THE EFFECTS OF CONJOINT FAMILY PLAY SESSIONS OF FAMILY INTERACTION PATTERNS

Thesis for the Degree of M. A.

MICHIGAN STATE UNIVERSITY
RITA WENDELIN LARSON

1972

ABSTRACT

THE EFFECTS OF CONJOINT FAMILY PLAY SESSIONS
ON FAMILY INTERACTION PATTERNS

By

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This study was undertaken primarily to investigate whole family interaction during free play, focusing on the formal aspects of communication rather than on the specific content of interaction. Videotape recordings of play sessions were rated by trained raters for the following categories: approach, inclusion, exclusion, withdrawal, family play, two-member play, isolated play, observation of ongoing activity, disinterested or ignoring activity, exploring, physical contact, initiates new activity, and assists family members. Specifically, it was questioned whether experimental families (father-mother-son triads) who had participated in eight weeks of play sessions with a therapist present would differ in their interaction patterns from control families (father-mother-son triads) who had not.

A multivariate analysis of the family member's scores for the final play session found a significant difference

between the experimental and control groups (p .03), a significant difference between the family members (p .02), and a significant interaction effect between the experimental condition and family members (p .04). The control group displayed more exploring, initiations, observation, approaches, and physical contact, while the experimental group displayed more family play and two-member play. The family member differences were due to father-son and mother-son differences and not mother-father differences. The son displayed more withdrawals, exploring, inclusions, initiations, and approaches, while the parents displayed more observation and physical contact. The largest interaction effect was found between the sons. It also appeared that it was the sons in the two groups who were primarily responsible for the overall differences in the two groups. The experimental sons displayed more observing and less approaches, withdrawals, inclusions, exclusions, exploring, and initiations. However, the proportion scores for inclusion-exclusion showed that the experimental sons were included more and excluded less proportionally than the control sons.

It was concluded that the control families seemed to avoid a continued social interaction with other family members, while the experimental families exhibited more social interaction and a greater sense of mutual involvement.

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A THESIS

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

MASTER OF ARTS

Department of Psychology

1972

To

David, Pat, and Michael

ACKNOWLEDGEMENTS

My thanks to my committee chairman, Dr. Gary Stollak, for his patience and support, and to the other members of my committee, Dr. Lawrence, Dr. David Wessel, and Robert Gurney, for their cooperation and assistance.

I would also like to express my gratitude to Bob Wilson without whose help I would still be battling the computer.

Thanks also go to the administration, teachers, and students of the participating elementary schools for their cooperation, which made this study possible.

Finally, I would like to thank Tom Koenig, Paul Richards, Carol Stein, David Stewart, and Terry Taylor, who rated the tapes for the present research.

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CHAPTER I

INTRODUCTION

Traditionally, most of clinical research on the therapy process has been oriented toward the individual patient, particularly toward the "intrapsychic determinants" of his behavior. In recent years there has been increasing attention devoted to aspects of an individual's interpersonal behavior, especially with respect to children and adolescents and their family interaction patterns. The present research evaluated the effects of a new family play technique. It consisted of conjoint play sessions with the presence of a "communication facilitator" whose function was to facilitate effective communication as the family played together. From here on the "communication facilitator" will be referred to as a therapist, although the families did not perceive him or her as a therapist. These families had never asked for and were never referred for psychological help. The present study attempted to assess whether the interaction patterns of families with a son in the first or second grade, who presented a syndrome of immature social behavior (low self-sufficiency, low self-control, anxiety, aggressiveness and attention-seeking) who had participated

in eight conjoint family play sessions with a therapist present would be different from those families who had not.

Increasing numbers of workers in the field (Bateson, Haley, and Weakland (1956); Midelfort (1957 and 1962); Ackerman (1957, 1958a, 1958b, and 1960); Jackson (1957 and 1961); Spiegel and Bell (1959); Haley (1959, 1962, and 1963); Carroll (1960); Grotjahn (1960); Bell (1961); Satir (1964); and Boszormenyi-Nagy and Framo (1965)) are emphasizing the family rather than the troubled child or adolescent as the primary unit of psychotherapeutic treatment. The reason for this shift in emphasis is the observation that the identified patient seems to be a symptom of a system of pathological interaction within the whole family (Ackerman, 1954, 1958a, 1958b, 1961, and 1963). According to Jackson (1957), the child's symptomatology maintains the family homeostasis and the family seeks to maintain the patient's pathology. Therefore, in this study the attempt to reduce the child's behavior problems included the family of a child who was beginning to show symptoms.

Research in Family Interaction

Although the study of interaction among family members is a relatively new area of endeavor, there is a rapidly growing body of research. Of particular interest for the hypotheses of this thesis are studies which seek to differentiate between the families of "normals," and families of

people who are emotionally disturbed.

Several methods have been used to study families: case history, psychological testing, interviewing, attitude and rating scales, questionnaires, and observational studies. The research done for this thesis used the last of these methodologies, namely that of observation.

In summarizing observational studies, Rabkin (1968) noted that the behaviors measured have usually been rated along dimensions of conflict, dominance, intrusion, and influence patterns, and more rarely, those of support, encouragement, or other integrative behavior. Primarily, these studies have been content rather than process oriented, emphasizing the amount, for example, of maternal domination or parental conflict, rather than the ongoing "who-does-what-to-whom, when" sequence.

Haley (1964), a pioneer in communication and family interaction research, stated that the ideal data in family research should be a "recording of observable events which are accurately measurable in some way so that comparisons and contrasts between families can be made" (p. 42). Ideally, there should be no guesswork or inference in the collection of data, itself, although what the data "mean" must involve inference.

The research for this thesis followed the goal stated above by Helay. Families were brought together and their interactions in the play sessions were videotaped. The

behavior on these tapes were rated by trained undergraduate raters, into categories found in Appendix A. The rating schema did not assess what the family members said to each other but rather concentrated on concrete and simple behavioral measures which hopefully reflected interaction uncontaminated by the difficulties working with speech samples. As Rabkin stated, "Research examining the entire family communication network, focusing on structure rather than content, is far more meaningful for our understanding of psychopathology."

Haley (1964), Lennard et al. (1965), Leighton, Stollak, and Ferguson (1970), and Ferreira and Winter (1967 and 1968), have used rating schemas that were related to structure--the process and style of interaction rather than to content, though in part the rating schemas were derived from content. Their studies were mainly concerned with amount, rate, and direction of intrafamilial communication, and the availability and strenght of communication channels between family members. The emphasis on process was based on the assumption that repetitive, formal patterns of family interaction, and not just the ongoing verbal content, influence the child's personality.

