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**Therapy success in a child guidance center as a function of  
intake and treatment variables**

**Joffe, Vera, Ph.D.**

**Iowa State University, 1988**

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Therapy success in a child guidance center as a function  
of intake and treatment variables

by

Vera Joffe

A Dissertation Submitted to the  
Graduate Faculty in Partial Fulfillment of the  
Requirements for the Degree of  
DOCTOR OF PHILOSOPHY

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Iowa State University  
Ames, Iowa

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DEDICATION

To my parents, Thea and Isaac Joffe, for their vigorous personal investment in the development of my curiosity as a child and of my career as an adult.

and

To my adorable children, Melissa and Monica, whose affection kept me aware and sensitive to the priorities of my life through the years of graduate school, and whose precious family time was taken away for the completion of this work.

"You favor us with knowledge and teach mortals understanding. May You continue to favor us with knowledge, understanding, and insight. Blessed is God, gracious Giver of knowledge" (Weekday Amidah).

## INTRODUCTION

Recent reductions in financial support to mental health programs as well as the development of a diversity of third party payment health insurance policies have called for an evaluation of the effectiveness and efficiency of mental health programs and institutions. However, the impact of child guidance center treatment modalities, the diversity and nature of their treatment and the descriptive characteristics of child guidance center clientele remain either infrequently investigated or unexplored. The present investigation is intended to address these issues by describing a child guidance center and its clientele, and by empirically relating client demographic and intake variables with recommended treatment modality. In addition, intake variables as well as treatment variables will be related to treatment compliance and outcome.

### Descriptive Studies of Child Guidance Centers

In their review, Barret, Hampe, and Miller (1978) concluded that research on child psychotherapy is sparse as compared with the number of studies focused upon adult psychotherapeutic processes or treatment outcomes. These authors delineated the history of child psychotherapy research, starting with the development of the child guidance movement in the decades of 1930 through 1940. During the 1950 to 1960 period, a variety of studies concentrated upon the study of the relationship between demographic variables and the utilization of mental health facilities for children (Roach, Gursslin, & Hunt, 1958). Also,

studies on the evaluation of outcome of child psychotherapy were initiated (Levitt, 1957), and conclusions were similar to the ones found in the studies of adult psychotherapy: about two-thirds of all cases were improved at treatment termination. Methodological criticisms associated with research were also given attention by researchers. Their concerns included issues such as the absence of control groups in evaluating the effectiveness of treatment programs.

It was during the decades of 1960-1970 when emphasis on institutions and programs for special needs was given (Hunt, 1960). For instance, Wolff (1961) studied, over a two-year period, 43 preschool children in a child guidance clinic and was able to identify high incidence of psychiatric disturbance in parents of clients at the clinic. Finally, the more recent trend in child psychotherapy research has been a reappearance of interest in studying children's and therapists' characteristics, and their relationship to intervention techniques as well as outcome measures (Heinecke & Strassman, 1975).

Two comprehensive meta-analytic studies of the effectiveness of psychotherapy with young populations have been published during the last two years (Casey & Berman, 1985; Weisz, Weiss, Alicke, & Klotz, 1987) and the results indicated that overall, treatment was effective. Details of these studies will be given in the end of this review.

#### Characteristics of child guidance clientele

Most of the studies to be reviewed in this section were developed as an attempt to describe the social and psychological characteristics of cases seen in child guidance clinics. Roach et al. (1958) reported

that their agency was providing services to clients of all occupational groups, that three times as many boys as girls were seen for treatment, and aggressive symptoms were the most frequent presenting concern. There was an underrepresentation of families with only one child. Hunt (1961) studied the same variables and found similar results: there were two times as many boys as girls seen for treatment, and this overrepresentation of boys tended to be higher within the age range of five and nineteen years.

Wolff (1961) studied 43 preschool children seen at a child guidance center and discovered that the ratio two to one of male compared with female clients was the result of an interaction between sex and age. There were equal numbers of males and females in the preschool population seen at the center; however, as age increased, the percentage of boys in the clientele was more pronounced. Some studies supported the general finding of the presence of an average of two times as many boys as girls in a child guidance center clientele, especially in the latency or school ages (Adams & Kagnoff, 1983; Beitchman, Bell, & Simeon, 1978; Beitchman, Murray, & Minty, 1981; Fava, 1981; Lurie, 1974; Marine & Cohen, 1975; Ramsey-Klee & Eiduson, 1969; Wersh, Tritt, Stambrook, & Dushenko, 1982). Although there have been consistent results to suggest the above ratio of twice as many boys as girls in a child guidance clientele, concurrent research in which attempts have been made to explain the possible reasons for the high proportion of boys in child guidance clinics has not appeared. A possible explanation may be societal influence and tendencies for boys to act out more often than girls



(Maccoby & Jacklin, 1974), e.g., boys are more stimulated to run, and to develop outdoor gross motor activities than girls in the Western society. Another possibility may be the common feeling among kindergarten and elementary school teachers that, in general, boys are less socially and cognitively mature than girls. This, in turn, may generate more referrals from school personnel for psychological and psychiatric treatment.

#### Family psychiatric history

Another variable studied in descriptive and empirical studies of child guidance centers is the presence of parental psychiatric problems. Beitchman et al. (1981), Stott et al. (1984), as well as Wolff (1961) encountered a high incidence of psychiatric disturbance in parents of clients seen for treatment.

Other relevant results have been found concerning family characteristics of the clientele in child guidance centers. Schiff and Kalter (1980) described the "multiproblem family" as one which is characterized by a multiplicity of problems, chronicity of need, resistance to therapy, and handicapping attitudes. Such families maintain multiple contacts with mental health agencies, have low family stability, long-standing family physical and/or psychiatric problems, and come from lower socioeconomic levels of society. Note, however, that no consistent results were found to relate lower socioeconomic levels to the child guidance populations (Beitchman et al., 1981; Marine & Cohen, 1975; Ramsey-Klee & Eiduson, 1969; Roach et al., 1958). On the other hand, Lurie (1974) noted that although psychological

impairment was significantly higher among lower income families, children from such disadvantaged families were among the least likely to have obtained services in child guidance agencies.

#### Family size and constellation

Roach et al. (1958) empirically studied a number of social psychological characteristics of clients in a child guidance center. One of their findings was that there were fewer families with an only child than families with two or more children. Such underrepresentation of one-child families in child guidance centers' clientele was also found by Ramsey-Klee and Eiduson (1969). However, Simonds and Aston (1982) and Wolff (1961) did not find such a trend in family size among families seen at a child guidance clinic.

Wersh et al. (1982) conducted a descriptive study of a pediatric setting in Canada. These authors found a significant relationship between family structure and presenting problem, i.e., the majority of children who came from single-parent families were experiencing general neurotic or somatic symptoms.

#### Common presenting problem

Some studies attempted to describe the most common symptoms presented in child guidance clinics. Adams and Kagnoff (1983) observed that the most frequent symptoms presented in their clinic were non-compliance with adults, temper tantrums, physical outbursts such as stealing and firesetting. Roach et al. (1958) concluded that aggressive behavior was the predominant complaint presented by parents. Fava (1981) encountered various diagnostic categories frequent in an

Italian child guidance clinic, such as functional enuresis, developmental reading disorders and mild mental retardation. Finally, Schechtman (1970) found a significant association between the type of symptom presented and age: the younger the child, the more symptoms were displayed; there was a decrease in symptom variability with older children, especially with girls. This author also found two consistent symptoms through all the ages, namely disobedience and poor school work.

Thus, there is some consistency in the results of descriptive studies of child guidance centers: there are usually twice as many boys as girls who attend the clinics, it is likely that the parents of children utilizing child guidance clinics have some psychiatric problem, and that client families usually have two or more children.

A second area of interest and relevance for the study of child guidance centers is a focus upon the rationale for treatment recommendations made in child guidance clinics.

#### How Are Treatment Decisions Made?

Burck (1978) believed that there were few research findings pertinent to the nature of child guidance clientele. This author was also of the opinion that there were not enough studies which focused on the effectiveness of therapy and the rationale for differing therapy policies.

