters might have seen specific subscales differently and therefore had only moderate agreement, the total of the scores on the Beavers subscales had very high (.005) inter-rater agreement; both tended to give the same total evaluation of family health or pathology. Of further significance was the fact that this summation was highly correlated (.005) with ratings on the

Global Health-Pathology Scale which had been tested previously and found to yield both high inter-rater reliability (Lewis et al., 1971) and validity (Gossett et al., 1971). This high agreement supports the reliability of the Beavers-Timberlawn Family Evaluation Scale.

To elaborate further on the meaning of the .005 level of significance between raters, both raters' data on the Global Health-Pathology Scale were rank ordered (see Figure 3) from healthiest to the most pathological family. Of the 36 families, on the 10 point scale, there was exact agreement between raters on 5 families, and agreement with 1 point variance on 13 families. Therefore, out of 36 families, there was rater agreement with 1 point variance or less on 18, or half, of the families. Patterns were sought between raters; was there a particular type of family they agreed on, or did they agree more as they gained rating experience? It was found that they agreed exactly on 2 Healthy, 0 Learning Disabled, and 3 Patient families (total 5). One point variance occurred with 3 Healthy, 7 Learning Disabled, and 3 Patient families (total 13). None of the Learning Disabled families were agreed upon exactly, but if totals for types of families among the 18 are tallied, all groups come out about even:

FIGURE 3. RANK ORDER OF FAMILIES ON THE GLOBAL HEALTH-PATHOLOGY SCALE FOR TWO RATERS, WITH VARIANCES OF ONE POINT OR LESS DENOTED



Legend:

Numbers= Randomized order in which families were viewed.

○ = Healthy family

□ = Learning Disabled family

△ = Patient family

☼ = Exact agreement between raters

5 Healthy, 7 Learning Disabled, and 6 Patient. It was noted that for 13 of the families, the one point variance was not always in the same direction, nor was one rater consistently higher than the other; for 7 of the families, one rater was a point higher, and for the other 6, the second rater was one point higher. It is also interesting note that both raters scored a Learning Disabled family as the healthiest family in the total sample.

The consideration of increasing agreement with experience was borne out by looking at the rank ordered data (Figure 3). It was noted that in the first 10 families observed, only 4 (2,5,8,9) were within one point variance; in the second 10 families only 3 (11,12,18) were within one point; of the third 10 families, 5 (22,23,25,26,30) were within one point; and the last 6 (31,32,33,34,35,36) were within one point. Actually, the last 7 families rated (30-36) were within one point variance. This important finding suggested that rater reliability was a function of experience; as experience increased so did inter-rater reliability, even though the raters did not compare their independent results as the study progressed. These same two raters would probably achieve even higher inter-rater reliability on the next sample of families

observed. This finding seems consistent with this rater's experience. Although a thorough orientation to the scales was given prior to rating, during the early ratings there was still a period of "feeling out" the range on each variable. With a building backlog of families already observed, it became easier both to "focus" on crucial behaviors, and see where they fell on the continuum from health to pathology.

Resuming the discussion of study variables as they related to inter-rater reliability, two variables were significant at the .01 level, Self-Concept (.413) and Closeness (.407). These variables, again, were rather easy to observe both at the verbal and non-verbal levels.

Two variables yielded inter-rater reliability at the .025 level, Conflict (.357), and Empathy (.338). This rater was surprised that agreement was so high on Empathy which seemed like a rather indistinct behavior that would be open to several interpretations. Conflict, on the other hand, was readily observable.

Three variables had inter-rater reliability at the .05 level: Mythology, Mood and Tone, and Responsibility. Mood and Tone was the most surprising, both in this area and on the graph. It was expected to be one of the most highly

differentiating variables among types of families, from theory, and was expected to yield higher reliability. In observing families, Mood and Tone seemed to be the most readily observable characteristic, and there certainly was wider variance among families than has been shown in the data. This low level finding was not congruent with this rater's experience, and indicated that some revision of that scale may be needed.

Four variables did not yield statistically significant correlation between raters: Expressiveness, Invasiveness, Parental Coalition, and Permeability. One possible explanation for the lack of agreement is that expressiveness, invasiveness, and permeability may be more vague, or open to more subjective interpretation than many of the more easily observed behaviors, such as Goal-directed Negotiation. However, this would not explain the presence of Parental Coalition, which seems to be a self-defined, readily observable behavior. From a theoretical standpoint, these are important variables, and it is possible that they need more specific behavioral correlates which might enable raters to evaluate them from a more similar frame of reference. Although there was no inter-rater reliability on these four variables, the results were

not discarded, since there was inter-rater reliability at the .005 level on the Sum of the Subscales.

In summary, inter-rater reliability at statistically significant levels occurred on 11 of 15 measures. The most important of these was the .005 level correlation between raters on the two summary measures--Global Health-Pathology Scale and Sum of the (Beavers) Subscales. Though raters were not always in agreement about specific interactional variables they agreed highly on the total health or pathology of the 36 families. This high inter-rater correlation supports the reliability of the Beavers subscales, as it compares almost exactly with the results on the previously tested Global Health-Pathology Scale. Inter-rater reliability was found to increase with experience. The high inter-rater reliability found for this study increases the significance of the findings. The impact of this high degree of correlation between raters was heightened by the fact that they came from quite different training backgrounds and have worked with very different types of patient families; however, all but 4 subscales were apparently immune to personal bias in interpretation to the extent that the results from two independent ratings were remarkably consistent.

