

STRUCTURAL FAMILY THERAPY OF A FAMILY WITH A HYPERACTIVE CHILD:
A SINGLE-SUBJECT INVESTIGATION AND DEMONSTRATION
OF A DOCTORAL STUDENT AND CHAIRPERSON
CLINICAL-RESEARCH TEAM

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This paper describes one single subject social work clinical dissertation and the collaborative process used to execute it. The dissertation examined the use of structural family therapy. The paper also discusses the formation of a clinical-research team of doctoral student and chairperson. The team worked to resolve particular clinical and research problems found in such dissertations.

The dissertation was based on the formal theory that a family is a self regulated, open, and homeostatic system. If a symptom such as hyperactivity develops in a family, that symptom can serve several functions. It can be used to maintain the family's homeostasis and to protect family members from having to deal with more central problems such as marital difficulties or the expression of anger. The thesis of the dissertation was that the symptom would only change as a result of a change in the degree to which the family was child focussed.

Structural family therapy specifies that the symptom of dysfunctional behavior rests in the family rules (Minuchin, 1970, 1974; Aponte and Van Deusen, 1981). In such systems the family rules often include the bridging of intergenerational barriers and the crossing of generational lines to create triangles. The major relationship energy in such families is spent on parent child coalitions, rather than in maintaining strong marital ties. This results in the creation of child focused family. The structural family therapists seeks to alter the family's structure so that it is less child focussed.

A child focussed family is one in which the dysfunctional child through its disorder performs important functions for various family members and the family as a whole. The hallmarks of the child-focussed family are (Barringan, 1976; Brant, 1980; Ritterman, 1979):

1. A primary code or rule interaction is to avoid conflict between the family members.
2. The function of child-rearing is the most important function in the family.
3. There is excessive concern for the dysfunctional child.
4. The dysfunctional child enables the spouses to avoid conflicts and unresolved issues in the spouse subsystem.
5. The boundaries between at least one parent and the dysfunctional child are characterized by enmeshment (engaged in frequent interaction).
6. The boundaries between at least one parent and dysfunctional child are characterized by harsh

criticism on the part of the parent and the provocation of criticism on the part of the child. This is a form of disengagement (relative little interaction).

7. If siblings are present in the family; their relationship with dysfunctional child can take one or two forms: (a) disengagement characterized by competition or hostility, or (b) enmeshment characterized by alliance and defense of the dysfunctional child.

The theory lead to the following research question: would changes in a family's structure as a result of the application of structural family therapy produce a lessening in the incidence of hyperactive behavior?

The two research hypotheses tested were:

1. The use of structural family therapy to treat a family with a hyperactive child will produce a change in the degree to which the family structure is child focussed.
2. The change in the family's structure to one which is less child focused will indirectly produce a change in the level of hyperactivity in the identified patient.

The treatment therefore did not focus directly on the hyperactive behavior, but on the family structure. These research hypotheses were further operationalized through a series of treatment hypotheses, and treatment strategies. The research-practitioner not only evaluated the research hypotheses through the use of a combination of standardized and student developed instruments, but also evaluated the treatment hypotheses through the clinical material. It was the need to develop and to evaluate the treatment hypotheses which lead to the formation of a doctoral student-chairperson team.

Treatment and Research Design

A single case study research design was used. The specific design was the A_1-B-A_2 type as it permitted the analysis of the effects of the introduction and subsequent removal of the proposed treatment package. This design is a form of an interrupted time series design as treatment effects were removed (Cook & Campbell, 1979; Hersen & Barlow, 1976; Kazdin, 1982; Nelsen, 1981; Reid & Smith, 1981). This design facilitated the answering of the research hypotheses that structural family therapy does modify the family structure and indirectly alters the level of hyperactivity in the child.

The treatment occurred with a white middle class nuclear

family. The parents, both college educated, had been married for over twenty years. The husband was an engineering consultant who traveled often, while the wife was a homemaker. The identified patient was an eight year old male who despite a full range intelligence quotient of 147 was having academic and behavioral problems in the third grade. The family was referred by the school. The son had no known physical or neurological problems. He had a 20 year old sister. She was a freshman in college and was absent from most family therapy sessions. The family had been physically mobile and the father's company moved them at the end of the study. The family had no previous treatment experience. They were seen by the researcher for a total of nine treatment sessions. They had five evaluation-baseline interviews before treatment, and three baseline or follow up sessions following treatment.