Cole and Magnussen (1966) presented challenging ideas to both child clinicians and researchers. They suggested that although

clinical practice usually involves the diagnostic assessment of a case followed by recommendations and treatment, little clinical research focused directly on the relationship between case assessment and resulting clinical treatment. The one exception to this trend exists in the related treatment concepts suggested by the well-developed and explicit behavior assessment, analysis and consultation literature (Ciminero, Calhoun, & Adam, 1977).

Cole and Magnussen (1966) proposed decision theory as an approach to focus on the relationship between assessment, disposition and action. This view focuses on the evaluation of the actions or results of different decisions that determine the value of the assessment approach. They suggested that actuarial assessment techniques are very useful for relating information about a patient to clinical action. In this approach, prediction of success of treatment is done through data available from clinical interviews, tests, and other information which is quantified and then combined according to a set of rules that have been empirically determined. Thus, what Cole and Magnussen (1966) proposed was the development of a program which attempted to systematically relate assessment to clinical action in order to determine what kinds of cases were included in the various treatment modalities offered by a child guidance clinic. Howe (1981) and Howe and Wilcox (1983) reinforced the idea of developing treatment focused assessment techniques.

How does one decide what type of therapy is most appropriate for different kinds of clients? This kind of question was asked and studied many times during the last two decades in the area of Counseling

Psychology (Borgen, 1984), as well as in Child Clinical Psychology (Barrett et al., 1978). However, the focus of studies in adult psychotherapy has been shifted to other areas of investigation such as the study of common elements in the various approaches to therapy which contribute to treatment success (Borgen, 1984). On the other hand, such a shift has not yet been the mode in the area of child psychotherapy with the exception of the most recent meta-analytic studies by Casey and Berman (1985) and Weisz et al. (1987).

A historical perspective on the issue was provided by Goldberg (1968) who reviewed the literature about empirical studies of the flaws and limitations of clinical judgment and decision-making and concluded that:

Clinical judgments tend to be (a) rather unreliable, (b) only minimally related to the confidence and to the amount of experience of the judge, (c) relatively unaffected by the amount of information available to the judges, and, (d) rather low in validity on an absolute basis. (p. 485)

In an attempt to explain how clinicians decided about the best treatment modality for their clients, Runyan (1977) suggested that in hospital and clinical settings, decisions about different treatment modality recommendations for various kinds of clients were made on pragmatic grounds, and they gave an example: "I have some free time in my schedule so I could see him."

Thus, in some clinical settings, treatment recommendations seem not to be based on a rational decision-making process, they may not have connection with empirical studies, and there may not be enough consideration about the costs and benefits of different therapy

modalities for specific clients.

Levin (1974) espoused a pessimistic view of the reality of decisions about treatment recommendations during an intake interview. He believed that factors other than the needs of patients ordinarily impinge on the intake decision such as resource capacity, staff ideology and interest, and teaching and research needs. Therapists may vary significantly in their opinions of the best therapy, given a specific type of client and problem. Also, cases that meet research and teaching needs are often treated differently, as are patients who are interesting to the staff.

Runyan (1977) suggested a decision-making approach to develop strategies to better treatment recommendations for different clientele. This approach would develop a decision matrix in which the therapist would estimate the probability of each individual outcome for each action, assign a value to each of these outcomes, and then assess the total benefits and risks associated with each course of action in order to reach a final decision. Ideally, the goal would be to reach an empirically based treatment recommendation with an accompanying rationale that would also take into account a valuative as well as technical-economic factors.

One of the few studies which might have followed Runyan's suggestion cited above (Runyan, 1977) was the research conducted by Rosenblum, Mannarino, Magnussen, and Jameson (1981). These authors attempted to correlate assessment variables with recommended treatment modality in order to empirically relate clusters of assessment information to three different dimensions of treatment planning: severity of

diagnosis, length of treatment, and treatment modality. Their study revealed that variables pertaining to categories of child dysfunction best predicted case severity and length of treatment. On the other hand, family characteristics and motivation significantly predicted treatment modality, particularly the motivation of the family and their investment in treatment. For example, parents who showed some change in approaching the problem presented during the intake interview, were more likely to be suggested to receive family therapy.

Rosenblum et al. (1981) supported the notion presented by Cole and Magnussen (1966) that informational categories need to be developed which are empirically related to treatment planning. Although their findings represent an important step in relating assessment variables with treatment factors, limitations were inherent in the study. For example, Rosenblum et al. (1981) aptly pointed out that their study did not consider the factors contributing to clinician's judgments in filling out evaluation forms. Thus, clinicians used different criteria to diagnose their patients. Furthermore, they pointed out the need for the inclusion of an additional independent variable, the therapist, in studying therapy outcome:

The inclusion of such individual differences regarding clinicians' characteristics would add refinement to our ability to make therapy predictions and better our understanding of the decision-making process as related to treatment recommendations. (p. 99)

Lastly, Rosenblum et al. (1981) noted that:

The most logical but broadest extension of this study is the addition of outcome information regarding therapy duration and effectiveness. Only in this way can the initial treatment decisions regarding prognosis and choice of modality which we have studied be evaluated as to their

accuracy and value. This could also lead to the rather promising and exciting possibility of predicting what treatments are most effective for what types of problems and over what period of time. (p. 99)

Thus, Rosenblum et al. (1981) showed that not only is it possible to empirically identify clusters of assessment information that can be used to predict important treatment decisions, but that one might also include information from therapy duration and outcome for such predictions.

The remainder of this chapter will consist of a review of research in which a study of the relationship between demographic variables, intake variables and compliance to treatment as well as success of therapy was conducted. The first area to be reviewed is what is normally called "premature termination of therapy" which follows in the next section.

#### Premature Termination Studies

Paolillo and Moore (1984) noted that failure to comply to treatment regimens has been called the best-documented but least understood health-related behavior. They defined the noncompliant group as people who cancelled or did not show for their appointments more than once in a 6-month period after their first two appointments.

Klein (1980) wisely indicated that the term "premature termination" was often used to cover a variety of conditions such as pre-therapy dropout, early therapy dropout, and late therapy dropout. He believed that premature termination before or during the early stages of treatment might be due to issues related to violation of



expectations regarding therapy and spontaneous recovery or to an early accomplishment of the client's goals. On the other hand, withdrawal of treatment without the psychotherapist's agreement at a later time in therapy may be related to specific treatment issues or treatment dissatisfaction that may be interfering with continuation.

The following review on premature termination in child therapy will follow Klein's (1980) discrimination among the three different stages of discontinuation of contact with a mental health clinic, namely: a first stage, the preintake dropout; a second stage, the post-intake and pretreatment discontinuation; and a last stage, premature termination during various levels of treatment.

A clarification needs to be made for the purpose of this study. The term "treatment compliance" will be defined as the adherence to treatment recommendations. On the other hand, the term "premature treatment termination" will be employed when families who have already started treatment and who discontinued therapy against the therapist's advice.

#### Preintake dropout

In a study which attempted to predict and reduce the preintake dropout rate in a mental health clinic as well as to examine relevant variables and demographic factors, Klein (1980) listed the significant factors that contributed to adult preintake dropout, such as low motivation for therapy, institutional source of referral, and lack of clarity and concreteness of the statement of the presenting problem during the initial phone contact. This author attempted to

predict and reduce the preintake dropout rate in a mental health clinic as well as to examine the variables and demographic factors involved. The results indicated that telephone intake workers could accurately predict the likelihood of intake interview attendance rates. However, contrary to the predictions, interview attenders were not more internally motivated than dropouts, and there was no significant increase in attendance at intake interviews as a result of an appointment reminder telephone call.

However, Klein (1980) delineated some specific characteristics of intake attenders as opposed to dropouts: they were more likely to present family-oriented problems, the phone worker who made the initial contact with the attender had a higher level of experience than those workers who talked with dropouts. Also, for attenders, there was a shorter waiting period between the initial phone call and the actual intake interview. Some suggestions were made to reduce pre-intake dropouts such as the development of an intake group, reduction of the waiting period between the phone call and the actual intake interview, scheduling of overlapping intake appointments for predicted dropouts, conveying information to the caller prior to the interview to clarify presenting problems and explain treatment procedures.