CHAPTER V

SUMMARY, CONCLUSIONS, IMPLICATIONS, RECOMMENDATIONS

Summary

The present family interactional study was conducted at Timberlawn Foundation. The techniques used to study families have been developed at Timberlawn, based on the literature, previous research, and clinical experience. The basic orientation used was general systems theory. The research team conceptualized psychopathology in quantitative terms. That is, pathology was seen as a series of points on a behavioral continuum extending from very functional to very dysfunctional behavior. Some interactional variables crucial to family functioning were identified, and family interaction was rated on these variables.

The purposes of this study were to identify characteristics of three different types of family systems: (1) Healthy families, (2) families with a child having a specific Communicational Deficit (Learning Disabled), and (3) families with an adolescent having a Behavioral Disturbance (Patient);

and (4) to compare these family systems regarding certain selected criteria. The tested hypothesis was that there would be no significant differences among the three types of family systems. The sample population consisted of 36 families, 12 of each of the three types.

The study instrument was a 50 minute videotape made while the family did five 10-minute tasks: (1) discussed family strengths, (2) devised an ending for a "loss" vignette, (3) discussed the best and the worst in the marriage (parents only), (4) discussed family closeness, and (5) planned something. The videotapes were then rated by two independent raters having no knowledge of the type of family being viewed, using the Beavers-Timberlawn Family Evaluation Scale and the Global Health-Pathology Scale. The Beavers Scale had 13 subscales regarding interactional behaviors indicative of a family's level of functioning. Each variable was rated on a 5 point continuum from health to pathology. In addition to the individual subscale scores, the Sum of the Subscales was computed to get a total family health score that could be compared to results of the Global Health-Pathology Scale, which was a 10 point continuum measuring overall family health. Such a comparison was made

because the Global Health-Pathology Scale had been tested previously and yielded high reliability and validity.

The results of the study were that the null hypothesis was rejected for 11 of the 15 measures for both Healthy and Learning Disabled groups when compared to the Patient group. The Healthy group was differentiated from the Learning Disabled group on only one variable, Parental Coalition. There were differences in family systems, and the interactional scales used did discriminate between the Patient family systems and the other family systems represented with high inter-rater reliability. The most significant inter-rater reliability, in terms of the value of the study and the scales used, occurred on both the Global Health-Pathology Scale and the Sum of the Beavers Subscales (both .005). This result was important because regardless of small variations on the subscales, raters agreed very closely in their assessments of the family's overall degree of health or pathology. Inter-rater reliability was found to increase with experience.

Conclusions

Although the study population was small, and represented a narrow stratum of society, preliminary conclusions were made that may provide guidelines for further study. The first conclusion reached was that family systems do in fact exist, and have a profound influence on members of the family. This was concluded from the finding that consistent patterns of interaction were observed in all of the families during videotaping, regardless of the type of task being done. This conclusion was derived more from the experience of rating than from specific data, but it did not usually occur that one person in the family demonstrated good negotiation skills and the others did not. If one person possessed problem solving skills, the other members also had this skill to some degree. This was generally true with all study variables. If a member did try a behavior that was not in the family repertoire, he was in some families ignored, in some families put down, or in some families told directly that the family did not do things that way.

The second conclusion derived from the present study was that there were identifiable differences among family systems. This was the real meaning behind the rejection of

the null hypothesis. The Patient families differed consistently and significantly from the Healthy and Learning Disabled families. Most of the Patient families were rated in the dysfunctional range on all variables, indicating that symptom formation is associated with systems dysfunction. Findings regarding the Patient and Healthy groups were generally consistent with descriptions of behavior from the literature, and previous research. To summarize, Healthy (and Learning Disabled) families tended to have a structure that was led by parents who had a fairly strong parental coalition. There was closeness among members, but individual ego boundaries were respected. The family's idea of how it functioned as a group was mostly congruent with reality. Problem solving ability was usually good. Family members were usually able to express thoughts and feelings clearly and without fear of retaliation, and were also willing to take responsibility for their own actions. Family members were receptive to one another, and did not "mind read," but rather asked another how he felt. The mood was affiliative, conflict was low, and members were generally sensitive to others' feelings. There was an accepting atmosphere that conveyed that growth and change

were expected, and that it was all right to disagree with others in the family. Spontaneity was evident in most interaction by the way people often talked at the same time with no impairment to the flow of ideas, and by the excited tone of voice, as though the interaction was enjoyable.