In Haley's 1964 study of speech sequences in family triads (who speaks after whom), he found a more random state of interaction in normal than in clinic families. He also tried to measure changes in the family system as a

result of family therapy. He felt it was in the nature of family therapy to encourage more equal verbal participation by family members. For example, if father was shut out, the therapist tended to work toward bringing him more into the conversation with wife and with child. Presumably after a number of therapy sessions, the clinic families should show a definite change toward the greater use of varied sequences of interaction. However, he did not have sufficient data available to test this hypothesis. Haley felt the families were not successfully treated. Four of the families were treated by training therapists and their supervisor felt that none of these families had undergone any basic change.

In a continuation of Haley's communication analysis, Lennard, Beauliere, and Embrey (1965) studied the communication sequence in twenty 3-member families (ten normal and ten with a schizophrenic son between the ages of 9 and 14). Of special interest to them was verbal behavior that was self-initiated, especially the volume and rate of self-initiated entry by a third family member into ongoing interaction between any two other family members (intrusion) and the response to this entry. They measured frequency, success, and duration of success of intrusions on the part of each family member. They found that in the schizophrenic families, the son addressed significantly less (at .025 level) communication to the father, and received less from him. The mother directed more communications toward the son

and received more from him. Mother and father communicated substantially less with each other. These data reflect a partial deficit in four out of six channels of intrafamilial communication. The authors concluded that in schizophrenic families there was a pattern of consistently lower frequency of father-son, son-father, father-mother, and mother-father communication.

Leighton, Stollak, and Ferguson (1970) compared communicative interaction between eight normal and seven clinic families (each containing a male child between the ages of eight and thirteen referred for under-achievement and/or lack of behavior control in the school). Tape recordings were scored using the following concrete measures:

1) total number of times each family member spoke,
2) total length of time each family member spoke,
3) average duration of speech for each family member,
4) total number of times any one family member was interrupted,
5) total number of times any one family member interrupts,
6) number of instances of simultaneous speech (two or more family members speaking at once.

Comparisons within families revealed that the normal father spoke more often and for a greater total duration than normal mothers, while average duration of speech was equivalent. Clinic mothers spoke more often, for a greater length of time, and for a longer average duration than did clinic fathers. Interruption data showed that there were no differences

between the normal father and the normal mother. In the clinic families, the father interrupted more often than the mother. There was no difference in the number of times the normal father and mother was interrupted, while the clinic mother was interrupted more often than the clinic father. The latter difference was maintained even when number of times speaking was held constant. From these results, they inferred that the normal family was characterized by father-dominance which appeared to be accepted by the other members of the family. The clinic family was characterized by mother-dominance when frequency and temporal measures of speaking were considered. However, data on interruptions suggested that this was a relatively unstable power hierarchy which lead to a recurring struggle on the part of the mother to maintain her position.

Using the Bales' Interaction Process Analysis categories, Ferreira and Winter (1967) studied family interaction with normal, maladjusted, schizophrenic, and delinquent triads. All children were at least 9 years old. They required each of the families to make up TAT stories. On the total amount of interaction, normal and maladjusted families had the highest scores and were significantly differentiated from schizophrenic and delinquent families, with the schizophrenic group having the lowest amount of interaction. Deviation scores to measure the evenness of participation for family members in each group were also

computed. Deviation from equal participation was greatest in the schizophrenic families and all of the deviation measures with statistical significance involved an inequality between the parents.

Another study by Ferreira and Winter (1966) found that the amount of time spent in silence was found to be significantly greater in clinic families than in normal families. The fact that the decrease of explicit information in clinic families involved all family members equally was interpreted by the authors as a breakdown in communication characteristic of the whole family rather than a single member. They concluded that "somehow deprived of an adequate exchange of information, the members of abnormal families were condemned to lack of mutuality, emotional isolation, and estrangement."

These family interaction studies support the consensus of opinion among therapists that in pathogenic relationships there is a breakdown in communication. Abnormal families do not seem to talk to each other as freely, frequently, explicitly, or clearly, as do normal families. As experience with families in conjoint family therapy indicates, members of abnormal families tend to withhold information.

Research in Nonverbal Communication

The family interaction studies suggest a lack or deficiency of communication in pathological families.

However, a breakdown in communication does not necessarily mean a lack of interaction, as the meaning of communication is much broader. People communicate at many levels. In 1927, Sapir wrote, "We respond to gestures with an extreme alertness and, one might say, in accordance with an elaborate and secret code that is written nowhere, known by none, and understood by all (p. 137). However, it was not until the 1950's that studies began to appear reporting systematic efforts to transcribe gestures and other nonverbal behaviors, and to understand their use and significance in human communication.

Duncan (1969) in his review of nonverbal behavior listed several modalities of nonverbal communication: (a) body motion or kinesic behavior: gestures and other body movements, including facial expression, eye movement, and posture; (b) para-language: voice qualities, speech nonfluencies, and such non-language sounds as laughing, yawning, and grunting; (c) proxemics: use of "social and personal space and man's perception of it (Hall, 1966, p. 1)"; (d) olfaction; (e) skin sensitivity to touch and temperature; and (f) use of artifacts, such as dress and cosmetics.

There have been a few systematic studies dealing with body motion. Birdwhistell must be given credit for opening up this area of communication study. Birdwhistell (1952) attempted to develop a detailed and comprehensive system for transcribing body motion. Although he only studied the

structure of body motions of one person, he also emphasized that no physical motion was meaningless, but that its significance derived from the interactional context in which it was evoked. In other words, persons engage in physical conversation even when verbally silent and modify their positions continually in response to perceptible movements in others.

Mahl (1966) has also pointed out that nonverbal behavior clearly has both intrapsychic and communicative-interpersonal aspects of importance. From the point of view of an individual patient, he regards movement and postures as reflecting expressions of drive and defensive processes, as well as conscious and unconscious attempts to communicate with the therapist.

In a more comprehensive study, Ekman and Freisen (1968) differentiated and studied four types of body motion cues: (a) body acts (clear movements), (b) body positions (no movement of a body part), (c) facial expressions, and (d) head orientations. They found that reliable agreements could be obtained among observers of body motion, that rates of occurrence of specific body acts could differentiate among patients and within patients at different stages of treatment, that body motion could provide "information about affect, the ongoing interpersonal relationship, and psychodynamics and ego defenses, and that there were complex interrelationships between nonverbal behavior (body motion)

and content or noncontent aspects of speech (p. 213)."

Scheflen (1964), by examining motion pictures of family therapy and other groups, has worked out in some detail a description of repetitive patterns of body positions and shifts, gestures, gazes, paralanguage, etc. These patterns occurred in relatively unvarying sequences, enacted over and over again. When the "meaning" of these patterns was analyzed by careful recording of their contexts as beginning, ending, or changing other sequences, they revealed a rather simple grammar of command to, or comment on, relationships in the group. Scheflen suggested that this was how, often without the awareness of participants, the relationships in a group were defined and controlled. Further, the sequences were themselves organized into larger sequences he called "programs". These programs were participated in by several members and had a cyclic, automatic quality quite familiar to both family therapists and watchers of family therapy.