#### Post-intake and pretherapy early termination

Studies in the area of adherence to treatment, or treatment compliance, will be reviewed in this section.

Jones' (1975) review on early termination concluded that one out of four people seen for intake rejected the appointment to begin

therapy when it was offered. More recently, Reeves (1978) found an even higher percentage of premature termination: between 30 and 65 percent of those clients who initially sought services did not comply to treatment recommendations.

Contributions of Health Psychology      Attempts have been made in the area of Health Psychology to develop a theoretical framework to study adherence to medical regimens (Haynes, 1979; Leventhal, Zimmerman, & Gutmann, 1984). Leventhal et al. (1984) presented three approaches to studying compliance: medical, behavioral, and the control or self-regulation views. The biomedical model is designed to define disease and its risks, and it suggests treatment and prevention interventions. Behavioral models, both operant and cognitive, focus on the participant's action. Their aim is to develop procedures to shape individual action to facilitate cure, control, or prevention of disease.

In addition, Leventhal et al. (1984) proposed the systems or self-control view as the most complete approach to studying compliance to treatment. According to this theory, the patient is an active agent: the organism regulates itself by developing a representation of an illness threat; behavioral plans for curing, controlling, or preventing disease; and criteria for evaluating the outcomes of coping efforts. In other words, the self-control approach offers a variety of variables that may control health as well as illness behaviors and they are: the individual's representation of a health threat, the acquisition of strategies for coping — such as developing a new approach to deal with the disease, e.g., following a new diet to lose weight — and

the individual's self-esteem. Thus, in this view, the recognition of underlying processes behind one's action is crucial.

The generalization of findings in the medical and health area of research to psychological studies and practice should be done with care. Elements such as perception of risk of illness, the somatic nature of symptoms are just a couple of examples which indicate some of the essential differences between the research areas of compliance in medical settings as compared with studies concerned with compliance with treatment in mental health clinics. Yet, it is worth considering carefully a review of health psychology studies for the purposes of this investigation.

Recently, various variables have been associated with adherence to treatment. Detailed consideration will be given to the most frequently studied elements which have been recognized as influential in determining compliance in therapy.

Referral source Burck (1978) studied the relationship between the source of referral and compliance to treatment of families and children in a child guidance center and found no significant differences: clients who were self-referred complied to treatment as much as clients who were referred by other social agencies such as court or department of social services.

Gaines and Stedman (1981) studied the factors associated with dropping out of child and family treatment and found a number of variables that were significantly related to attendance of psychotherapy. The nature of the referral source was also found to be significantly related with attendance in treatment: self-referred

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and individual referred clients were more likely to comply to treatment than institutionally referred clients. Finally, the initial clinical perceptions of the family, the predictions about termination, and the family attendance in evaluations and therapy sessions (the higher the attendance in evaluation sessions, the higher the level of attendance in therapy) were also significantly related to attendance in therapy.

Hoenig and Ragg (1966) discovered that referrals to a psychiatric clinic were less likely to result in no-shows if the patient was directed to a specific psychiatrist. Also, Hartroijls (1974) came to the conclusion that self-referrals were less likely to lead to no-shows than practitioner referrals were.

Haynes (1979) concluded his book which reviewed compliance in health care with the statement that:

Further research into the effect of the referral process on compliance should have high priority, since the findings presented here suggest that rather simple logistical changes can substantially improve compliance with follow-up appointments. (p. 55)

Presence of family members      Gaines and Stedman (1981) found that failure to bring all members of the family to the evaluation session when the entire family was recommended to attend the session was found to indicate poor prognosis for therapy compliance. Sirles (1984) also concluded that the presence of all members of the family in an intake interview increased the likelihood of compliance to therapy. More specifically, Webster-Stratton (1985) concluded that father-involved families presented a significantly higher

probability of maintenance of therapy appointments as well as therapy benefit after one year. These results suggest that fathers (or father-figures in the home such as boyfriend or stepfather) should not be ignored in parent training programs and evaluations.

Length of the waiting list      The length of the waiting list, or, in other words, the interval between the intake interview and the first therapy session, has been indicated as an extremely important variable to be considered in the study of pretherapy dropout. In a study of "no-shows" for initial therapy sessions, Lefebvre, Sommeraver, Cohen, Waldron, and Perry (1983) asked nonattenders the reasons for cancelling or failing to keep appointments. Results indicated that more than 50 percent of dropout clients gave the long waiting period as the major factor for nonattendance. These results confirm previous conclusions that the percentage of nonattendance to mental health appointments increases in direct proportion to the length of a mental health clinic's waiting list (Haynes, 1979; Woods, 1974).

Inman (1956) studied the factors that operate together to discourage a family from coming back to a clinic for treatment after an initial interview had been conducted. The results were also consistent with prior findings, i.e., the most important reason for discontinuing contact with a child guidance clinic was attributed to long waiting time periods between the treatment recommendations and the beginning of therapy. Secondary reasons for discontinuation of contact with the clinic were the improvement of the child's problems prior to the onset of therapy and the parents' resistance to have further contact with the clinic.

The practitioner-patient communication and relationship      Reviewers

in the area of Health Psychology made use of models of communication to understand the interaction between physicians and their patients. Studies in this area revealed that the practitioner often failed to state the precise regimen to be followed, or stated it in an unclear or too technical fashion. When the physician's instructions were clear, the patient was likely to comply with treatment.

The practitioner-patient relationship is an area of study with great implications for the study of adherence to psychotherapy. The nature of the relationship has been shown to affect the patient's definition of illness, developing of coping mechanisms, and evaluation of outcomes.

In addition, a sub-area of the study of practitioner-patient relationship focuses upon the association between the mutuality of expectations between the practitioner and the client and compliance to treatment (Francis, Korsch, & Morris, 1969; Korsch, Gozzi, & Francis, 1968; Zimmerman, 1982). The evidence was consistent in suggesting that congruence of patient's and practitioner's expectations of the type of relationship developed during the first meeting lead to greater patient satisfaction and greater compliance.

An illustration of a study in the area of practitioner-patient relationship is the research conducted by Korsch et al. (1968). These authors studied tape recordings of 800 interactions between physicians and their pediatrics patients and their mothers. They also collected mothers' impressions of the medical appointment through interviews. They discovered that mothers whose expectations were

unmet during the visit with the physician were less satisfied, and, in turn, were less compliant with treatment recommendations.

Another aspect of the practitioner-patient relationship was the effect of its emotional tone on therapy adherence. Once a positive relationship was established, the continuation of the relationship with the physician was observed to be relevant. One may hypothesize from the above finding that clients may prefer continuity, i.e., to relate to the same clinicians once they start treatment.

Predicting compliance      Ewalt, Cohen, and Harmatz (1972) attempted to develop a practical instrument for predicting which families who had applied to a child guidance clinic accepted treatment following diagnostic evaluation. Their study resulted in a scale which they called the "Continuation Prediction Scale." Among 56 family factors examined, only five actually predicted continuation in treatment, namely: (a) age of the child (children under 12 years of age were more likely to continue treatment); (b) mothers' education (the greater the level of education completed, the higher the probability that this person's family would stay in therapy); (c) also, families who took responsibility for their problems and who wanted help were continuers; (d) finally, the symptom of the child's stubbornness was also more associated with continuers. These authors demonstrated that age of parents, beliefs of causation of problems, somatic complaints, and family size were factors that were not related to continuance in treatment.

Although the above study represents an attempt to develop an instrument to help clinicians best predict treatment compliance, it



presents some methodological and statistical weaknesses. Apparently, Ewalt et al. (1972) attributed equal weights to all five predictive factors described earlier. However, their instrument was not developed to predict therapy outcome, or to help in recommending specific treatment modalities for different types of clients.

Procedures designed to decrease dropout      Some suggestions have been made to decrease the pretreatment dropout. Marine and Cohen (1975) recognized the crucial role of waiting periods between intake and treatment offered and modified the intake by speeding its procedure by decreasing the interval between the intake interview and the initial therapy session. This intervention significantly increased the attendance of families at initial therapy sessions.