The treatment research proceeded as follows:

- I. During the baseline (A₁) and the return to baseline (A₂) phases:

The family was seen in 30 minute sessions in which they completed a series of instruments, returned the completed Daily Behavioral Checklist and completed two research tasks. The tasks consisted of their discussing among themselves one conflict-resolution task and one decision-making task. The data derived from the standardized instruments was used to measure the level of hyperactivity. Tape recordings of the two tasks were first used to develop treatment hypotheses. These conversations were later transcribed and used to test the research hypotheses. These conversations were later transcribed and used to test the research hypothesis about the family's structure.

- II. During the treatment phase (B):

The family continued to return the Daily Behavioral Checklist and to discuss the two tasks during 30 minute session. Immediately after this portion of the contact they were seen in a treatment session with the research-practitioner. The treatment sessions lasted 90 minutes.

The family's activity with the conflict-resolution and the decision-making tasks were used to evaluate the family's structure. The conflict-resolution task used Strodbeck's revealed difference technique (1951). The family was asked to discuss a hypothetical family issue in which they were to agree on which of two opposing solutions was the best one to the typical family problem. The issues they were discussing were developed from those items on the Family Environment Scale to which the parents gave opposite answers. The decision-making tasks used those developed by Minuchin, Montalvo, Guerney, Rossman, & Schumen (1976), Minuchin, Rossman, and Barker

(1978), Haley (1964, 1967), and Stanton et al (1980) to examine structural changes in families. The authors developed additional decision-making tasks following the outlines these authors provided. This was done so that there were the same number of both tasks. The tasks were then randomly assigned to the particular family session.

The research instruments used in this particular phase of the research were as follows:

- I. To confirm hyperactivity as a problem:
 1. Child Behavior Checklist (Achenback & Edelbrock, 1983) A 1
 2. Revised Conners Parent Symptom Questionnaire (Goyette, Conners, & Ulrich, 1979) A 1 and A 2
 3. Werry-Weiss-Peters Activity Scale (Sprague, Barnes, & Werry, 1970) A 1 and A 2
 4. Conners Teacher Rating Scale (Werry & Sprague, 1974) A 1 and A 2
 5. Home Situation Questionnaire (Barkely, 1981) A 1 and A 2
 6. Conners Abbreviated Parent-Teacher Questionnaire (Hyperkinesis Index) Conners, 1973) A 1, B, & A 2
 7. Daily Behavior Checklist - developed by the authors A 1, B, & A 2 - completed by the mother daily. Included items about the child and was used to record important family events.

- II. To evaluate the family and to create tasks used prior to each family session:
 1. Family Environment Scale (Moss and Moss, 1981) A 1

Tape recordings of the family's activities on the two tasks and the recordings of treatment interviews were used by the doctoral student and chairperson team to develop specific treatment hypotheses. These treatment hypotheses were used to plan and to evaluate the treatment approaches used in each session. The transcripts of the two task activities were later used with the lag sequential analysis procedure (Gottman, 1979a, 1979b) to evaluate the research hypotheses. As an illustration of the development of a treatment hypotheses, the second session will be discussed.

The review of the baseline data and the tape recordings of the two task activities during the baseline and first treatment session confirmed the earlier treatment and research hypothesis. The child's verbal remarks and physical acts resulted in the parents focusing on him. Rarely did they speak directly to each other. The son often suggested a resolution to the two tasks, to which the parent would eventually agree. During the first treatment interview attempts on the part of the social worker to engage the parents in short conversations by either rearranging

the seating pattern, or by directly speaking to them did not work. Even the action of having the son wait outside the interviewing room for 15 minutes failed as he either continued to check on the session or banged on the door.

In reviewing the tapes, the clinical research team speculated that the child's disruptive behavior might be reduced if he was allowed to comment on the parent's conversation, at the same time the structural requirement was that the parents interact without the son. In the earlier session the son had told the social worker that he liked to draw. The treatment strategy for the second session was then based on the treatment hypotheses that he acted to comment on the session. He was then given drawing materials and asked to draw what he saw or heard was occurring in the room, but that he must not disrupt or speak with his parents. This kept him inside the room, but blocked his intervention into the conversations. It also was a beginning on restoring the generational barriers needed in this family.