Other people have also recognized the importance of nonverbal communication, although they have not studied it systematically. Hall (1966) in his book The Silent Language, discussed how spatial changes gave a "tone" to a communication, accented it, and at times even overrode the spoken word. The flow and shift of distance between people as they interacted with each other was part of the communication process. Schutz (1968), in his book Joy

stated that "in all cases the feelings were directly converted into some physical relationship. Moving toward or away from a person was a clear indication of the feelings existing between the two." Hobson (1959), in commenting on group therapy sessions, said, "Changes in the patterns of relationships, choice of seats, bodily movements, and amount and direction of talk were often more revealing than the content of dream, fantasy, and thought."

The study of nonverbal behavior has not been easy. A crucial obstacle to research on nonverbal behavior has been the problem of obtaining permanent records of the behavior, determining an appropriate unit of measurement, and devising analytic methods which will reveal the meaning of nonverbal behavior.

However, despite these methodological problems, the importance of nonverbal behavior has not been disputed. There are several assumptions about the origin and function of nonverbal behavior, each with its advocates. They are as follows, (Ekman and Freisen, 1968):

(1) Nonverbal behavior can be considered a relationship language, sensitive to, and the primary means of, signaling changes in the quality of an ongoing interpersonal relationship.

(2) Nonverbal behavior is the primary means of expressing or communicating emotion, either because of the physiology of the organism or because of the priority of nonverbal to verbal behavior in the formative years of personality development. While the patient may state his feelings verbally, the presence of nonverbal cues which support or belie the verbalization

may sometimes be crucial to the therapist's determination of whether the patient really feels what he says.

(3) Nonverbal behavior has special symbolic value, expressing in body language, basic, perhaps unconscious, attitudes about self or body image.

(4) A nonverbal behavior has a metacommunicative function of providing qualifiers as to how verbal discourse should be interpreted.

(5) Nonverbal behavior is less affected than verbal behavior by attempts to censor communication.

Ekman and Mahl both presented evidence that research on psychotherapy should include measurements on nonverbal behavior and stated that two more questions more relevant to the therapeutic process needed to be answered. First, "might nonverbal behavior reflect any of the changes over time associated with a change in psychological functioning resulting from therapeutic intervention? Also, might nonverbal behavior during interviews be sensitive to the individual differences between patients, even though they share some of the same presenting problems?"

The research for this study will be concerned with the nonverbal level of communication within the family during family play sessions. The nonverbal measures that will be studied are observable physical actions, such as the body movements toward or away from family members, and play and non-play activities in relationship to the other family members. In family play sessions this nonverbal physical dimension deserves a great deal more attention

because the setting is conducive to much physical bodily movements and also the family's primary activity is physical play rather than verbal exchange.

It was the assumption of the experimenter that the measures to be dealt with in this study should reflect the group structure and emotional relations within the family. Riskin (1963) described the family as an ongoing system, one in which certain repetitive and enduring techniques or patterns of interaction were developed over time.

The present study was not a study of "normal" and "clinic" families as such, but rather a study of interaction patterns of families with a child rated by his teacher as low on behaviors indicative of social maturity and achievement motivation. These families had never asked for and were never referred for psychological help.

CHAPTER II

HYPOTHESES

1. Control families and experimental families who have undergone eight weeks of conjoint family play sessions would differ on their interaction patterns.
2. Fathers, mothers, and sons would differ between each other in their interaction patterns.
3. There would be an interaction effect between the experimental condition and individual family members.
4. There would be a significant difference between dyads--father-mother, father-son, mother-father, mother-son, son-father, and son-mother on the dependent variables of approach, withdrawal, inclusion, and exclusion.

CHAPTER III

METHODOLOGY

Subjects

The Ss were nine boys and their eighteen parents. All boys were attending the first or second grade at Holt-Dimondale, Michigan, school district. From ratings by their teachers, these boys were in the "low" adjustment if he was rated in the lowest category on at least two of three scales (self-sufficiency, achievement motivation, and self-control). (See Ferguson, Stollak, and Karson (1969) for greater details of the rating procedure.) The parents of these boys were then contacted by either Dr. Lucy R. Ferguson or Dr. Gary E. Stollak and asked if they would be willing to participate in a study about how families communicated with each other in a play setting. They were offered a stipend of $5.00 per session for their participation in the project. Families who agreed to participate in the project were randomly assigned to either the experimental group or the control group. Boys assigned to the two conditions were to be matched as closely as possible for (a) age, (b) ordinal position, (c) parents' education, and (d) overall socioeconomic status of the family based on education and

father's occupation. The characteristics of the two groups are indicated in Table 1. (The experimental group was found to contain a disproportionate number of youngest children in somewhat larger families and was slightly less maladjusted) than the control group, as judged by the teacher ratings. Ferguson et al. (1969) used a total of 10 families in their study (4 control plus 5 experimental) but due to an incomplete collection of recordings only the data from 4 control and 5 experimental families were used in the present study. The five families in the experimental group were seen in an initial session of family play without a therapist present, eight play sessions with a therapist present, and finally a play session without a therapist. The four families who participated in the "control group" completed an initial play session without a therapist present, then another play session without a therapist after an interval of eight to ten weeks. All of the family play sessions without the therapist present were videotaped and also the initial and final play session with a therapist present were videotaped, with the family's knowledge and permission. Only the videotape recordings of the last play sessions were used in this study.

Instructions to the Therapists Participating in the Family Play Sessions:

> "The goal of the sessions is to facilitate communication of affect between family members, and interventions by the therapists should be

TABLE 1

Demographic Characteristics of Families in This Project

Boys's Age	Ordinal Position	Mid-Parent Education	Father's Occupation
		Experimental Group	
7	1/1	14 years	Accountant
7	5/5	12.5 years	Police Officer
7	3/3	9.5 years	Oldsmobile Assembly Line
7	4/4	12 years	Meat Cutter
6	5/5	12 years	Salesman
		Control Group	
7	1/2	12 years	Restuarant--Chef, Manager
6	1/2	11.5 years	Department Store Stockman
8	2/3	11 years	Service Manager in Car Dealership
6	3/3	11 years	Machine Repairman
7	1/3	11 years	Machine Tool Operator

> geared to this aim. Structuring of the sessions, evaluation of family members' behavior or dynamic interpretations should be avoided. Therapist intervention may include reflection of feelings being expressed overtly or covertly by family members, elicitation of affect if it is not being expressed but is implied by the ongoing interaction, and suggestions to family members that they acknowledge or otherwise respond to the feelings of other family members."

In general, the therapists adhered closely to these instructions in their work with the families. However, in order to promote interaction and affective communication, it sometimes proved necessary and useful to suggest specific activities to the family, comment on role relationships among family members and otherwise intervene somewhat more actively than initially anticipated. Thus their technique became somewhat more similar to the methods described by such family therapists as Bell (1963) and Satir (1964).