Tracy (1977) studied the impact of a behavioral analysis intake procedure — as opposed to a traditional one — on client attrition in a community mental health center. Results suggested that significantly more people made contact after a first visit if it was conducted by a behavior analysis approach. This behavioral strategy included three key elements in the interview: stating the client's problems in behavioral terms, stating the client's personal strengths and resources, and explicitly negotiating therapy goals. Tracy's conclusion was that because the behavioral analysis report required the clinician to clearly state to the patient his or her perception of the problems as well as the patient's personal strengths, this approach was less likely to generate client attrition, and therapy was more effective.

Pretherapy education and expectations for treatment      Some studies investigated the effect of various educational procedures to

increase information gathering and clarification about treatment before and during the initial interview at child guidance clinics.

Informing clients about what to expect from therapy might encourage more realistic expectations and more congruence with therapists' expectations (Klein, 1980; Tracy, 1977). The "Role-Induction Interview," the RII (Cole & Magnussen, 1966), has been used as a way to arouse realistic expectations of improvement, to explain the therapist's anticipated behavior, and to work with the client's expectations and misunderstandings about therapy. The use of such a procedure has been shown to present positive results (Cole & Magnussen, 1966; Tracy, 1977).

Instituting a group intake was suggested by some people (Garfield & Bergin, 1978; Klein, 1980; Raynes & Warren, 1976). In the same line of reasoning, Jacobs, Charles, Jacobs, Weinstein, and Mann (1972) showed positive effects with the utilization of a brief educational process as a tool to help diminish communication discrepancies between clients from low socioeconomic levels and their middle class clinicians.

An additional example of the use of an educational approach to enhance compliance to psychotherapy includes a study by King (1981) who utilized two different preparation methods for child therapy in a mental health clinic: a telephone interview and an orientation film. The positive results of the orientation film reported in her study indicated the importance of sharing expectations regarding treatment in the client-clinic relationship (King, 1981). Heilbrun (1972) also used a film to induce certain role expectations in clients who first visited a clinic and found positive results.

Other studies include Urie (1975) and Holmes and Urie (1975). They prepared a group of children on how to become involved in therapy by developing a questionnaire called "Understanding of Therapy." They also found out that such strategies were helpful for the understanding and compliance to treatment. Weiner (1984) introduced a videotape orientation as a preparatory method for children and parents for psychotherapy at a child guidance clinic and came to the conclusion that families who watched the videotape developed more realistic expectations about therapy but the presentation did not result in better attendance rates than families who did not watch the orientation film.

Thus, pretherapy education endeavors have been demonstrated to enhance the congruence between patients' and clinicians' expectations about treatment which, in turn, might increase patients' compliance with treatment recommendations.

#### Premature termination during the treatment stage

Klein (1980) suggested that clients who left treatment within the first six to eight sessions without the agreement from the therapist were generally people who "get a taste of the therapy process, but fail to sustain the intensity and longer involvement of therapy as judged most useful by the initial evaluator and therapist" (p. 52). He reviewed the literature in early treatment termination and concluded that "although no clear explanation emerges as to what is responsible for early termination, it appears as though expectations,

preparedness, focus of goals may be among the more significant factors" (p. 54).

Family demographic variables      Previous research on the socio-economic variables that significantly contribute to the premature termination of therapy have generated inconclusive results (Powell, 1984). Nevertheless, a number of variables have been studied as factors related to premature termination in later stages of therapy. Gass (1975) concluded that, as opposed to time unlimited therapy, treatment contracted for eight sessions seemed most effective, establishing significantly more progress, fewer cancellations, and fewer dropout rates.

A series of studies was conducted to correlate family variables to early termination. Smigelsky (1949) discovered some differences between parents who discontinued treatment on their own initiative as opposed to those who continued treatment: parents who accepted their children or who unconsciously rejected them remained in therapy whereas the ones who openly rejected their children withdrew from therapy. Rivara (1985) found no correlation between mothers' IQ and attendance in therapy. Plunkett (1981) also did not find significant results in attendance for psychologically and nonpsychologically oriented parents. Lochman and Brown (1980) studied the relationship between selected client variables, the perceived usefulness of therapy, and the dropout rates in a parent-education treatment group. They came to the conclusion that parents who rated the Parent Education Group as most useful had significantly higher incomes, and their children were younger. They concluded that the attitude of parents about therapy

was a significant contributor to the continuance in a parent education program. Finally, Sirles (1984) found that mothers with a lower level of education were more likely to drop out from treatment.

Powell (1984) and Mayer and Rosenblatt (1964) emphasized the importance of the effect of social context and network on the continuance of treatment. Early termination was correlated with the presence of other help sources in the social context. Premature termination was also significantly associated with a disapproving attitude of significant others to stay in therapy.

Who pays for therapy? Traditional psychoanalysis suggested that the client's payment of a fee was important for the success of treatment. Researchers have disagreed about the effect of third-party payment on treatment outcome. Yoken and Berman (1987) studied this relationship with adult clients who sought psychotherapy from a low-cost treatment center. They concluded that the effectiveness of psychotherapy was not impaired when someone other than the client paid for therapy. However, these authors recognized the limitations of their study for not controlling for the source of referral variable.

Area of residency and transportation to the clinic Other variables often correlated with early therapy termination in child guidance centers are the difficulty of transportation to the center and client proximity to it. Kolko, Parrish, and Wilson (1985) studied obstacles to keeping appointments in a child behavior management clinic and discovered that the most frequent factor related to not keeping an initial evaluation appointment was the difficulty in

securing transportation, followed by problems with health in the family, as well as competing responsibilities at home. Powell (1984) tried to diminish the effect of such factors by providing transportation for a parent education program and found significant results in decreases of premature treatment termination. Lefebvre et al. (1983) found a higher percentage of out of town families who failed to make their appointments, and suggested that such families should be referred to local agencies for initial evaluative work.

Therapists' characteristics Plunkett (1981) studied the lack of congruence between therapists' and parents' estimation about the duration of therapy and found a positive correlation between high discrepancy of prediction of treatment and early termination.

Slipp and Kressel (1978) found that less experienced therapists had higher levels of therapy dropouts. However, Durlack (1979) found no significant correlation between level of experience and early termination, and Burck (1978) encountered no significant difference in quality of training of staff related to attendance in therapy.

Thus, discrepant results were found concerning therapists' characteristics and experience related to early termination of therapy. Only two out of sixty studies reviewed in this investigation took into account the variable "therapist" in analyzing treatment outcome (Howe & Wilcox, 1983; Hunt, 1961). The ignoring of such an important source of variance may have biased a considerable number of studies described above. That is, a study that investigates therapists' characteristics would have a sample size equal to the number of therapists, and not the number of clients in the study. In other

words, the experimental unit of studies in which therapists' characteristics are studied should be the number of therapists, and not the number of clients.

Weisz et al.'s (1987) meta-analytic study suggested that, in general, there was no overall difference in effectiveness in therapy between professionals, graduate students, and paraprofessionals. However, they also found that professional training may enhance therapist effectiveness with older, more difficult-to-treat children. Also, professionals (with doctor's or master's degrees) were noticeably more effective in treatment of overcontrolled problems such as phobias and shyness (Achenbach & Edelbrock, 1978) than graduate students and paraprofessionals.

Some problems associated with the above reviewed literature      The ideal amount of contact and the ideal length of time of therapy for any particular client is a partial judgment (Klein, 1980). In other words, each individual client and his/her therapist influence the decision of the ideal length of time of therapy. In fact, Falk (1955) suggested that the word "failure" should be reevaluated in child guidance clinics. This investigator discovered that many clients benefited from the first therapy session more than realized by most therapists. Although this issue has been recognized by some researchers in the area of evaluation of therapy outcome, there is scarcity of proposed solutions for such crucial problems. One possibility would be to ask experienced clinicians to read complete information of a number of cases — such as intake information, treatment planning and performance, as well as termination and summary

information -- and decide whether each treatment was prematurely terminated or not.