In the second treatment session the son was able to refrain from interfering with his parents for as long as 15 minutes. The parents were asked to continue the practice at home and the son was asked to bring his pictures with him to the next session. The analysis of the data from the two family tasks completed prior to the third session confirmed that the family structure had begun to change. The use of the drawings as a means of both commenting on the parental interaction, and as a means of enforcing a generational barrier were replaced by other strategies in other interviews.

Results

The data from the standardized instruments which measured the level of hyperactivity during the two phases are presented in Table 1. These results indicate that there was no marked differences in the level of hyperactivity between the time periods.

TABLE 1.
Pre- and Post-Treatment Measures of Hyperactivity

	Phase A ₁	Phase A ₂
Home Behavior Questionnaire *	14 of 16 Problem situations	14 of 16 Problem situations
Abbreviated Conners Parent Questionnaire	1.75 (Mean score)	1.75 (Mean Score)
Conners Teacher Questionnaire	1.3	1.5
Werry-Weiss- Peters Activity Scale	27 (Raw score)	20 (Raw score)

*Over eight problem situations is indicative of hyperactivity.

The data from Conners Abbreviated Parent Teacher Questionnaire and the Daily Behavior Checklist do indicate that the level of hyperactivity was lower during the treatment phase (B) than during either the baseline (A₁) or the return to baseline phase (A₂). (See figures 1 and 2) From these results it was concluded that the use of structural family therapy did produce a change in the child's level of hyperactivity.

The examination of the family's structure and the degree to which they were child focused utilized the transcriptions of the family's verbal activity with the conflict-resolution and decision-making tasks. These transcriptions were coded by two judges. Their level of agreement was over 85%. The transcriptions were coded within three categories. These categories were: A. Who speaks, B. To whom did the person speak, and C. The content of the remark.

These data indicated the following:

A. Who speaks:

1. In Baseline A₁, there were chains composed of mother and son exclusively and father and son exclusively.

2. In treatment phase B, the exclusive mother and son chains disappeared as well as in withdrawal baseline A₂.
3. The exclusive father-son chains are present in treatment phase B, but disappeared in withdrawal phase A₂.
4. Exclusive mother and father chains are present in treatment phase B, but were absent in pre-intervention baseline A₁ and withdrawal baseline A₂.
5. Chains involving mother-father and son exclusively were present in the pre-intervention baseline A₁ and the withdrawal baseline A₂, but are totally absent from the treatment phase B.

The conclusion made was the intervention made a difference in the "Who speaks" pattern in the family. The pre-intervention phase A₁ the son was present in all chains. During that phase, the mother or father did not evoke each other to speak in a constant chain without the son being present in that chain. During the treatment phase B, this pattern changed. Now the father and mother evoked each other to speak in chains without the son being involved.

B. To whom?

The following conclusions were made from the data:

1. In the conflict task in the pre-intervention baseline (A₁) there was present long chains of to son.
2. The to son chains were also present in the decision tasks during Phase A₁, but their length was not as long and there was a lower proportion of such chains in the decision tasks than was found with the conflict-resolution tasks.
3. This pattern changes in the treatment phase (B) for both the decision and conflict-resolution tasks. In that phase, chains involving to father and to mother were found. In the conflict-resolution tasks the long to son chains were not found. The proportion of the to son comments was reduced during the treatment phase.
4. In the withdrawal or return to baseline phase (A₂) the to mother and the to father chains found in phase B remain in the decision making task data.