Instructions to the Families in the Experimental Play Condition:

> "We are interested in how families communicate with each other when they are in a relaxed situation where they can play and generally have fun with each other. We have asked you to come in for a total of ten sessions, and if it is convenient, we will meet at this same time each week. You are free to use any of the materials in this room in any way you wish, and you may also talk together about any topics you choose. There are no rules, and we hope you will feel free to act as naturally as possible. From time to time I will ask some questions or make some comments about how you seem to be feeling, or ask you to tell me how you think other members of the family are feeling. We would like to help you, thereby, to communicate more effectively with each other. We hope that you will express your feelings as openly as possible. Do you have any questions before we begin?"

Attempts of the family to seek structure were to be parried by leaving choices up to them. The investigator left the

room after giving the instructions. Sessions were to be terminated after 45 minutes.

Instructions to the Families in the Control Play Condition:

> "We are interested in how families communicate with each other when they are in a relaxed situation where they can play and generally have fun with each other. We have asked you to come in for a total of four sessions, and if it is convenient, we will meet at this same time again, in ten weeks. You are free to use any of the materials in this room in any way you wish, and you may also talk together about any topics you choose. There are no rules, and we hope you will feel free to act as naturally as possible. Do you have any questions before we begin?"

Attempts of the family to seek structure were to be parried by leaving choices up to them. The investigator left the room after giving the instructions. Sessions were to be terminated after 45 minutes. (The same procedure was used for the initial and final play sessions for the experimental families.)

The Measure of Change

The rating scale was developed by the experimentor who observed the initial videotaped family play sessions. After having examined the tapes and having noted a series of variables on which the family could be rated, the experimentor and four undergraduate psychology majors (who were not the raters) examined the items which had been selected. With their help, the categories were more rigidly defined and some additional categories were added. Thus, in the end, a group of thirteen categories made up the final version of the Nonverbal Family Play Scale. The family communication

was measured by rating the final play session for each family. Ratings were obtained from videotapes, by undergraduate students[1] who were carefully trained in the use of the rating schema, but who were not informed of the purpose or design of the study. The complete session for each family was analyzed for the following categories: (1) approach, (2) inclusion, (3) exclusion, (4) withdrawal, (5) family play, (6) two-member play, (7) isolated play, (8) observation of ongoing activity, (9) disinterested or ignoring activity, (10) exploring activity, (11) physical contact, (12) initiates new activity, and (13) assists family members. A more detailed description of each category is presented in Appendix A. Time intervals of 20 seconds served as a basic scoring period during which behaviors for each family member were rated. The first four categories and the last three categories could be scored more than once during any 20 second interval. The remaining categories could be scored only once and only if the behavior extended over at least half of the standard time interval.

The raters were trained on videotapes of three families who did not complete the project. Two raters coded each tape and the frequencies of each behavior observed by rater

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[1]Tom Koenig, Paul Richards, Carol Stein, David Stewart, and Terry Taylor served as raters.

A and rater B were averaged, with "rounding" always to the odd number, preventing any systematic overestimating or underestimating of the frequencies of the behavior.

CHAPTER IV

RESULTS

Rater Reliability

To obtain an estimate of the reliabilities for each of the scale variables, Pearson *rs* were computed for the rater pair of PR and DS (Table 2). They rated six of the same videotapes, although not all of these tapes were used in this study. The reliabilities were high. However, there were low reliabilities on some of the items but this seemed to be related to the very low occurrences of these behaviors. Also, the reliability for physical contact could not be computed because of the large number of zeros scored for the variable.

The reliability for the rater pairs who rated the final free play sessions were also computed (Table 3). They were all very high. The experimenter felt that this was partially because the scale used objective categories and therefore was reliable. However, the reliabilities were also high because the variables were measured on different scales, thus making the variances of the scores very large. As a result, this also forced the correlations to be high (Nunnally, p. 126).

TABLE 2

Inter-Rater Reliability for Items of the Nonverbal Family Play Scale for the Rater Pair of Paul Richards and David Stewart

Variable	Family Member	r
Approach	father	.79
	mother	.88
	son	.91
Withdraw	father	.95
	mother	.95
	son	.75
Inclusion	father	.95
	mother	.88
	son	.78
Exclusion	father	-.32
	mother	.86
	son	.63
Family Play	father	.99
	mother	.99
	son	.99
Two-Member Play	father-m	.48
	mother-s	.68
	son-f	.91
Isolated Play	father	.99
	mother	.93
	son	.96
Observation	father	.94
	mother	.91
	son	-.19
Exploring	father	.64
	mother	.85
	son	.69
Physical Contact	father	----
	mother	----
	son	----
Initiations	father	.00
	mother	.88
	son	.83
Assists	father	.67
	mother	.89
	son	.80
Ignoring	father	.88
	mother	.79
	son	.00

TABLE 3

Inter-Rater Reliability for the
Rater Pairs of the
Final Free Play Sessions

Family	Group	Rater-Pair	r
1	E	PR and TK	.88
2	E	PR and TT	.97
3	E	CS and TK	.89
4	E	CS and TK	.94
5	E	TK and CS	.96
6	C	CS and TK	.98
7	C	PR and DS	.99
8	C	PR and DS	.98
9	C	TK and CS	.97

Analysis of the Data

A multivariate analysis of variance was used to test the hypotheses of this study. Since there were unequal cell frequencies, the least squared method for the estimate of sum of squares was adopted (Bock and Haggard (1968)). Although univariate tests, such as F-test, could be performed on each variable separately, a single probability statement applicable to all variables jointly could not in general be obtained from the separate Fs. Because the 12 dependent variables used in this study were obtained from the same subjects, the variables would be correlated in some arbitrary and unknown manner. Therefore, the separate F-tests could not be calculated. The multivariate test, on the other hand, is based on sample statistics which take into account the correlations between variables. The multivariate test has known exact sampling distributions from which the required probabilities can be obtained (Bock and Haggard (1968)).

Hypothesis I

Hypothesis one predicted that there would be a significant difference between the experimental and control group on the dependent variables. An Analysis of Variance was computed for the dependent variable of family play. The results of the analysis are presented in Table 5. The mean for the experimental group was 28.80 and 2.12 for the control group. The results showed that the experimental families displayed

significantly more family play than the control families (p .04).

A multivariate analysis was performed on the remaining categories of the Nonverbal Family Play Scale. Overall, a significant difference between the experimental group and the control group was found at the .03 level (Table 4). The discriminant function coefficients and weighted cell means (Bock and Haggard, 1968) for the experimental and control group are listed in Table 6. The discriminant function coefficients are the linear combination of variables which best discriminate between groups of subjects. They are used primarily as an aid in characterizing differences between groups of subjects (Bock and Haggard, 1968). The standardized coefficients of the discriminant functions indicated that exploring, initiations, observation, approach, two-member play, and physical contact contributed most to the observed group differences. The cell means for these variables indicated that the control group displayed more exploring, initiations, observation, approaches, and plysical contact, while the experimental group displayed more two-member play.