Another difficulty generated by the research previously reviewed is the adoption of the traditional approach of compartmentalizing research into two separate areas: either description and assessment or psychotherapy research. In other words, very few of the studies have attempted to link factors from the description/diagnosis/assessment stages with treatment variables in order to recommend treatment modalities. Almost no study cited above used the various descriptive and treatment variables together to best predict premature termination of therapy with the exception of the Rosenblum et al. (1981) and Ewalt et al. (1972) papers which were reviewed earlier in this chapter.

Meta-analysis of research on the effectiveness of psychotherapy with children and adolescents In recent years, researchers in the area of child psychotherapy have started focusing efforts in studying treatment outcome as a function of treatment approach, type of child, and therapist characteristics.

Casey and Berman (1985) meta-analyzed 64 studies with children up to 12 years old. These studies included treatment-control comparison; and the average effect size found was .71, which suggested a reliable advantage for psychotherapy over no psychotherapy. The most significant results of this meta-analysis were that the percentage of boys was negatively correlated with outcome, there were no substantial differences as a function of age or of group versus individual therapy. Overall, Casey and Berman's (1985) meta-analysis



implied that child psychotherapy is demonstrably effective across age groups and types of therapy.

The most recent meta-analytic study of child and adolescent psychotherapy outcome research was done by Weisz et al. (1987). This group of investigators reviewed studies which focused on pre-kindergarten through high school children, with 66 percent of the children being male. The following is a summary of their findings:

1. The mean statistically significant effect size of treatment-control comparisons of 163 studies was .79 (significantly different from zero,  $p < .0001$ ). Of the 163 effect sizes, only six percent were negative, i.e., those indicated an opposite effect of treatment.
2. Therapy was more effective for children than for adolescents, especially when the clinicians were paraprofessionals or graduate students.
3. Professionals were more effective in treating undercontrolled problems.
4. Behavioral treatments were more effective than nonbehavioral ones regardless of age, clinician experience, or type of problem treated.

Weisz et al. (1987) concluded that:

Overall, the findings revealed significant, durable effects of treatment that differed somewhat with client age and treatment method but were reliably greater than zero for most groups, most problems, and most methods. (p. 542).

Thus, there seems to be a growth in the amount of outcome research in the child and adolescent area of therapy. The present

investigation represents a commitment in this field of clinical research.

### Summary and Statement of the Problem

The introduction reviewed different areas of research in child psychotherapy. Initially, descriptive studies of child mental health centers were listed. Little consistency was found in studies which investigated the demographic characteristics of child guidance clientele, with the exception of such trends as the higher percentage of boys as compared to girls, and the frequent presence of parents' psychiatric disorders. Some methodological issues may be associated with the lack of consistent results.

Methodological solutions pertinent to difficulties encountered in this area of research are suggested in the present study. The previous review of the literature pointed to the lack of studies on the relationship between the two phases of services, namely, assessment and treatment. However, additional studies were reviewed in which an attempt was made to correlate the assessment and treatment stages of psychological services in order to best predict and recommend treatment for different populations, as well as to improve treatment compliance and positive outcome. These studies represent an attempt to relate assessment and therapy with treatment outcome.

A third major area reviewed in the above introduction was the field of Premature Treatment Termination. Differentiation was made among the various stages of premature termination as suggested by

Klein (1980): preintake dropout, post-intake and pretreatment termination, and premature treatment termination. Furthermore, two distinct concepts were suggested for the purposes of this work: the first, called the compliance to treatment recommendations, and the second one, outcome of treatment (success or premature termination). These distinct concepts are defined as follows and were used as a means of focusing explanatory questions and of organizing results:

1. Compliance to treatment recommendations: This concept was applied to the period of time between an initial interview and/or evaluation and the first scheduled treatment appointment. It refers to whether the families seen for an initial interview complied with treatment recommendations and attended to at least the first treatment session when this was the recommended route. Note that even if a family was seen for only one therapy session after an intake interview and failed to attend to other sessions, they complied with treatment recommendations according to the definition of compliance in this investigation. The compliance group also includes those families who were recommended to receive no further treatment and who did not receive services after the initial interview and evaluation at the Des Moines Child Guidance Center.

2. Treatment outcome: This concept refers to the time of termination of contact with the Des Moines Child Guidance Center. Once treatment was terminated, various measures of the degree of success of therapy were used, and some of them were: Change in the clients' levels of psychological functioning, change in diagnosis, and reason for termination; their operational definitions will be

described with detail in future sections of this work.

Finally, areas of development needed in this area were recognized and proposed as goals for this study. One of the goals of the present study was to attempt to empirically identify clusters of demographic and assessment information in order to predict treatment modality as well as to separately predict treatment compliance and outcome.

The purpose of this exploratory investigation was to: (a) describe a child guidance center clientele for the period of one year; (b) to empirically relate demographic and intake variables with recommended treatment modality; and (c) to separately relate demographic, intake and treatment variables with respective separate measures of treatment compliance and treatment outcome.

The specific questions to be addressed will be described below. Although the questions will be stated in bivariate form, the analyses were multivariate. For example, the predominance of males was studied in connection with age, family composition, etc. The number of variables explored in these multivariate analyses was subject to practical constraints. The number of observational units limited the number of variables that could be used in such analyses.

The following questions were addressed in this exploratory study. The numbers in parentheses represent the respective designated categories from the Coding Sheet (Appendix A) which were used as variables to address questions and which were used to explore associations of variables.

Description of the clientele of the Des Moines Child Guidance Center (DMCGC)

1. Were there more boys than girls among the DMC GC clientele?  
(2)
2. Was the ratio of boys as compared to girls more accentuated for the latency ages? (2 and 3)
3. What was the most frequent diagnostic category on Axis I of the DSM-III (American Psychiatric Association, 1980) at the DMC GC?  
(33 and 45)
4. Was there a high percentage of families in the clientele of the Center with a specific family constellation and structure? (12, 14, 18, 20, 22, 23, 24, 25)
5. What percentage of cases served by the clinic lived in Polk County? (15)
6. Was there a predominance of families with two or more children as compared with single child families among the DMC GC clientele? (24)
7. What was the distribution of income level of the families seen at the DMC GC during the year under study?
8. What was the religious preference of client/families of the DMC GC during the year of study? (28)
9. What was the racial distribution of clientele at the DMC GC? (29)
10. Was there an association between severity of the psychiatric diagnosis of the identified patient (child who was originally referred to the clinic) and parental level of functioning? (33 and 34)

11. What percentage of cases complied with service or treatment plan? (35 and 47)

12. What were the most common reasons for termination of therapy at the DMCGC? (48)

Correlation between demographic and intake variables with recommended treatment modality

The following questions were addressed by exploring the association between demographic and intake variables with recommended treatment modality variables.

1. Was there any relationship between demographic variables, intake variables, and proposed service action? (An association of all demographic variables available with proposed service action, i.e., categories 1 through 34 with 35.)

2. Was there any relationship between the client's psychological state and proposed service action? (An association of categories 33 and 34 with 35.)

3. Was there any relationship between staff member characteristics and recommended treatment?

Intake and treatment variables related to treatment compliance and treatment outcome

The following questions were addressed by exploring the associations between demographic variables, intake and treatment variables with the treatment compliance variable (MC) and with the treatment outcome variable (MO).

Two questions were presented for each set of variables studied: one pertained to compliance to treatment and the other related to

success of treatment.