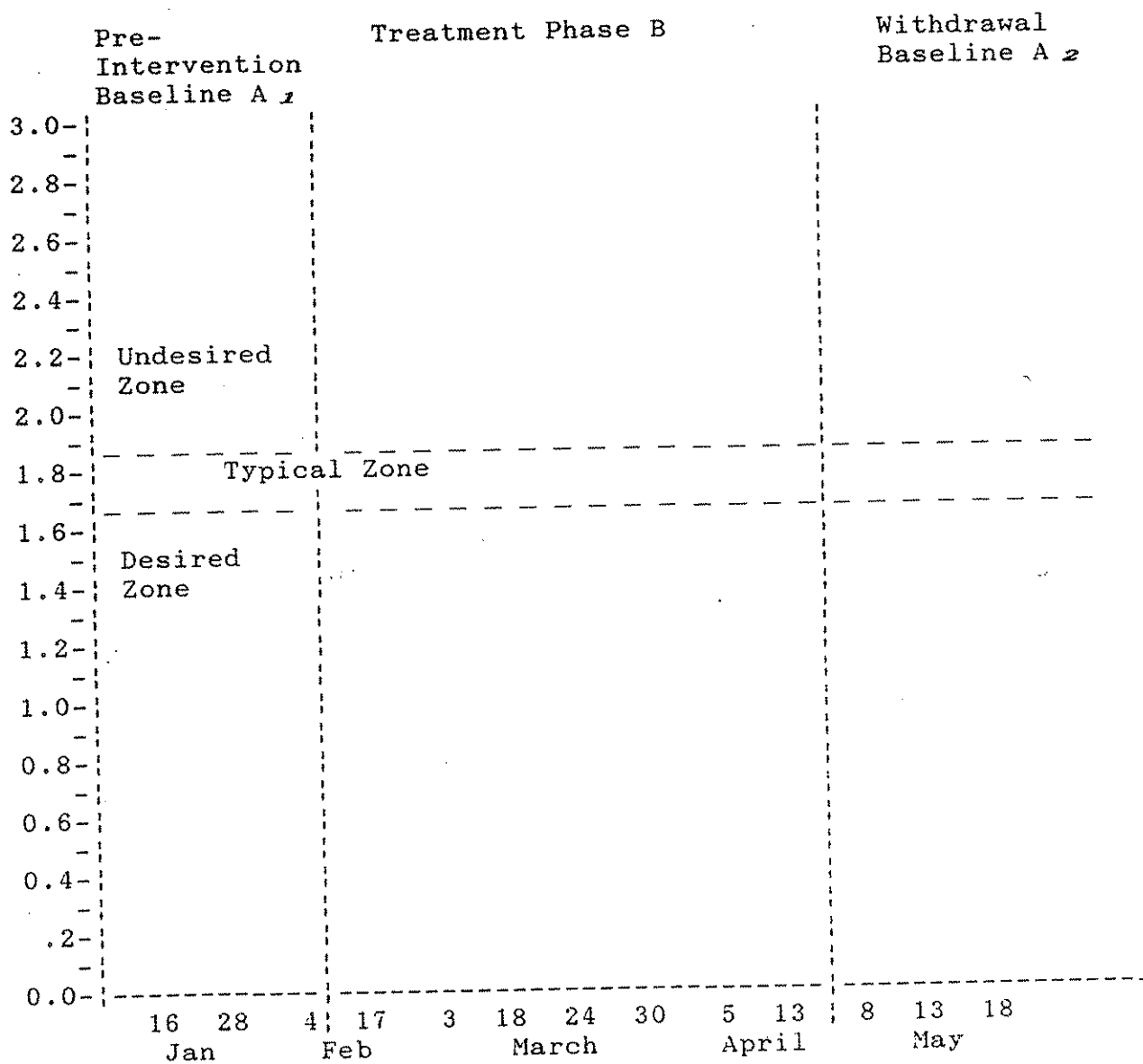


Figure 1. Repeated measures of global hyperactivity across phases A₁, B, and A₂.