To get a better understanding of the variable two-member play, the data were computed into proportional scores for the three dyads, mother-father, mother-son, and father-son (Table 7). Examination of the proportions of two-member play among the dyads for the control families

TABLE 4

Multivariate Analysis of the Variance for the Nonverbal Family Play Scale

Source of Variation	F	df	p
Treatment	3.2736	12 and 10	.03
Family Member	2.6160	24 and 20	.02
Interaction	2.1347	24 and 20	.04

TABLE 5

Analysis of Variance for Family Play Scores of experimental and Control Groups

Source of Variation	SS	df	MS	F
Between	1214.20	1	1214.20	6.24 (p .04)
Within	1362.19	7	194.60	
Total	2.576.39	8		

TABLE 6

Mean Scores for Experimental Group and Control Group and Multivariate Analysis of Variance

Variable	Weighted Mean Scores		Discriminant Function Coefficient	
	Experimental	Control	Raw	Standardized
Exploring	4.30	5.92	.5344	1.9715
Initiations	1.63	3.17	-.7431	-1.5298
Observation	19.83	35.74	-.0540	-1.0937
Approach	3.17	5.87	-.2540	- .9625
Two-Member Play	21.73	14.17	.0527	.6916
Physical Contact	.20	.87	-.8099	- .6220
Isolated Play	26.70	41.17	-.0183	- .5618
Withdrawal	2.67	5.92	.1528	.5559
Assists	1.20	4.12	-.1989	- .5463
Exclusion	.33	1.58	-.2419	- .2706
Inclusion	2.40	3.54	-.0909	- .2376
Ignoring	1.60	1.17	-.0152	- .0370

TABLE 7

Proportion Scores of Two-Member Play
for Family Dyads
of Control and Experimental Groups

	Family				
Dyad	1	2	3	4	5
	Experimental Group				
MF	.67	.01	.21	.15	.50
MS	.28	.29	0.00	.68	.40
FS	.05	.70	.79	.17	.10
(total)	(51)	(45)	(7)	(20.5)	(21)
	Control Group				
MF	0.00	.22	0.00	0.00	
MS	.07	0.00	.97	.13	
FS	.93	.88	.03	.87	
(total)	(15)	(13.5)	(22.5)	(34)	

revealed that there was one dyad in each family which contained an extremely high proportion of two-member play (.87 or above). This was found in the father-son dyad for three of the families and in the mother-son dyad for the remaining family. Another interesting finding was that in every control family there was one dyad in which no two-member play occurred. In three of the families there was no two-member play for the mother-father dyad and one family where there was no two-member play for the mother-son dyad.

The proportional distribution of two-member play among the dyads for the experimental families was not as skewed. The largest proportion score for the experimental families ranged from .50 to .79. In comparison, the control families largest score ranged from .87 to .97. In addition, the experimental families had only two families with little or no two-member play for a dyad.

Hypothesis II

Hypothesis two predicted that there would be a significant difference between the family members, irrespective of experimental condition for fathers, mothers, and sons. A multivariate analysis found a significant difference at the .02 level (Table 4). The discriminant function coefficients of the discriminant function indicated that withdrawal, exploring, observation, inclusion, initiations, and approach contributed the most to the family member

differences, while assists and ignoring contributed the least to the differences. The discriminant function coefficients and cell means for the mothers, fathers, and sons are listed in Table 8 of this section. In addition, the mean discriminant scores were computed to determine how much each family member differed from the other family members. The difference was found to be due to the father-son and mother-son differences. There was little differentiation between the mothers and fathers on their mean discrimination score or means for the dependent variables. The cell means indicated that the sons displayed more withdrawals, exploring, inclusions, initiations, and approaches, while the parents displayed more observation and physical contact.

Hypothesis III

Hypothesis three predicted that there would be a significant interaction effect between the experimental condition and family members. A multivariate analysis found a significant difference at the .04 level (Table 4). The discriminant function coefficients and weighted cell means for the mothers, fathers, and sons of the experimental group and control group are listed in Table 9 of this section. The standardized coefficients of the discriminant function indicated that withdrawal, inclusion, observation, exploring, approach, initiations, and exclusion contributed the most to the interaction effect. The following interaction

TABLE 8

Mean Scores for Family Members
and Multivariate Analysis of Variance

Variable	Mean Scores			Standardized Discriminant Coefficients	
	Father	Mother	Son	Raw	Standardized
Withdrawal	1.67	1.83	8.83	-.5657	-2.0578
Exploring	3.67	2.61	8.78	-.5147	-1.8987
Observation	38.16	34.56	8.00	.0876	1.7731
Inclusion	1.72	1.83	5.17	.5334	1.3943
Initiations	1.61	1.28	4.06	.6674	1.3741
Approach	2.39	2.61	8.11	.3534	1.3394
Physical Contact	.28	1.11	.11	.9051	.6952
Exclusion	.11	.67	1.89	-.5870	- .6567
Two-Member Play	15.72	19.95	19.44	-.0362	- .4760
Isolated Play	24.50	25.39	32.50	-.0033	- .1007
Assists	3.44	2.61	1.44	-.0262	- .0719
Ignoring	2.39	1.00	.84	-.0188	- .0460
Mean Discriminant Score	2.45	3.12	-2.36		

TABLE 9

Mean Scores for Family Members
of Control and Experimental Group
and Multivariate Analysis of Variance

Variable	Group	Weighted Mean Score			Discriminant Function Coefficient	
		Father	Mother	Son	Raw	Standardized
Withdrawal	E	1.00	1.70	5.30		
	C	2.50	2.00	13.25	-.6627	-2.4106
Inclusion	E	1.50	1.20	4.50		
	C	2.00	2.62	6.00	.7999	2.0624
Observation	E	27.50	19.60	12.40		
	C	51.48	53.25	2.50	.0745	1.5084
Exploring	E	3.20	2.60	7.10		
	C	4.25	2.62	10.88	-.3871	-1.4280
Approach	E	1.90	1.50	6.10		
	C	3.00	4.00	10.62	.3538	1.3407
Initiations	E	1.50	1.10	2.30		
	C	1.75	1.50	6.25	.5804	1.1947
Exclusion	E	.10	.40	.50		
	C	.12	1.00	3.62	-.9106	-1.0186
Two-Member Play	E	19.40	27.20	18.60		
	C	11.12	10.88	20.50	-.0460	- .6047
PhysicalContact	E	.00	.60	.00		
	C	.62	1.75	.25	.6355	.4881
Assists	E	.90	1.50	1.20		
	C	6.62	4.00	1.75	.0755	.2073
Isolated Play	E	24.20	21.90	34.00		
	C	24.88	29.75	68.88	-.0024	- .0726
Ignoring	E	2.80	.80	1.20		
	C	1.88	1.25	.38	.0160	.0390

effects were found for the significant variables:

WITHDRAWAL:

The experimental and control mothers were very similar in their number of withdrawals. The experimental fathers withdrew slightly more than the control fathers. The largest difference on this variable was found between the sons. The control sons withdrew over twice as many times as the experimental sons.