1. Were families of children who had received prior DMCGC services (intake and/or treatment) relatively less likely to comply with treatment? (1 and MC)
2. Were families of children who had received prior DMCGC services less likely to benefit from therapy? (1 and MO)
3. Did people who had to wait less time between their first call and the intake interview comply more with recommended treatment? (7 and MC)
4. Did families with previous referrals have a lower likelihood of complying with treatment recommendations? (9 and MC)
5. Did families with previous referrals have a higher probability of success with treatment? (9 and MO)
6. Did patients and families who were self-referred comply more with treatment recommendations than the ones referred via other persons, institutions or clinics? (10 and MC)
7. Did patients and families who were self-referred succeed more in therapy than families referred via other persons, institutions, and clinics? (10 and MC)
8. Did patients and families who were referred by an individual comply more to treatment than individuals referred by an institution? (10 and MC)
9. Did families who were self-referred succeed more in therapy than others? (10 and MO)
10. Did children of intact families (parents married and living together) comply more to treatment recommendations than children from

single parent families? (22 and MC)

11. Did children of intact families succeed more in treatment than single parent families? (22 and MO)

12. Was there an association between presence of a male or a female parental figure in the household and treatment compliance? Was there any association between the child's natural parents' marital relationship and treatment compliance? (12, 14, 18, 20, 22, MC)

13. Was there an association between presence of a male or a female parental figure in the household and treatment success? Was there an association between the child's parents' marital relationship and treatment success? (12, 14, 18, 20, 22, and MO)

14. Was there a relationship between treatment compliance and the presence of the father figure in the intake evaluation? (MC and 50)

15. Was there a relationship between treatment success and the presence of the father figure in the intake evaluation? (MO and 50)

16. Did families with older parents comply more to therapy than families with younger ones? (13, 19, and MC)

17. Did families with older parents benefit from therapy better than families with younger ones? (13, 19, and MO)

18. Did families with two or more children comply less with therapy recommendations than families with one child? (24 and MC)

19. Did families with two or more children benefit less from therapy than families with one child? (24 and MO)

20. Was there a relationship between religious preference and



compliance with treatment? (28 and MC)

21. Was there an association between religious preference with treatment success? (25 and MO)

22. Was there an association between racial origin and treatment compliance? (29 and MC)

23. Was there an association between racial origin and treatment success? (29 and MO)

24. Was there an association between the diagnosis on the Axis I of the DSM-III (American Psychiatric Association, 1980) and compliance with treatment? (recoding of 33 and MC)

25. Was there an association between the diagnosis in the Axis I of the DSM-III (American Psychiatric Association, 1980) and treatment success? (recoding of 33 and MO)

26. Was there a relationship between the different levels of functioning and compliance with treatment? (34 and MC)

27. Was there a relationship between the different levels of functioning and success of treatment? (34 and MO)

28. Was there an association between the intake worker's sex, years of experience and professional identity and compliance with treatment recommendations? (36 and MC)

29. Was there an association between clinicians' professional identity and the use of the various DSM-III (American Psychiatric Association, 1980) diagnostic categories? (27 and 33)

30. Was the compliance rate higher when the time interval between the intake/evaluation session(s) and the first therapy session was shorter? (40 and MC)

31. Was there an association between waiting time for therapy and therapy success? (40 and M0)

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32. Was there an association between therapists' sex, years of experience, professional identity and premature termination during therapy? (41 and 48)

33. Was there an association between duration of treatment and treatment success? (42 and M0)

## METHOD

## Subjects

The focus of this study was the Des Moines Child Guidance Center: its professional staff and its clientele. The Des Moines Child Guidance Center (DMCGC) was founded in 1936 as a nonprofit mental health center designed to meet the needs of children with emotional problems. More recently, the Center's general purpose has been to promote mental health through the provision of services for children in the greater Des Moines area and neighboring rural districts.

Data relevant to the Des Moines Child Guidance Center clientele and staff was provided by a retrospective file review of cases which were: (a) opened during the year of 1983 and (b) which were closed during the period ending December 31, 1986. There was a total of 830 cases opened during the year of 1983. From those, all the cases which were not closed by December 31, 1986 were eliminated for the purposes of data collection of this study.

Given the variety of services provided by the Des Moines Child Guidance Center during the year of 1983 and due to the scarcity of information gathered in some specific programs, the following case files were also eliminated from the original sample: (a) Child Custody Evaluations; (b) 36-Hour Comprehensive Evaluations (extensive family evaluations for youth considered for residential placement); (c) Evaluations with Juvenile Court and other consultation services such as In-Home Treatment, 72-Hour Placement Assessment Service, Therapeutic Nursery; (d) Day Hospital program clients.

There were 30 Custody Evaluations, 26 Home-Based Evaluations, 19 In-Home Treatments, 66 evaluations for the Juvenile Court, and nine Day Hospital cases that were opened during the year of 1983. All the above file cases were eliminated from the subject pool of this investigation.

The resulting number of file cases for which there was study relevant information was 689. A sample of 303 cases, or 44% of the total relevant pool, was selected for study.

### Instruments

The primary instrument of this study was a coding scheme and form developed by the author of this investigation (Appendix A). This coding system was developed in order to reorganize the data in the center files which were chosen for review.

The input for the coding scheme was provided by the following Des Moines Child Guidance Center (DMCGC) forms which were utilized for the data collection:

(a) Request for Service sheet: Completed by the phone intake caller during the first contact with the client's family. Most of the time, the client's mother initiated the first contact and placed the phone call to the DMCGC (Appendix B). This form was usually checked and corrected (when necessary) during the intake interview.

(b) Service Plan or Treatment Plan I: Constructed by the intake clinician after the interview. This was often reviewed during a weekly staffing when final treatment recommendation was made (Ap-

pendix C).

(c) Termination Summary Form: Completed by the therapist or intake worker (Appendix D).

(d) Intake report and progress notes: These sources were reviewed in order to determine treatment modality, as well as to ascertain the percentage of sessions in which clients failed to appear or cancelled appointments.

All the above instruments were completed by DMCGC clinicians.

### Procedure

#### Informed consent

No direct informed consent forms were sent to families who were seen at the DMCGC in 1983 due to the lack of research contact with them at the time of data collection. Rather, modified informed consent forms to collect data from therapists' entries in clients' files were obtained from all therapists at the DMCGC (Appendix E).

The proposal was reviewed by the Iowa State University Human Subjects Committee as well as by the DMCGC Research Committee. Appropriate approvals were obtained from both committees (Appendix F); the Iowa State University Committee on the Use of Human Subjects in Research reviewed this project and concluded that the rights and welfare of human subjects were adequately protected.

#### Data collection procedure

The primary investigator of this research and a DMCGC staff member collected the data in the Center's location. No files were

removed from the building of the DMCGC.

A sample of 303 cases from a potential pool of 689 cases opened from January 1, 1983 and which were closed by December 31, 1986 was selected. The data collectors attempted to select every other case from the chronological order of cases opened from January to December of 1983. Whenever the case selected belonged to one of the categories which was eliminated for the purposes of this study (such as a case that was not terminated by December 31, 1986), the next case was selected for the sample of this study.

Unfortunately, during the four-month period of data selection, from January 1987 to May 1987, the files which were opened in 1983 and closed by December 31, 1986 were being microfilmed by the secretarial staff of the DMCGC. This procedure interfered with the random selection of files because they were no longer organized in chronological manner and, thus, easy access was not possible. However, data collection proceeded in a manner that approximated the initial plan for random selection of the relevant sample.

#### Scoring and recoding of the data

Data selected directly from the Coding Sheet (Appendix A) Data gathered from the forms described above were coded in the Coding Sheet (Appendix A). Different numerical codes were developed for categorical as well as continuous variables. Refer to Appendix A for specific details.

In order to make the cell sizes sufficiently large to meet the assumptions of the statistical tests used and in order to facilitate

meaningful interpretation of the data, some variables were recoded into smaller categories. The categories with larger frequencies were retained intact, whereas the ones with smaller frequencies were combined to form a category with a relatively large frequency. An illustration of this procedure is the recoding of the treatment modality offered at the DMCGC. Originally, there were 46 combinations of treatment modalities offered (see Appendix G for details). Due to the low frequency of cases in each category, they were recoded into four categories: Family Therapy, Parent and/or Playtherapy, Other Therapy Modality, and No Treatment.

Some of the categorical variables had only two categories (e.g., the variable compliance had two levels: the family complied or did not comply to treatment recommendations). Other variables, even after being recoded, still had a great number of categories. When those variables were related with another multicategorical variable, often the majority of cells had expected values less than five. Whenever this occurred in this investigation, the procedure adopted was to further reduce the number of categories to produce a "valid" chi-square statistic. This reduction was based on a logical as well as a clinical rationale.