In contrast, the Patient families often had a structure of marked dominance, with little room for negotiation. Sometimes a child rather than a parent seemed in charge, and sometimes no one seemed in charge. Parents often seemed to be closer to a child than to one another. Sometimes there was a clinging closeness, and sometimes marked isolation. The family's idea of how it functioned as a group often seemed incongruent with reality. Problem solving ability seemed lacking, almost as though nothing could be done. Interactions seemed stereotyped and often lacked spontaneity. Members were often not very clear in disclosing thoughts and feelings, and tended to be evasive about taking responsibility for individual actions. Members occasionally used "mind reading" tactics, and were not very receptive or responsive to one another. If feelings were expressed, they were more often oppositional or hostile, rather than

affiliative. This led to a rather hostile, and sometimes depressed, mood where conflict seemed a matter of course, and empathy was rather sporadic. The identified patients in these Patient families were primarily diagnosed as having character disorders, and were expected to fall in the mid-range on the behavioral continua. They did not represent the most pathological end of the scale (schizophrenic), and yet raters using the Beavers and Global scales were able with good reliability to show a consistent spread between the Patient and Healthy groups. This spoke well for the discriminatory power of most of the subscales.

Since the type of Learning Disabled families described herein have not been studied previously, it was not known how they might be rated. They paralleled the Healthy group closely, and scored slightly higher on Structure. They varied more widely from the Healthy group on Parental Coalition and Conflict, but in general, there was little difference between the two groups. This finding indicates that learning disability, as defined for this study, is not associated with any particular type of system dysfunction which was used as a measure in this study. This finding lends support to

the theory of an organic or neurological etiology.

The third conclusion drawn from the study was that high inter-rater reliability could be achieved using the Beavers-Timberlawn Family Evaluation Scale to rate family interaction. The inter-rater reliability on the Sum of the Subscales compared almost exactly with that on the Global Health-pathology Scale, which has been previously tested and found to be both reliable and valid. It was also concluded that inter-rater reliability between independent raters increased with experience in rating.

Implications

Implications of the present study for nursing will be discussed as they relate to nursing practice and to nursing education. Regarding nursing practice, family study is important because nurses work more closely with families than do most of the other health professionals. It has been suggested in the literature that if any health discipline can remedy the fragmented delivery of health care services and depersonalization of the patient in our society, it is the nurse. In fact, some nursing authorities say that if we do not address this need, our profession

may disappear, as others emerge to meet today's needs. If nurses are to become involved with health care delivery, they will need to establish themselves out in the community where 80% of the health problems exist, and will need to know how families operate and how to work effectively within the family framework. Even in the hospital setting, it has been shown that the speed and often completeness of a patient's recovery is associated with the adequacy of his family system regarding the ability to cope with stress, problem solve, change roles temporarily, and lend emotional support to the ill family member.

This study has reinforced the idea that family systems exist, and that there are distinct and identifiable differences among family systems. Nurses could learn to assess the degree of health or pathology in a family, and identify specific areas of functioning within the family that are causing problems. Once these have been identified, nursing intervention could be directed to problem areas. Utilizing a systems framework demands treating the family as a unit, instead of singling out an identified patient. The question has been raised whether any individual can be treated effectively, regardless of the type of pathology, unless the

family system of which he is an integral part is considered in the planning and nursing intervention. Systems theory related to families does not apply just to psychiatry, but to all types of nursing practice. Nurses need to work on increasing family participation in both treatment and planning. Such involvement could play an important part in decreasing recurrence of pathology in the family, and possibly preventing other pathology from emerging.

Nurses could become familiar with the family system concepts by utilizing a tool such as the Beavers-Timberlawn Family Evaluation Scale during the assessment phase. This scale focuses on interactional behaviors indicative of the family's functional level. In addition, using Tapia's Model for Family Nursing could facilitate organization of family data into a meaningful plan for nursing intervention, based on the family's functional level. Recognizing this functional level can help the nurse in her development of realistic goals and a workable plan for reaching them. These tools also give her a yardstick by which to measure progress.

Once a family assessment has been made, the nurse can help the family change dysfunctional behaviors or

pathological conditions. This area of family assessment has implications for primary prevention as well as intervention. Nurses are often in a position to deal with families before problems become apparent, especially community health nurses and school nurses. If these nurses are aware of family systems operation and can recognize behaviors along the continuum from optimal to dysfunctional they can assist families in identifying potential problem areas. This is the real challenge to nursing. Even when family systems are not ready for change, the nurse could teach the patient about family systems, and help him find ways to get his needs met within the system.

Regarding nursing education, presentation of systems theory at an early stage of the program would give students a comprehensive framework for viewing the total person in his social and physical environment at any point on the continuum from health to pathology. Many schools of nursing have already incorporated the systems approach, and one school changed its graduate psychiatric program to "psycho-social" nursing, giving emphasis to the interplay of systems both inside and outside of the individual. Making students aware of family systems and how they best function has

implications for all areas of nursing, even administration, since all nurses practice within some system, and work with individuals who are within systems.

Nurses already in the community could contribute greatly to the growing body of family knowledge by recording their observations of family systems, and by conducting their own research. They have already gained community acceptance, and are in an excellent position to see how families operate in their natural setting, dealing with natural problems. This would be advantageous, since one of the main criticisms of family research has been that studies put people in an unnatural environment and give them unrealistic problems to solve. Family research is in its infancy and the opportunities for nursing to contribute to the field are unlimited.