INCLUSION:

In the experimental families the mothers were included the least, the fathers were included slightly more than the mothers, and the sons were included the most. In the control families the fathers were included the least, while the mothers were included the most. In comparing the family roles for the experimental and control families, the control family members displayed more inclusion, with the fathers the most similar on this variable.

OBSERVATION:

For the experimental group the father observed the most, then mother, and the son observed the least. In contrast, for the control group the mother did the most observing, then the father, and again the son observed the least. In comparing the control and experimental family members, the control mothers and fathers observed much more than the experimental mothers and fathers, but for the sons the reverse was true. The control sons observed less than the experimental sons.

EXPLORING:

The experimental and control mothers were similar on this variable. The control fathers explored more than the experimental fathers. The largest difference for this variable was found between the sons. The control sons explored more than the experimental sons.

APPROACH:

In both the experimental and control families the sons did the most approaching, with the control sons approaching more than the experimental sons. The experimental fathers approached somewhat more than the experimental mothers. Within the control families, the mothers approached somewhat more than the fathers. In comparing the family roles for the experimental and control families, the fathers were the most similar on this variable and the sons were the most dissimilar.

INITIATIONS:

The mothers and fathers for the experimental and control families were very similar on this variable. However, the control sons made almost three times as many initiations as the experimental sons.

EXCLUSION:

The experimental family members were very similar on the exclusion variable. In contrast, there was wide variation on this variable for the members of the control families. The control fathers received very few exclusions

while the control sons received the most exclusions. In comparing the family members for the two groups on this variable, the fathers were very similar for both groups, the control mothers received slightly more exclusions than the experimental mothers, and the control sons received a great deal more exclusions than the expimental sons.

To better understand the approach, withdrawal, inclusion, and exclusion behaviors, a percentage score was computed for each family member of the experimental and control families for the combined variables of approach-withdrawal, and inclusion-exclusion (Table 10). Approaches and withdrawals were considered as part of the larger variable--"movement in relationship with other family members". In other words, a family member could move toward (approach) or move away (withdraw) from another family member. Therefore, a family member's percentage score for approaches was the percentage of total movements (approaches and withdrawals) which were approaches. Inclusions and exclusions were considered as part of the larger variable--"responsiveness of family members". In other words, a family member could be included by another family member or excluded.

In the control families the father and son had the same relative scores for approaches and withdrawals, whereas the mother made more approaches and fewer withdrawals

TABLE 10

Percentage Scores for Family Members of the Experimental and Control Families Approach-Withdrawal and Inclusion-Exclusion

	Family Member		
Variable	father	mother	son
	Experimental Group		
Approach	.66	.47	.54
Withdrawal	.34	.53	.46
Inclusion	.94	.75	.90
Exclusion	.06	.25	.10
	Control Group		
Approach	.55	.67	.54
Withdrawal	.45	.33	.46
Inclusion	.94	.72	.62
Exclusion	.06	.28	.38

than father and son. In the experimental families the father made the most approaches and fewest withdrawals. The mother made the fewest approaches and the most withdrawals. The son was in between the mother and father for approaches and withdrawals. In contrasting the experimental and control families, the sons had the same relative scores. The greatest difference was found between the mothers. The experimental mothers made fewer approaches and more withdrawals than the control mothers. In contrast, the experimental fathers made more approaches and fewer withdrawals than the control fathers, but the difference was not as large as found between the mothers for the two groups. The fathers and mothers in the experimental and control families had the same relative scores for the inclusion-exclusion variable. The most striking finding for this variable was that the experimental sons were included a much larger percentage of time than the control sons and excluded less than the control sons.

Hypothesis IV

Hypothesis four predicted there would be a significant difference between the dyads--father-mother, father-son, mother-father, mother-son, son-father, and son-mother on the dependent variables of approach, withdrawal, inclusion, and exclusion. A multivariate analysis found an F-ratio of 1.04 for the degrees of freedom of 20 and 150, which was nonsignificant (p .42).

CHAPTER V

DISCUSSION

Hypothesis I

In this study it was found that in a free play session the family interaction patterns of a group of families who had undergone 8 weeks of conjoint family play sessions were different from that of a group of control families who had not. Focusing on the differences between groups (control families and experimental families) without reference to the individuals composing the groups, it was found that the control families displayed more exploring, initiations, observation, approaches, and physcial contact, while the experimental group displayed more family play, and two-member play.

The experimental families exhibited more family play than the control families who exhibited very little family play. This finding indicated that there was more social interaction among the experimental families and a greater sense of involvement. It has been noted in the introduction that in pathological families people do not seem to talk to each other as freely, frequently, clearly, or explicitly as they do in normal families, and

as this study with young children indicates, without aid, they do not play together very much either.

The finding that the control group displayed more exploring and initiations may be an artifact of the experimental situation rather than interpersonal differences between the groups. Only having been in the play room for one hour, ten weeks previously, the control families would be expected to show more exploring and initiations because they were not as familiar with the setting and toys. As a result, the control families would be more curious to explore the room and try out the various toys. The experimental families had been in the play room nine times previous to this session and therefore were more familiar with the setting and toys.

Another explanation for these results may be that the control families used the exploring and initiations asa defensive maneuver in which to avoid a continued social interaction with the other family members.

The control families displayed significantly more observation than the experimental families. A plausible explanation could be that this was only the second time the control families had been in the free play situation and therefore were still uneasy and reluctant to participate in play activities. The parents found it more comfortable to observe the child playing. Again, another explanation could be that observation was a defensive maneuver in

which to avoid social interaction with the other family members and in turn avoid confronting their conflicts with one another.

Ferguson, Stollak, and Karson (1969), in an unpublished report of the larger pilot project of which this study was a part, found that the mean proportion score for the control group for this same free play session was 2.06 for "negative" affect and .27 for "positive" affect. Therefore, mostly negative affect was displayed by the control families. This lends support to the idea that initiations, exploring, and observation behavior were more than just an artifact of the experimental situation and more likely a defensive maneuver to avoid the negative affect found within the family.

The experimental families displayed less observation than the control families and this finding may be viewed as an indication of improvement. It might be expected that after nine previous play periods (eight with a therapist present) the experimental families would become bored with the play activities and therefore they would spend more time in observation of each other. In contrast, the experimental families showed less observation than the control families which indicated more time spent interacting with the family. This was also supported by the finding that the experimental families exhibited more family play and two-member play.