Specific information on the changes of variables is given in Appendix G. For example, parents' occupations were initially classified according to the two-digit code of the Dictionary of Occupational Titles (1977). They were further regrouped into a smaller number of categories which appear in Appendix G. They are: Unemployed, Title XIX, Disabled, Professional, Skilled, Semi-Skilled, and Unskilled.

Further on, for the chi-square analyses, the above categories had to be recoded into a smaller number of categories, namely: Skilled, Unskilled, Unemployed, and Professional.

Data pertinent to principle diagnosis of child as indicated on Axis I of the DSM-III was also recoded. Categories with higher frequencies remained identical, namely Parent-Child Problem (V61.20), and Oppositional Disorder (313.81). All categories of Conduct Disorder in addition to Atypical Impulse Control Disorder were grouped together. All "V Codes" for Conditions Not Attributable to a Mental Disorder that are Focus of Attention to Treatment (except Parent-Child Problem) were placed in the same group. The remaining categories were coded as belonging to the group called Other.

The diagnostic categories were also classified according to Achenbach and Edelbrock's (1978) dichotomous concept of Overcontrolled and Undercontrolled behavior clusters. These two clusters were originally conceptualized (Achenbach & Edelbrock, 1978) by factor analyses of the symptoms presented by children with various psychiatric diagnosis. Undercontrolled behaviors were described child behaviors in which there was a lack of control over conduct that was expected for a given age. Examples include all Attention Deficit Disorder as well as the Conduct Disorder classifications. In contrast, Overcontrolled behaviors were presented by children who were withdrawn, were shy, timid, tense, and who also reported fears of being unloved, and of being inferior to other children. This concept included the following DSM-III diagnostic categories: Separation Anxiety Disorder, Avoidant Disorder of Childhood or Adolescence, Overanxious Disorder,



and Elective Mutism.

Proposed and Received Service Variables were also recoded due to the large variety of treatment modalities offered by the DMCGC (listed in Appendix A). The various categories were regrouped into four groups, namely: Family Therapy, Playtherapy and/or Parent Therapy, No Further Treatment, and Other Treatment Modality.

Other variables derived from various sources of the Coding Sheet (Appendix A) A few variables were created as a result of a combination of variables which were directly obtained from the Coding Sheet (Appendix A). They were the following:

1. Measure of Compliance (MC): There were two ways in which a family complied with recommendations: (a) if no further service was suggested and the family did not receive treatment; (b) if further services were recommended and the family started receiving the treatment recommended. A family did not comply with recommendations if further service was suggested but the family did not return to the Des Moines Child Guidance Center for treatment.

The Compliance Measure (MC) was derived from the Coding Sheet, categories 38 and 39 (Appendix A).

2. Measure of Treatment Outcome (MO): A second set of measures which were created as a measure of treatment outcome (MO).

A detailed explanation of these variables follows.

The measures of treatment outcome utilized in this study were derived from the forms completed by clinicians described earlier in this section. A review of the treatment outcome measures used in this study follows.

The first treatment outcome measure was defined as a change in the child's diagnostic classification from the time of the first interview to the time of termination of contact with the DMCGC. This was a dichotomous variable, and it was not a clear indication of treatment outcome because it represented change without an indication of direction or level. However, it might give the reader some information on any change of the child's diagnostic category as a result of intervention.

A second treatment outcome variable was defined as the reason for termination of contact with the DMCGC. This information was directly obtained from the Termination Summary Sheet that clinicians filled out for each case. Originally, there were seven reasons for termination of contact with the Center, namely: mutual decision (staff and client's agreement), clients moved, death of the client, against staff advice, lack of contact, other, and against staff advice and lack of contact combined. A composite dichotomous variable was created from this multicategorical variable to allow for more interpretable chi-square and correlation analyses. Thus, reason for termination was then redefined as: with or without staff advice, i.e., did the family terminate therapy with staff's advice or not?

A third treatment outcome variable was defined as the change of level of functioning in the different behavioral domains, namely overall functioning, personal, social, educational, emotional, and parental functioning. The clients' assessed level of functioning at the time of the first interview was subtracted from the level of functioning at the time of termination of contact with the DMCGC. This new variable was sensitive to changes to the better (positive

sign), to the worse (negative sign), or no change at all (zero).

Finally, a more sophisticated measure of treatment outcome was suggested. The dichotomous variable was called "Outcome," and it took into account the reason for termination of contact with the Center as well as the change in the overall level of functioning after services were terminated. "Outcome" was defined as follows: If a family terminated contact with the DMCGC with the staff's advice and it was judged that the child's level of overall functioning improved, outcome was seen as positive. All other alternatives were seen as not having a positive outcome.

#### Statistical Analysis

##### Preliminary analysis: Clinicians' variability in using rating scales which evaluated clients' levels of psychological functioning

A series of multivariate analyses of variance was performed in order to alert the reader of the possibility that clinicians' variation in rating clients' psychological levels of functioning could have influenced the relationship of these rating variables with other variables (e.g., place, sex). In other words, in order to study the presence of variability due to clinicians and/or variability due to the particular clients each clinician worked with, analyses of variance as well as multivariate analyses of variance (ANOVAs and MANOVAs) of the rating scales included in this investigation were performed.

An additional scale of the client's psychological functioning was created, the level of total functioning. This variable was derived

as a result of the sum of the other ratings of psychological functioning, as the formula that follows explains.

Level of Total Functioning = Sum of Overall + Personal  
+ Social + Educational + Emotional + Parental Levels  
of Functioning

A final preliminary analysis was performed by correlating all measures of the clients' assessed levels of psychological functioning in order to investigate if they measured distinct constructs.

#### Data analysis

Data collected pertinent to the variables of this study were of two kinds: categorical (nominal), such as sex, religion, counselor, and at least ordinal, such as age and rating scales of level of emotional functioning. However, dichotomous categorical variables are amenable to correlational analysis in that the correlation between two such variables is a phi-coefficient ( $\phi$ ) and this statistic was used in this study as follows (Fleiss, 1973):

$$\phi = \sqrt{\frac{\chi^2}{N}}$$

In this investigation, the relationship between a dichotomous variable and an ordered one was calculated as a point-biserial correlation coefficient.

Chi-square analyses were utilized in order to assess the presence of association between categorical variables. Correlational and linear regression analyses were conducted for sets of ordinal variables.

These types of tests were also used when one variable was at least ordered, and the other one was a dichotomous one. Finally, when an analysis was made between one categorical, nondichotomous variable and an at-least-ordered variable, an ANOVA was performed. Multiple regression and MANOVA were also used.

Only occasionally were attempts made to explain or interpret results where the  $p$  level was greater than .01. Also, the  $p$  values reported were obtained from computerized data analyses which provided their exact value, e.g., " $p = .000$ " which means that  $p < .001$ .

### Summary analysis

Discriminant analyses were performed as an attempt to predict therapy modality recommended given a combination of demographic and intake variables. The same type of analysis was utilized as an attempt to predict treatment modality received given a combination of demographic and intake variables.

Finally, multiple regression analyses were performed as an attempt to predict compliance to treatment given a combination of demographic and intake variables. Multiple regression analyses were also performed as a means to predict treatment outcome given a combination of demographic, intake, and treatment variables.

### Warning

At this point, it is helpful to remind the reader that this investigation is a case study: results to be described in the following sections are pertinent to the DMCGC only; no generalizations shall be made to other populations. For example, significance tests were

performed in which the independent variable was the therapist. However, the significance tests were based on the number of clients rather than the sample of therapists. Therefore, these tests were merely descriptive of the DMCGC agency, and should not be generalized to populations of therapists.

## RESULTS

The results of this study will be presented in the following order:

1. Preliminary analysis. A study of clinicians' variability in using rating scales in evaluating clients' levels of psychological functioning was conducted. Correlation among the rated levels of the clients' psychological functioning will be reported also.