Recommendations

The videotape technique used in the present study, as well as the Beavers-Timberlawn Family Evaluation Scale and Global Health-Pathology Scale, have been tested and achieved statistically significant results. There is agreement between these methods, clinical assessment, family

self-evaluation, and microanalysis. Further research utilizing the same methodology is recommended for studying a wider range of families representing other social classes and cultural groups, so that findings can be generalized. It is suggested that populations of lower middle-class, working class, and low class healthy families be studied next, since previous studies have shown less variance in behavior patterns among healthy families than among disturbed families. If this proves to be true for all classes of healthy families, then there will be established patterns associated with optimal health in our society that apply to all classes. The same thing could be done with cultural groups; there may be some optimal behavior patterns which are found in all groups.

It would also be warranted to study a group of healthy families not connected with a church, if they can be found through other sources. The interest here would be to find out whether participation in church activity and belief in a transcendent value system is always associated with health or not. Westley and Epstein found a correlation between community activity participation and health. This would be another area to explore with the healthy families already

studied.

It is also recommended that the two raters used for this study rate another group of families to see if inter-rater rater reliability does continue to increase with experience as predicted, or if there is a levelling point. It is also recommended that two different raters be used to study some of the families to see if they also get low inter-rater reliability on the same four variables as did the present two raters, or if the low reliability obtained here was the result of bias on the part of one of the raters. If it is found that these four scales (Parental Coalition, Expressiveness, Permeability, and Invasiveness) continue to yield low reliability, they should be changed. They seem to be important variables from the extensive work done at Timberlawn in devising the Scales, and possibly finding more specific behavioral correlates for these variables would increase their capacity to be rated objectively and thus increase inter-rater agreement.

The Mood and Tone variable did not discriminate between Healthy and Patient groups in the present study, despite the rater's subjective observation that this finding was not consistent with the rating experience; there were

marked differences in family tone that were apparent almost immediately. It seems that the scale did not fit the observation, possibly because the total range from 1 to 5 was not utilized. Most families observed were rated between 1 and 3, which used only half the scale. There were no cynical and hopeless (5) families, and though some were depressed (4), they usually showed sufficient anger to be classified as overtly hostile (3). Using only part of the range lessened discriminatory power on the scale. Possibly one scale could be used for Feeling Tone, ranging from Affiliative (1) to Oppositional (5), and another scale could be used for Mood, ranging from Optimistic and Hopeful (1) to Depressed (5). There may be some cynical and hopeless families in society, but they would probably not be present in these stratified samples of people either active in the church or actively seeking help for one of their children having either a learning disability or a behavioral problem.

Regarding the Healthy and Learning Disabled groups, there were only two variables on which the variance between them was fairly wide, Conflict and Parental Coalition. It is recommended that a closer study be made of these two

variables to see whether this finding continues with other raters. The present raters agreed on the Conflict rating, but not on Parental Coalition. If Conflict continues to be higher for the Learning Disabled group in further studies, it would have implications for more family involvement with treatment of the child to resolve some of the conflict, which might be hindering his learning progress.

Another area worthy of study would be to compare family systems of the same type at different stages of development. Family systems with young children may be different in significant ways, especially regarding Structure, from families with all adolescent children.

A future recommendation, demanding great financial and research staff resources, would be to do a cross-sectional family study of an entire community. At one time, families of all classes, in all stages of development, and of different cultural backgrounds could be studied and compared. Another extensive project would be to follow a group of families of different types longitudinally for several generations, to determine which interactional variables were more predictive in terms of both optimal development and emergence of pathology.

There are many directions that family research can take, since the work is just beginning. Studies such as the present one may add to the knowledge of family systems, and help direct future research efforts.

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AGENCY PERMISSION FOR CONDUCTING STUDY*

THE TIMBERLAWN FOUNDATION

GRANTS TO BARBARA W. NEILL

a student enrolled in a program of nursing leading to a Master's Degree at Texas Woman's University, the privilege of its facilities in order to study the following problem:

A COMPARISON OF FAMILY INTERACTION
ON A HEALTH TO PATHOLOGY CONTINUUM

The conditions mutually agreed upon are as follows:

1. The agency (may) (~~may not~~) be identified in the final report.
2. The names of consultative or administrative personnel in the agency (may) (~~may not~~) be identified in the final report.
3. The agency (wants) (~~does not want~~) a conference with the student when the report is completed.
4. The agency is (willing) (~~unwilling~~) to allow the completed report to be circulated through interlibrary loan.
5. Other _____

Date 9-1-74

Barbara W. Neill
Signature of student

John A. Lewis, Jr.
Signature of Agency Personnel

Mary Luke, Ed.
Signature of Faculty Advisor

*Fill out and sign three copies to be distributed as follows: Original-Student; first copy - agency; second copy - TWU College of Nursing.