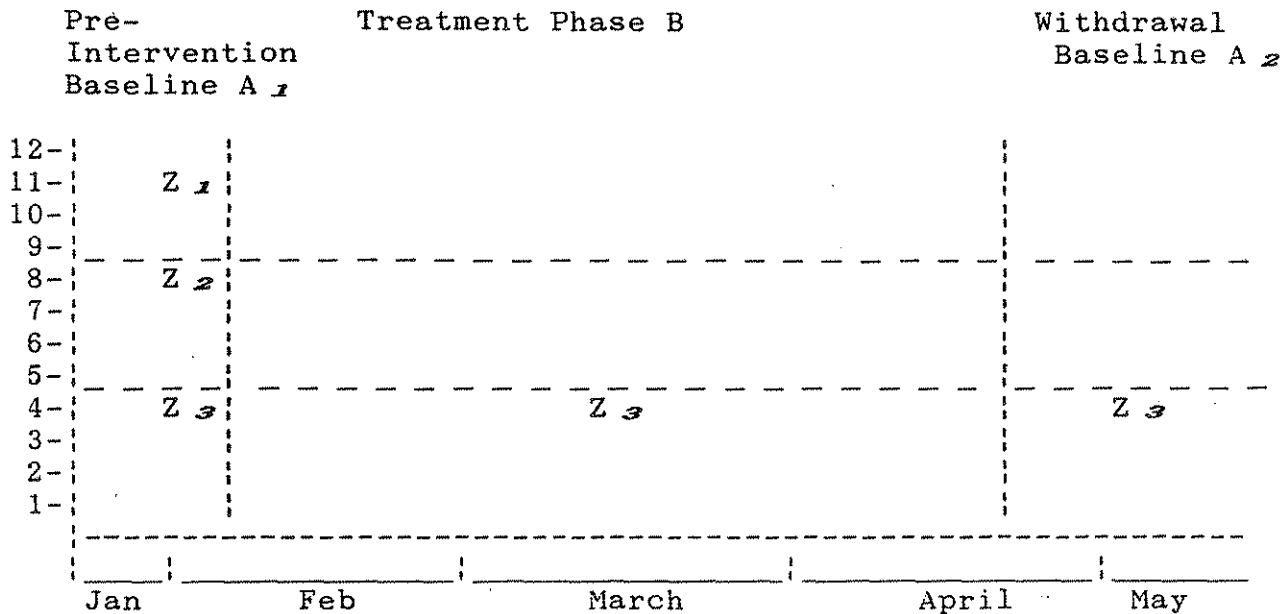


Figure 2. The number of problem behaviors per day across phases A₁, B, and A₂.

However, since there was not sufficient data in the conflict-resolution task, no conclusion could be made about changes for that task.

C. The Content

The following conclusions can be drawn from the data:

1. Conflict task analysis of pre-intervention baseline A₁--
 - a. In the interaction chains where problem-solving occurs, the interaction involves mother and son exclusively or father and son exclusively with no exclusive mother and father problem-solving chains. In these chains, there are few negative codes (MR, DG, and PF).
 - b. The interaction chains show that mother and father are evoked to make conflict statements (DG, MR, and TF) by the son but not by each other. The mother is evoked to make such statements more than the father.
 - c. In the one chain where the mother and father are linked to negative codes, the son is evoked to produce a positive code between mother and father negative codes.

- d. The father is predominant in the problem-solving chains with the son. The mother is excluded.

2. Conflict task analysis treatment phase B--

- a. In those chains where problem-solving occurs, the father is no longer predominately with the son. Mother and father are involved in the chains. There are more negative codes in these chains.
- b. All chains in this phase show that mother evoked father to make conflict statements. Neither the mother nor the father evoked the son to make a conflict statement, whereas in phase A₁ they did.
- c. The son is not evoked to produce a non-conflict statement between mother and father.
- d. While the mother and father evoked conflict statements from each other, they do not evoke problem-solving statements from each other.

3. Conflict task analysis of withdrawal phase A₂--

This phase showed no patterns emerging. The conflict tasks done by the family were two in number and of short duration, and not producing enough family interaction to analyze.

4. Decision task analysis of pre-intervention baseline A1--

- a. The predominant content code is that of problem solving, The conflict codes are missing in all but one chain.
- b. Mother and son evoked each other to problem solve to the exclusion of the father. The father does not appear in any problem-solving chain.
- c. When the son evokes an agreement code from the mother after he makes a problem-solving statement, the chain ends.

5. Decision task analysis of treatment phase B--

- a. The predominant codes evoked are problem solving and agreement. Even when a chain starts with a DG code, it turns into a problem-solving chain.
- b. All family members evoke from each other problem codes or do not terminate chains.

- c. Agreement code evokes further problem-solving codes or do not terminate chains.
- 6. Decision task analysis of withdrawal phase A₂--

This phase's interaction is more like pre-intervention baseline A₁ than treatment phase B.

Conclusions

It was concluded that structural family therapy may be a good treatment for aiding those families with hyperactive children. The treatment did produce changes in this one family from being child focused, to one in which the parents began to interact more with each other. The strength of the change was a moderate one. The facts that the withdrawal baseline returned the level of hyperactivity to the initial level, and that the family structure may not be so different may have clinical and research implications.

Clinically this family seem to make changes in the way it dealt with each other. The parents spoke of being more effective in communicating with each other. However, the problem of the couple's anger towards each other was only identified. It had not been subjected to treatment in this project. In the last session with the family they were given the recommendation that as a couple they should seek marital counseling. Since they were moving to a new community, they were given resources in that community to contact.