The control families displayed significantly more approaches than the experimental families. This may be a result of the family not continuing in family play or in much two-member play. In other words, they did not have much continued social interaction. These briefer interactions may have resulted because of negative feelings within the control family. Ferguson et al. (1969) found a large amount of negative affect in the control families. Schulman, Schoemaker, and Moelis (1962) found that conduct-problem group parents were very hostile and rejecting. Therefore, it could be speculated that when a family member approached another family member there was usually some negative feelings present which prevented them from getting into a continued interaction. However, why do the family members continue to approach? They may be attempting to put up a "good front" in the forced situation of the play session and as a result might continue to approach the other family members rather than become too remote or emotionally detached. They may also be approaching for attention or recognition. This may be particularly the case for the child. There may also be a control aspect to the approaches, particularly for the parents.

The experimental families showed significantly more two-member play than the control families. This reflected more involvement among the family members for the experimental group. Comparison of the two group's proportional scores

for the dyads of two-member play indicated that for the experimental families two-member play became more equally distributed among the dyads, with fewer omissions of one dyad. The most noticeable increase of two-member play occurred between the mother and father. It appeared that the deficits in some of the communication channels among the control families had been improved in the experimental families. However, even in the experimental families there was still one dyad which was extremely low. Maybe with additional play sessions the experimental families would develop even more equal participation among the dyads.

The variable of physical contact must be interpreted with caution. Due to the large number of zero's for the variable the reliability could not be computed. In addition, due to the large number of dependent variables used in this study, the original variables of positive physical contact and negative physical contact were combined into one variable--physical contact. The results showed that the control families exhibited more physical contact. Further examination of the data showed that the control families displayed more positive and more negative physical contact. This finding was unexpected. One would expect the experimental families to display more positive physical contact and the control families to display more negative physical contact. A speculative explanation for these unexpected results was that the control families may

have consciously displayed more positive physical contact in an attempt to put up a "good front". However, they were unable to control their negative behaviors and therefore also displayed more negative behaviors. As a result of their inability to control the negative physical contact, they compensated by purposely putting up a "good front" with positive physical contact. Due to the small number of families in this study and the fact that the reliability was unknown for this variable, interpretation of these results must be very tentative.

It is interesting to compare the results of the group differences in this study with the work of Ferguson et al. (1969). They reported that "negative" behaviors (dependency, disruptive attention seeking, provoking, resistance, criticism, exclusion, evasion) increased in the control group between the initial and final free play sessions and significantly decreased in the experimental group. Also, there was no statistically significant change toward more positive affective behavior in the free play interaction of the experimental families.

Also, in another study using the same Ss, Conway (1970) used a slightly less direct measure of the impact of family play sessions. She studied family interaction in response to structured tasks which preceeded the initial and followed the final play sessions. She found that experimental families significantly decreased their amount of negative interaction

and significantly increased their ratio of positive to negative interactions. Control families showed no change at all in their family interaction.

In other words, the removal of negative behaviors which occurred after eight conjoint play sessions enabled the family to function better as a unit. There was more mutual involvement as evidenced by more two-member play and family play. The experimental family members could related to one another with greater ease, thus reflecting freer family climate. Therefore, with a marked decrease in communication of negative affect the experimental families showed more appropriate and effective patterns of interaction.

Hypothesis II

A multivariate analysis found significant differences among the family members--father, mother, and son. These differences were found to be due to father-son and mother-son differences. In analyzing these role differences the experimental and control groups were combined. Therefore, it was hard to know if the differences between parents and sons would have been greater or lesser without combining the two groups. No significant differences were found between fathers and mothers. The mother-father difference was expected on the basis of work with schizophrenic families, where patterns of parental dominance or parental role-reveral were often found. It is quite possible that the families in this research project were too close

to "normal" families to exhibit this pattern. Another explanation for the nonsignificant differences between mother and father is simply that there were too few families to yield significant results. Perhaps with a larger sample of families, the hypothesized difference would be found. Another possibility is that the control parents may have been downplaying their differences and presented a united front. On the other hand, the downplaying of differences would be expected to decrease in experimental families, but this decrease might be counterbalanced by parents actually feeling less discrepant toward their children as the play sessions continued. Similar results were found by Conway (1970). She found no significant differences between parents during an initial structured task completion session nor during a final similar session for either the experimental or the control group.

The son displayed more exploring and initiations than his parents. They may partly be a result of the setting. A child is naturally more interested in playing with the toys and therefore would be expected to do more exploring and make more initiations. Parents displayed more observation. This may be a result of the "generation gap". Adults feel more awkward in the child's medium of play and therefore prefer just watching. The son also displayed more approaching. The child may approach for attention. We notice and comment on a child who is the center of

attention. It is also clear that so long as a child, for example, remains the center of attention he succeeds in maintaining control over the content and flow of interaction in the whole group, preventing others from talking freely to each other and focussing discussion on his behavior. This may be the best means for a child in that situation to feel that he has some control over his parents. The son also displayed more inclusions and withdrawals. The son was included more because he made more approaches. The son would also be expected to display more withdrawals from the family members because he made more approaches and also because he was doing more exploring and initiations which would require withdrawing.

Hypothesis III

Hypothesis three predicted that there would be a significant interaction effect between the experimental condition and family members. In other words, the experience of being in the control group or experimental group would affect individual family members differently.

The differences found between the fathers of the control group and the fathers of the experimental group were very similar to those found for the group differences in hypothesis one. The control fathers displayed more observation, withdrawals, inclusions, exploring, approaches, initiations, and exclusions. However, in looking at the proportion scores of approach-withdrawals, the experimental

fathers made a greater proportion of approaches than withdrawals in comparison to the control fathers. This suggests a greater involvement in the family of the experimental fathers. They take a more active and controlling role in the family, whereas the control fathers are more detached.

Comparing the mothers for the two groups showed that they were very similar on the variables of withdrawal, exploring, and initiations. Larger differences were found for observation, approaches, inclusions, and exclusions. The differences for the inclusion and exclusion variables can be misleading when only looking at total frequencies. The control mothers were included and excluded more because they made more approaches. Comparing the proportion scores for inclusion-exclusion revealed that the control mothers and experimental mothers were included and excluded the same proportion by the family. Therefore, the greatest differences found between the mothers was that the control mothers observed and approached more than the experimental mothers. The approach variable may be a reflection of dominance in the family. The mothers in the control group made more approaches which may be interpreted as a control strategy in itself in the sense that it prevents other members from attracting attention to themselves. Thus, while one person is the center of attention others cannot use other power strategies. The mothers in the control group attempted to control by approaching but preferred to stay somewhat

remote from the family as evidenced by their observation behavior and very little play activity with other family members. The detachment may be a means of avoiding conflict or revealing any negative feelings he may have towards the other family members.

The experimental mothers exhibited less observation and approaches which might be interpreted as improvement. Their need for attention and control diminished and they spent less time observing because they were able to interact more with the other family members.