APPENDIX A

MODEL FOR FAMILY NURSING

Nursing Activities	Trust	Counseling	Complex of Skills	Prevention	None
Continuum of Nursing Skills	<p><i>Nurse and Family-Partners</i></p> <p>Acceptance and trust, maturity and patience, clarification of role, limit setting, constant evaluation of relationship and progress.</p>	<p><i>Partnership</i></p> <p>Based on trust relationship, uses counseling and interpersonal skills to help family begin to understand itself and define its problems. Nurse uses honesty and genuineness, and self-evaluation.</p>	<p><i>Partnership Stressing Family's Ability</i></p> <p>Information, coordination, teamwork, teaching; uses special skills, helps family in making decisions and finding solutions.</p>	<p><i>Nurse—Expert and Partner</i></p> <p>Anticipated problem areas studied, teaching of available resources, assistance in family-group understanding, maturity and foresight.</p>	
Continuum of Family Functioning	<p><i>Nurse—"Good Mother" to Family</i></p> <p>Chaotic family, barely surviving, inadequate provision of physical and emotional supports. Alienation from community, deviant behavior, distortion and confusion of roles, immaturity, child neglect, depression-failure.</p>	<p><i>Nurse and Family-Siblings</i></p> <p>Intermediate family, slightly above survival level, variation in economic provisions, alienation but with more ability to trust. Child neglect not as great, defensive but slightly more willingness to accept help.</p>	<p><i>Nurse—Adult Helper to Family</i></p> <p>Normal family but with many conflicts and problems, variation in economic levels, greater trust and ability to seek and use help. Parents more mature, but still have emotional conflicts. Do have successes and achievements, and are more willing to seek solutions to problems, future oriented.</p>	<p><i>Nurse—Expert and Partner with Family</i></p> <p>Family has solutions, are stable, healthy with fewer conflicts or problems, very capable providers of physical and emotional supports. Parents mature and confident, fewer difficulties in training of children, able to seek help, future oriented, enjoy present.</p>	<p><i>Family Independent</i></p> <p><i>Nurse not Needed</i></p> <p>Ideal family, homeostatic, balance between individual and group goals and activities. Family meets its tasks and roles well, and are able to seek appropriate help when needed.</p>
Family Levels	I Infancy	II Childhood	III Adolescence	IV Adulthood	V Maturity

APPENDIX B

DEMOGRAPHIC DATA REGARDING FATHER'S OCCUPATION
AND RELIGION FOR THE STUDY POPULATION OF THIRTY-
SIX FAMILIES

FATHER'S OCCUPATION	HEALTHY FAMILIES	LEARNING DISABLED FAMILIES	PATIENT FAMILIES
OWNER	2	4	1
PRESIDENT	1	-	-
VICE-PRES.	2	-	1
ATTORNEY	2	1	-
PHYSICIAN	-	-	3
MANAGEMENT	4	5	5
SALES & MGMT.	1	2	1
SKILLED LABOR	-	-	1
TOTAL	12	12	12

FAMILY RELIGION	HEALTHY FAMILIES	LEARNING DISABLED FAMILIES	PATIENT FAMILIES
PROTESTANT	12	10	12
CATHOLIC	0	2	0
TOTAL	12	12	12

APPENDIX C

Name _____
 Date _____

The following statements fit some families better than others.
 Please circle the number that best describes how well each statement fits your family.

	Does Not Fit Our Family At All		Fits Our Family Some		Fits Our Family Very Well
1. We live in a good neighborhood.	1	2	3	4	5
2. Our family talks things out.	1	2	3	4	5
3. We have a sense of humor.	1	2	3	4	5
4. There is an opportunity for each member to express himself in his own way.	1	2	3	4	5
5. There are activities which we all enjoy doing together.	1	2	3	4	5
6. We respect each other's feelings.	1	2	3	4	5
7. In our home, we feel loved.	1	2	3	4	5
8. We have the right kinds of friends.	1	2	3	4	5
9. Life is exciting most of the time for our family.	1	2	3	4	5
10. Discipline is moderate and consistent.	1	2	3	4	5
11. Educational goals are important to us.	1	2	3	4	5
12. There is a sense of belonging in our family.	1	2	3	4	5
13. Our family is a reliable, dependable family.	1	2	3	4	5
14. We establish reasonable goals for ourselves.	1	2	3	4	5
15. We encourage development of potential in all members of our family.	1	2	3	4	5

		Does Not Fit Our Family At All		Fits Our Family Some		Fits Our Family Very Well
16.	Our family is a happy one.	1	2	3	4	5
17.	The future looks good to our family.	1	2	3	4	5
18.	Our family members have good friends.	1	2	3	4	5
19.	Understanding and sympathy come easy in our family.	1	2	3	4	5
20.	We have many outside interests and activities.	1	2	3	4	5
21.	One or more of our family members is odd.	1	2	3	4	5
22.	Our family needs no one outside to make us happy.	1	2	3	4	5
23.	Our family expects a lot from its members.	1	2	3	4	5
24.	We trust each other.	1	2	3	4	5
25.	In our family children obey parents.	1	2	3	4	5
26.	Children in our family are treated fairly.	1	2	3	4	5
27.	Members of our family continually grumble about work they do for the family.	1	2	3	4	5
28.	There is frequent laughter in our family.	1	2	3	4	5
29.	Our family follows examples set by other families.	1	2	3	4	5
30.	We have well understood but unspoken rules concerning family behavior.	1	2	3	4	5
31.	Members fear to express their real opinions.	1	2	3	4	5