One of the implications from this study is that the treatment phase might be too short to effect a change in the family structure. This research did support the idea that these types of families can be helped by structural family therapy.

Replication of this study should have high priority. This includes direct replication; clinical replication with a series of clients by the same clinician or group of clinicians; and systematic replication where the setting, clinician, and other factors are varied. It will only be through such replications that it will be possible to generalize from this type of research.

The research methodology can also be improved upon. Additional coding schemes to measure the family's interaction may be used. The addition of coding schemes may permit further use of sequential analysis of the data.

Doctoral Student and Chairperson Clinical-Research Team

The theory used to develop the research hypotheses was considered to be formal theory (Glasser and Strauss, 1976). That theory specified that there would be dysfunctional family relationship rules and that the family would be child focused. However, as was mentioned, the general research theory and experimental design had to be supplemented with the development of treatment hypotheses and treatment strategies. The dissertation research design allowed for the development of these treatment hypotheses as did the treatment theory (Minuchin, 1974). The treatment hypotheses and strategies had to be developed from the specific family interactions. The process of developing these treatment hypotheses was considered to be the same as that used to create grounded theory. The clinical research study then simultaneously used two levels of theory work and two levels of analysis. The data used to test the research hypotheses were also used for the development and evaluation of the treatment hypotheses.

The process used in the development of grounded theory were used because such theory has been judged to be more compatible with clinical decision making and actions (Reid and Smith, 1981). The advantages include its openness to comment and correction and greater degree of complexity it can account for. In grounded theory the theoretical accounts and explanations are said to conform more closely to situations being observed. Finally grounded theory and its users claim it is a more creative process which leads to improvement in the interpretation of research data (Fanchel and Moss, 1972; Turner, 1981).

In order to maximize the therapeutic and research thrust of this dissertation the doctoral student and chairperson formed a clinical-research team. The first purpose of forming such a team was to facilitate the theoretical work needed for creating clinical hypotheses. Grounded theory often requires immersion into the data in order to identify the patterns (Glasser, 198). Not unlike the situation where note taking can be reviewed after a day in the field, the tape recordings of the interviews were reviewed. The data for each treatment interview were independently culled by both the doctoral student and chairperson in their exploration for relationship patterns. The products of these independent examinations were then compared until all meaningful categories were located. The degree of complexity to the understanding of what the family structure was like had to be agreed upon before treatment strategies were developed (Schon, 1983).

The results of this consultation lead to the formation of not only treatment hypotheses, but also treatment strategies (Hoffman, 1981). These were then judged in light of the overall

treatment theory used to guide the study. In the evaluation of the two sets of hypotheses, no incompatibility was found.

The second reason for forming a treatment team rested with the nature of clinical social work dissertations. Family structures are powerful. The rules of family life are not obvious to the family and they will use their power to force the social worker to join them in their patterns. Structural family therapy requires that the social worker provoke, join, and change the transactions. He/she must do so while maintaining and analyzing the treatment itself (Fisherman, 1983). But the powerful nature of the family's need for their homeostasis could easily lead the social worker to either have his efforts undermined or the family leave treatment. If the family is able to incorporate the social worker on their own terms, this would mean in this treatment that the social worker would also become child focused. In this treatment by focusing on the structure, the social worker was also demonstrating that he would not become child focused.

In order to create a powerful emotional and intellectual force capable of preventing the social worker from being incorporated in the family pattern the clinical team concept was also needed. This made it possible for the doctoral student to relate to the emotional aspects of the interviews, with the chairperson relating more to the spoken relational qualities. Peggy Papp's (1980) use of a Greek Chorus as a medium for both commenting on the treatment and facilitating the treatment changes was in part enacted through the team approach.

Finally the use of the treatment research team insured additional human subject protection for the family. The university human subjects review committee determined that this type of research fell under the rubric of therapeutic investigation. Therefore, to insure additional protection, as might be done in a drug study, the chairperson acted as another means of control.

In summary, the dissertation demonstrated the use of structural family therapy in the treatment of a family with a hyperactive child. Clinical research projects by doctoral students may further the goals of the profession and make clinical interventions more effective and efficient. The project also demonstrated the particular nature of the doctoral student and chairperson team concept in the execution of clinical studies.

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