The largest interaction effect was found between the sons. This suggested that the identified patient's behavior changed the most with the play sessions. It also appeared that it was the sons in the two groups who were primarily responsible for the overall differences in the two groups. The experimental sons displayed more observing and less approaches, withdrawals, inclusions, exclusions, exploring, and initiations. Some of these variables are deceiving and therefore the proportion scores must be examined. The control sons approached and withdrew more times which again suggests an attention-control strategy, whereas the experimental sons made fewer attempts to control their parents' attention. The control sons might be responding to minimal involvement with their parents by attempting to break in communication patterns by approaching. However, the proportion of approaches-withdrawals for the experimental and

control sons was the same. In looking at the total frequencies of inclusion and exclusion the control sons displayed more than the experimental sons. However, this was a result of the fact that they made more total number of approaches. The proportion scores indicated a very interesting and notable difference between the sons. The experimental sons were included more and excluded less proportionally than the control sons. This suggested that the experimental sons became more accepted into the parental interaction, which suggested more group cohesiveness. The control sons were excluded or left out a larger proportion which was an indication that the son was the "isolate" in the family triad. This might be why the control sons developed more subtle strategies for control and attention and therefore exhibited alot of initiating, exploring, and approaching. With these behaviors he could at least get his parents to observe him. This may be all he wanted however, because if they were to interact it might only result in conflict with the son as the isolated scapegoat. The exploring and initiations of the control sons might also, partially, be an artifact of the situation. The control sons were not as familiar with the setting and therefore were more curious to explore the room and try out the various toys.

The experimental sons exhibited more observation. This might be an indirect measure that the experimental

sons did not feel the need for attention and control as much as the control sons. As a result, the experimental sons did not have to spend so much time approaching, exploring, and initiating. They now had some time to sit and observe the parents. It might also be that the experimental son could observe the parents now because there was less negative feelings among the family members and therefore rather than avoiding the parents interactions (exploring and approaching), the son felt comfortable in merely observing.

Hypothesis IV

Hypothesis four predicted that there would be a significant difference between the dyads--father-mother, father-son, mother-father, mother-son, son-father, and son-mother on the dependent variables of approach, withdrawal, inclusion, and exclusion. These measures were intended to reflect the amount and direction of intrafamilial communication or at a more inferential level, a measure of the strength of communication channels between family members.

Lennard, Beaulier, and Embrey (1965) studied the verbal content of familial communication. They found that in schizophrenic families the son addressed significantly less communication to the father and received less from him. The mother directed more communication toward the son and received more from him. Mother and father

communicated substantially less with each other.

Due to the complexity of analysis, the unequal cell frequencies, and the small number of families in the two groups, the control and experimental families in this study had to be analyzed together. A multivariate analysis was computed and was found to be statistically nonsignificant.

It was felt that analyzing the two groups together blurred the differences. Deficits in communication channels should be most apparent in the control group. However, due to the small number of families in the control group (n=4) and the large number of variables it would be impossible to analyze the data with any reliability. Therefore the experimental families were included in the analysis. However, if the play sessions were worthwhile (which the other results seem to indicate) there is a strong possibility that these communication channel deficits would be alleviated somewhat by the play sessions. Therefore if any deficits were in the control families they would be counterbalanced by the experimental families.

Another possibility for the nonconfirmation of the hypothesis is that another measurement should be included. Rather than just measuring the frequency of approach to the two other family members, an additional measure of the number of times a family member approached a single family or the dyad of the two remaining family members should be used. For example, a measure of the number of times the

son approached the mother and father separately should be taken with an additional measure of the number of times he approached them while they were together. In this study, a son might not have approached his father much, but would approach him when the father and mother were together. Therefore, with the measures used in this study, it would appear that he was approaching his father much more than he was and the communication deficit would not be noticed in the analysis.

Although the hypothesis was not confirmed, the experimenter feels these variables are worthwhile studying and that they could reveal some interesting insights into communication channels of families, particularly in a play therapy situation where there is less verbal behavior than in conjoint family therapy.

Main Implications for Future Research

The methodological problems inherent in the study make interpretations difficult. Due to the unequal cell frequencies and the complex analysis, it was not possible to analyze the initial free play session. Only the final free play scores were analyzed. Therefore, regardless of findings, whether similarities or differences were found between the two groups, one cannot provide a definite answer as to which group changed. One has to assume that since nothing, except temporal factors (Campbell and Stanely, 1966), was involved with the control group and that the two groups were homogeneous in the beginning of the study, that it was the

experimental group that changed and this change was a result of the family play sessions.

A larger sample and equal number of families in the two groups would enable the experimenter to analyze the before and after data and would therefore maximize the precision of the findings. It would also be a better indicator of the outcome of the play sessions. Another improvement would be the inclusion of a control group of families who played together for ten sessions without a therapist. This would enable the experimenter to see if the presence or activity of the therapist really made any difference. Also, one could find out with more certainty if the results for the control group were due to interpersonal differences rather than an artifact of the experimental situation.

The goal of this study was primarily methodological: to develop a rating scale and evaluate whole family interaction during free play. The study focused primarily on the formal aspects of communication rather than on the specific content of the interaction. The experimenter concluded from the findings that the categories of the rating scale were reliable and valid; that is, the categories had relatively high inter-rater reliability and the data derived from usuage yielded statistically significant differences among the experimental and control families.

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APPENDIX A

NONVERBAL FAMILY PLAY SCALE

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NONVERBAL FAMILY PLAY SCALE

Behavior Category	Definition and examples
Approach	S makes a physical movement toward a family member(s). Ex: joins a game or activity, etc.
Included Excluded	After an approach is made, the S is either included and participates in an interaction --or is excluded and the attempted interaction is rejected or ignored.
Withdraw	"moving away"--physically leaves a family member(s).
Family Play	M, F, S, are all involved in a play activity.
Two-Member Play	Two family members are involved in a play activity.
Isolated Play	Family member playing by oneself.
Observation of Ongoing Activity	Family member is watching the ongoing activity of the other family members and is interested in what's going on, but is not contributing.
Ignores or Disinterested in Ongoing Activity	S does not look at activity of other family member(s). Ex: sitting and looking at the wall while the other family members are actively playing. Fleeting glances.

Exploring Activity	S is busy looking at toys and games in the room but doesn't get actively involved with anything in particular.
Physical Contact Positive	An expression of warmth or affection. Ex. hugging, sitting on lap, putting hand on another's shoulder, etc.
Physical Contact Negative	An expression of hostility or aggression. Ex. hitting, pushing, slapping, etc.
Initiates New Activity	S begins a new play activity, without prompting.
Assists Family Member(s)	S helps family member(s) but not in a play activity. Ex. helps put away toys, etc.
Symbols	Participants: F=father, M=mother, S=son, Fam=whole family, T=therapist. =approach, =withdraw, =included, =excluded.

Interval=20 seconds