	Does Not Fit Our Family At All		Fits Our Family Some		Fits Our Family Very Well
32. Only certain kinds of ideas may be expressed freely.	1	2	3	4	5
33. There is strict discipline.	1	2	3	4	5
34. We just cannot tell each other our real feelings.	1	2	3	4	5
35. Good manners and proper behavior are very important to us.	1	2	3	4	5
36. We do not talk about sex.	1	2	3	4	5
37. We have very good times together.	1	2	3	4	5
38. We can get mad at each other but it doesn't last long.	1	2	3	4	5
39. We need each other.	1	2	3	4	5
40. We are a strong, competent family.	1	2	3	4	5
41. We are satisfied with the way we now live.	1	2	3	4	5
42. We forgive each other easily.	1	2	3	4	5
43. We can adjust well to new situations.	1	2	3	4	5
44. We are not as happy as I would like.	1	2	3	4	5
45. Each of us tries to be the kind of person the others will like.	1	2	3	4	5
46. There are serious differences in our standards and values.	1	2	3	4	5
47. We accept each other's friends.	1	2	3	4	5
48. Each member has a job to do.	1	2	3	4	5
49. Our family life follows a regular schedule.	1	2	3	4	5
50. We like to get together with relatives.	1	2	3	4	5

APPENDIX D

BEAVERS - TIMBERLAWN
FAMILY EVALUATION SCALE

Family Name _____ Rater _____

Segment _____ Date _____

Instructions: The following scales were designed to assess the family functioning on continua representing interactional aspects of being a family. Therefore, it is important that you consider the entire range of each scale when you make your ratings. Please try to respond on the basis of the videotape data alone, scoring according to what you see and hear, rather than what you imagine might occur elsewhere.

I. STRUCTURE OF THE FAMILY

A. Based on the entire tape, check the term that best describes your general impression of the structure of this family.

1	1.5	2	2.5	3	3.5	4	4.5	5
Chaos		Marked dominance		Moderate dominance		Led		Egalitarian
Leaderless; no one has enough power to structure the inter- action.		Control is close to absolute. No nego- tiation; dominance and submission are the rule.		Control is close to absolute. Some nego- tiation, but dominance and submission are the rule.		Tendency toward dom- inance and submission, but most of the inter- action is through respectful negotiation.		Leadership is shared between parents, changing with the nature of the interaction

If 2 to 4, indicate:

Who is #1 in power: Father _____ Mother _____ Child (specify) _____

Who is #2 in power: Father _____ Mother _____ Child (specify) _____

B. Parental Coalitions: Check the terms that best describe the relationship structure in this family.

1	1.5	2	2.5	3	3.5	4	4.5	5
Parent-child coalition				Weak parental coalition				Strong parental coalition

C. Closeness

1	1.5	2	2.5	3	3.5	4	4.5	5
Amorphous, vague and indistinct boundaries among members				Isolation, distancing				Closeness, with distinct boundaries among members

II. MYTHOLOGY: Every family has a mythology; that is, a concept of how it functions as a group. Rate the degree to which this family's mythology seems congruent with reality.

1	1.5	2	2.5	3	3.5	4	4.5	5
Very congruent		Mostly congruent			Somewhat incongruent			Very incongruent

III. GOAL-DIRECTED NEGOTIATION: Rate this family's overall efficiency in negotiation and problem solving.

1	1.5	2	2.5	3	3.5	4	4.5	5
Extremely efficient		Good			Poor			Extremely inefficient

IV. AUTONOMY

A. Communication of Self-Concept: Rate this family as to the clarity of disclosure of feelings and thoughts. This is not a rating of the intensity of feelings, but rather of clarity of expression of individual thoughts and feelings.

1	1.5	2	2.5	3	3.5	4	4.5	5
Very clear				Somewhat vague and hidden				Hardly anyone is ever clear

B. Responsibility: Rate the degree to which the family members take responsibility for their own past, present, and future actions.

1	1.5	2	2.5	3	3.5	4	4.5	5
Members regularly are able to voice responsibility for individual actions				Members sometimes voice responsibility for individual actions, but tactics also include sometimes blaming others, speaking in 3rd person or plural				Members rarely, if ever, voice responsibility for individual actions

C. Invasiveness: Rate the degree to which the members speak for one another, or make "mind reading" statements.

1	1.5	2	2.5	3	3.5	4	4.5	5
Many invasions				Occasional invasions				No evidence of invasions

D. Permeability: Rate the degree to which members are open, receptive and permeable to the statements of other family members.

1	1.5	2	2.5	3	3.5	4	4.5	5
Very open		Moderately open			Members frequently unreceptive			Members unreceptive

V. FAMILY AFFECT

A. Expressiveness: Rate the degree to which this family system is characterized by open expression of feelings.

1	1.5	2	2.5	3	3.5	4	4.5	5
Open, direct expression of feelings		Direct expression of feelings despite some discomfort		Obvious restriction in the expressions of some feelings		Although some feelings are expressed, there is masking of most feelings		No expression of feelings

B. Mood and Tone: Rate the feeling tone of this family's interaction.

1	1.5	2	2.5	3	3.5	4	4.5	5
Unusually warm, affectionate, humorous and optimistic		Polite, without impressive warmth or affection; or frequently hostile with times of pleasure		Overtly hostile		Depressed		Cynical, hopeless and pessimistic

C. Conflict: Rate the degree of seemingly unresolvable conflict.

1	1.5	2	2.5	3	3.5	4	4.5	5
Severe conflict, with severe impairment of group functioning		Definite conflict, with moderate impairment of group functioning		Definite conflict, with slight impairment of group functioning		Some evidence of conflict, without impairment of group functioning		Little, or no, conflict

D. Empathy: Rate the degree of sensitivity to, and understanding of each other's feelings within this family.

1	1.5	2	2.5	3	3.5	4	4.5	5
Consistent empathic responsiveness		For the most part, an empathic responsiveness with one another, despite obvious resistance		Attempted empathic involvement, but failed to maintain it		Absence of any empathic responsiveness		Grossly inappropriate responses to feelings

VI. GLOBAL HEALTH-PATHOLOGY SCALE: Circle the number of the point on the following scale which best describes this family's health or pathology.

10	9	8	7	6	5	4	3	2	1
Most Pathological									Healthiest

APPENDIX E

TABLES 1-15. Illustration of the Mean and Standard Deviation for Each Study Subsample on Each Variable Studied.

1. STRUCTURE

Subsample	Mean	S.D.
Healthy	2.5	1.2
L. D.	2.3	1.0
Patient	3.8	1.0
Total	2.9	1.3

2. PARENTAL COALITION

Subsample	Mean	S.D.
Healthy	1.7	1.1
L. D.	2.5	1.1
Patient	3.4	1.0
Total	2.5	1.3

3. CLOSENESS

Subsample	Mean	S.D.
Healthy	2.1	1.0
L. D.	2.3	0.9
Patient	3.3	0.8
Total	2.6	1.1

4. MYTHOLOGY

Subsample	Mean	S.D.
Healthy	2.2	1.4
L. D.	2.5	1.2
Patient	3.6	1.3
Total	2.8	1.4

5. GOAL-DIRECTED NEGOTIATION

Subsample	Mean	S.D.
Healthy	2.5	1.0
L. D.	2.5	0.9
Patient	3.9	1.1
Total	2.9	1.2

6. EXPRESSION OF SELF-CONCEPT

Subsample	Mean	S.D.
Healthy	2.3	1.5
L. D.	2.7	1.1
Patient	3.8	1.0
Total	2.9	1.4

7. RESPONSIBILITY

Subsample	Mean	S.D.
Healthy	1.8	0.9
L. D.	2.0	0.7
Patient	3.0	0.9
Total	2.3	1.0

8. INVASIVENESS

Subsample	Mean	S.D.
Healthy	1.6	0.9
L. D.	1.7	0.7
Patient	3.1	1.4
Total	2.1	1.2

9. PERMEABILITY

Subsample	Mean	S.D.
Healthy	2.5	1.3
L. D.	2.8	1.2
Patient	3.6	1.0
Total	3.0	1.2

10. EXPRESSIVENESS

Subsample	Mean	S.D.
Healthy	2.7	1.1
L. D.	2.7	1.1
Patient	3.7	1.0
Total	3.0	1.2

11. MOOD AND TONE

Subsample	Mean	S.D.
Healthy	2.3	1.2
L. D.	2.4	1.1
Patient	2.9	0.9
Total	2.5	1.1

12. CONFLICT

Subsample	Mean	S.D.
Healthy	2.0	1.3
L. D.	2.7	1.0
Patient	3.9	1.0
Total	2.9	1.4

13. EMPATHY

Subsample	Mean	S.D.
Healthy	2.5	1.3
L. D.	2.8	1.2
Patient	3.7	1.1
Total	3.0	1.3

14. GLOBAL HEALTH-PATHOLOGY

Subsample	Mean	S.D.
Healthy	3.8	2.5
L. D.	4.2	2.2
Patient	7.3	2.2
Total	5.1	2.8

15. SUM OF THE SUBSCALES*

Subsample	Mean	S.D.
Healthy	28.5	14.0
L. D.	31.8	11.8
Patient	45.6	11.4
Total	35.3	14.5

*This Table is not represented on the graph, but was used in computing inter-rater reliability.

RAW DATA FOR RATER 1

I.D.	STUDY VARIABLES														SUM
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	
1-1	10	10	10	10	10	10	10	10	10	10	10	10	10	1	130
2-3	40	45	30	45	40	40	30	35	40	40	40	40	45	8	510
3-3	15	25	20	20	20	25	20	20	20	30	15	15	20	4	265
4-3	30	35	30	45	45	50	30	35	45	45	45	45	35	9	515
5-2	45	40	30	30	40	30	30	25	35	35	35	35	30	5	440
6-1	10	10	10	10	20	10	10	10	10	10	10	10	10	1	140
7-2	30	45	30	50	20	35	15	10	40	45	30	40	45	8	435
8-2	15	20	20	20	25	35	20	20	25	35	40	25	30	4	330
9-3	45	40	40	50	50	45	40	50	45	45	30	50	50	10	580
10-3	20	15	25	10	15	15	10	10	15	10	15	25	15	3	200
11-1	40	10	30	35	40	25	20	20	40	35	25	20	40	5	380
12-2	10	10	10	10	10	10	10	10	10	10	10	10	10	1	130
13-1	45	45	40	50	45	50	35	20	50	40	50	50	45	10	565
14-2	15	20	20	25	30	35	25	10	20	30	15	20	25	3	290
15-1	15	10	20	15	20	15	15	10	20	25	15	15	15	3	210
16-2	25	30	40	30	20	40	25	30	35	30	25	30	40	6	400
17-2	10	10	10	10	10	10	10	10	10	10	10	10	10	1	135
18-2	30	35	30	40	35	30	25	20	45	40	30	45	45	7	450
19-3	45	35	35	20	40	40	40	40	45	40	30	40	45	7	495
20-3	45	20	20	25	50	30	25	30	35	25	20	30	25	5	380
21-2	10	15	10	10	20	10	10	10	10	10	10	15	10	1	150
22-1	30	20	20	15	20	20	15	15	30	30	15	15	25	4	270
23-3	45	30	30	45	45	35	30	15	40	40	35	40	40	7	470
24-1	20	10	15	15	30	10	15	10	20	25	20	15	25	3	230
25-3	40	50	45	45	45	45	40	40	30	40	30	50	50	10	550
26-2	40	20	25	30	35	30	30	20	40	30	25	30	35	5	390
27-1	40	30	30	45	30	50	20	40	40	45	40	40	40	7	490
28-3	50	30	40	45	50	45	40	45	45	40	30	50	50	10	560
29-1	20	10	15	15	30	15	10	10	15	25	25	15	15	3	220
30-2	15	25	20	20	20	15	20	20	30	20	15	25	20	4	265
31-3	40	40	40	45	30	45	30	45	40	45	35	45	35	7	515
32-1	15	10	15	10	15	15	10	10	15	20	15	10	15	2	175
33-2	35	30	30	25	30	40	25	20	40	30	40	30	30	5	405
34-1	20	10	10	10	15	10	15	10	20	15	15	10	15	2	175
35-3	45	40	40	35	35	40	20	10	30	40	25	40	35	8	435
36-1	35	25	35	35	25	40	35	25	35	40	35	30	40	5	435

Legend:

I.D., FIRST NUMBER = family number

I.D., SECOND NUMBER = subsample:

1 = Healthy family

2 = Learning Disabled family

3 = Patient family

RAW DATA FOR RATER 2

I.D.	STUDY VARIABLES														SUM
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	
1-1	25	25	20	20	20	25	15	10	30	25	20	25	30	4	290
2-3	35	25	40	40	40	35	35	35	40	20	40	45	35	8	465
3-3	30	40	30	45	40	35	30	40	30	20	25	35	25	8	425
4-3	35	20	35	40	40	40	30	50	20	25	35	40	30	7	440
5-2	15	20	15	15	35	20	30	30	15	25	40	10	20	4	290
6-1	15	15	20	20	20	15	40	50	40	20	15	35	25	4	330
7-2	10	15	20	20	20	25	30	50	20	20	15	25	20	4	290
8-2	20	25	25	20	20	20	15	15	20	25	20	25	20	3	270
9-3	40	35	45	40	50	40	40	50	30	45	35	50	50	10	550
10-3	20	45	25	40	20	35	45	25	20	25	40	40	25	7	405
11-1	40	15	25	20	35	30	25	20	25	35	20	30	30	5	350
12-2	10	10	15	15	15	25	25	20	20	30	10	20	15	2	230
13-1	15	15	15	15	30	20	25	30	20	15	20	10	20	3	250
14-2	15	20	20	25	40	30	40	30	20	35	15	30	25	5	345
15-1	20	25	20	30	25	20	20	10	30	20	20	25	35	5	300
16-2	20	10	15	10	15	25	20	30	20	20	15	15	25	3	240
17-2	25	15	20	20	30	20	20	45	30	15	15	10	20	4	285
18-2	25	40	40	45	30	35	35	50	20	25	35	35	35	8	450
19-3	45	40	45	50	35	50	45	30	15	40	40	50	35	10	520
20-3	40	15	35	30	50	40	45	50	20	45	50	50	35	9	505
21-2	25	30	25	20	40	25	30	25	30	35	20	35	35	7	375
22-1	20	15	25	40	15	25	40	10	40	20	20	25	25	5	320
23-3	25	15	25	45	35	25	40	20	20	20	25	40	20	8	355
24-1	30	40	35	20	30	20	40	50	20	20	25	20	30	7	380
25-3	30	45	40	35	35	30	30	45	40	35	45	45	35	9	490
26-2	30	35	30	25	30	40	40	15	45	35	25	30	35	6	415
27-1	15	10	20	15	15	20	20	10	30	30	20	10	20	4	235
28-3	25	20	15	30	35	20	25	10	20	20	35	45	25	5	325
29-1	15	20	15	10	25	15	20	30	15	30	20	35	30	5	280
30-2	15	20	15	15	15	20	25	30	20	20	20	25	15	3	255
31-3	30	25	35	40	15	30	35	50	15	35	25	30	35	7	400
32-1	15	15	15	15	15	15	15	10	30	20	15	10	20	3	210
33-2	30	25	25	20	25	20	25	40	30	30	15	20	30	4	335
34-1	15	15	10	15	20	15	15	30	25	15	15	15	15	3	220
35-3	20	30	40	30	40	40	35	10	20	30	25	30	35	7	385
36-1	25	20	20	25	15	30	25	10	20	40	20	15	30	5	295

Legend:

I.D., FIRST NUMBER = family number

I.D., SECOND NUMBER = subsample:

1 = Healthy family

2 = Learning Disabled family

3 = Patient family

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