2. A description of the DMCGC and its clientele's demographic characteristics was completed.

3. The association between treatment modality suggested at the end of the intake procedure and the demographic, intake and therapy variables was calculated. Similar associations will be described with the dependent variable treatment modality received.

4. Compliance. The association between the compliance variable with demographic, intake, and treatment variables was calculated.

5. Treatment outcome. The association between treatment outcome variables with demographic, intake, and treatment variables was computed.

6. Summary analysis. Four discriminant analyses were performed as an attempt to predict therapy modality recommended, treatment modality actually received, compliance with treatment recommendations, and treatment outcome.

Preliminary Analysis: Clinicians' Variability in Using Rating  
Scales Which Evaluated Clients' Levels of Psychological Functioning

Variability of clinicians' ratings of clients' levels of functioning  
at the time of initial interview

A multivariate analysis of variance of clinicians' rating of clients' levels of functioning in all areas was performed. Wilk's Lambda was used throughout for the reported F and significance level. Results indicate that, overall, there was variability in therapists' ratings of their clients' levels of functioning at the time of the initial evaluation (Wilk's Lambda = .321,  $F = 1.67$ ,  $df = 156$ ,  $p = .000$ ).

Separate analyses of variance of each scale of clients' level of functioning reveals variability in clinicians' ratings of all scales (overall, personal, social, educational, emotional, and parental) as indicated in Table 1.

Variability of therapists' ratings of clients' levels of functioning  
at the time of termination of services with the DMCGC

Multivariate analysis of variance of clinicians' ratings of clients' levels of functioning in all areas was performed. Wilk's Lambda was used throughout for the reported F and significance level. Results indicate that, overall, there is variability in therapists' ratings of clients' levels of functioning (Wilk's Lambda = .130,  $F = 1.74$ ,  $df = 138$ ,  $p = .000$ ).

Separate analyses of variance of each scale of clients' level of functioning revealed variability in therapists ratings of all scales (overall, personal, social, emotional, and parental), except



Table 1. Univariate analyses of variance of clinicians' ratings of clients' levels of psychological functioning at the time of the initial interview

Level	Statistics	
	F	p value
Overall	2.74	.000
Personal	2.43	.000
Social	2.13	.002
Educational	1.89	.007
Emotional	2.11	.002
Parental	2.17	.001

Note: dfs = 26,212.

the scale of level of educational functioning, as it is indicated in Table 2.

Variability of therapists' ratings of clients' change in level of functioning from the time of the initial interview to the time of termination of contact with the DMCGC

Multivariate analysis suggested that therapists also varied according to their judgment of change of clients' level of functioning as a result of intervention (Wilk's Lambda = .118,  $F = 1.71$ ,  $df = 138$ ,  $p = .000$ ). A study of the least square means of each individual therapist's ratings of his/her clients' change in the various scales of psychological functioning follows.

Table 3 suggests that a few therapists believed that no change occurred in clients' functioning as a result of intervention, e.g., therapist coded as "400." Other therapists judged that substantial

Table 2. Univariate analyses of variance of clinicians' ratings of clients' levels of psychological functioning at the time of contact with the DMCGC

Level	Statistics	
	F	p value
Overall	3.19	.000
Personal	3.10	.000
Social	2.65	.000
Educational	1.86	.019
Emotional	2.65	.000
Parental	2.81	.000

Note: dfs = 23,102.

changes in the positive direction happened, such as therapist coded as "816" who, on the average, attributed the most change in the positive direction to her/his clients. Also, in average, Outreach therapists (the ones coded "811," "810," and "604") judged that their clients' level of functioning in different areas was improved. In other words, Outreach clinicians judged that most clients benefited from treatment.

Separate analyses of variance of each scale of clients' changes in levels of functioning (overall, personal, social, educational, emotional, and parental) revealed variability in clinicians' judgment of clients' improvement in the scales of social, educational, and parental functioning.

Table 3. Least square means of each individual therapist's ratings of her/his clients' change in the various scales of psychological functioning

Therapist/ scale	Overall	Personal	Social	Educational	Emotional	Parental
805	.72	.44	.72	.56	.39	.50
811	1.71	.64	1.64	.78	1.43	1.78
604	1.69	.62	1.77	1.38	1.23	1.15
810	1.00	.33	1.11	1.11	.89	.67
801	1.00	.12	.75	.25	1.00	.75
1400	.75	.25	.38	.12	.62	.50
611	1.00	.43	.43	.28	.57	.28
612	.67	.33	.67	.17	.83	.67
800	.00	-.20	.40	.20	.60	.00
601	.80	.40	1.20	.60	1.00	.00
804	.67	.00	.00	.00	.00	-1.00
615	1.00	.25	.50	.25	.75	.50
600	1.00	.67	-.33	.00	.00	.00
616	.67	.67	.00	.33	1.00	2.00
400	.00	.00	.00	.00	.00	.00
813	-.33	.00	-.33	-.33	.33	-.33
602	2.00	.50	.50	.50	1.00	1.50
815	.00	.00	.00	.00	.00	.00
816	3.00	1.00	1.00	1.00	2.00	2.00
802	6.00	3.00	6.00	5.00	3.00	5.00
623	3.00	1.00	4.00	1.00	3.00	3.00
806	3.00	.00	3.00	1.00	1.00	2.00
614	1.00	1.00	.00	1.00	.00	.00
618	.00	.00	1.00	.00	.00	.00

Note: There was no available data for some therapists. It is possible that those individuals were the parent therapist in most cases, and, therefore, they did not complete the Termination Summary (Appendix D).

Correlation between clients' various levels of psychological functioning

A correlation matrix was computed among the clients' levels of functioning.

Table 5 indicates a very high correlation between the variables pertaining to clients' assessed levels of psychological functioning

Table 4. Univariate analyses of variance of clinicians' ratings of clients' change in the various levels of psychological functioning

Level	Statistics	
	F	p value
Overall	2.92	.000
Personal	1.84	.021
Social	5.60	.000
Educational	3.49	.000
Emotional	1.96	.012
Parental	2.89	.000

Note: dfs = 23,951.

Table 5. Correlation between the clients' assessed levels of functioning in the various areas at the time of the initial interview

Level	Overall	Personal	Social	Educational	Emotional	Parental
Overall	1.000	.602	.782	.730	.803	.463
Personal		1.000	.560	.507	.472	.347
Social			1.000	.662	.696	.439
Educational				1.000	.596	.310
Emotional					1.000	.453
Parental						1.000

Note: 249 < N < 275.

Note: All correlations are significant ( $p = .000$ ).

before treatment.

A high correlation between the clients' assessed levels of functioning after intervention was also found.

Table 6. Correlation between the clients' assessed levels of functioning in the various areas at the time of termination of contact with the DMCGC

Level	Overall	Personal	Social	Educational	Emotional	Parental
Overall	1.000	.625	.818	.742	.838	.588
Personal		1.000	.617	.525	.544	.450
Social			1.000	.710	.774	.550
Educational				1.000	.672	.437
Emotional					1.000	.588
Parental						1.000

Note: 253 < N < 276.

Note: All correlations are significant ( $p = .000$ ).

Similar results were found with the correlations between the differences of clients' assessed levels of functioning from the time of the initial interview to the time of termination of contact with the DMCGC.

Finally, all the before-intervention measures were correlated with the after-intervention measures, as indicated in Table 8.

The level of overall functioning is used to represent all other scales of levels of psychological functioning for purposes of

Table 7. Correlation of the differences of clients' assessed levels of functioning from the time of the initial interview to the time of termination of services with the DMCGC

Level at: Termination	Beginning					
	Overall	Personal	Social	Educational	Emotional	Parental
Overall	1.000	.537	.793	.697	.782	.567
Personal		1.000	.500	.574	.444	.438
Social			1.000	.734	.729	.600
Educational				1.000	.606	.456
Emotional					1.000	.555
Parental						1.000

Note: 244 < N < 273.

Note: All correlations are significant ( $p = .000$ ).

Table 8. Correlations between the clients' assessed levels of functioning at the beginning and at the termination of contact with the DMCGC

Level at: Termination	Beginning					
	Overall	Personal	Social	Educational	Emotional	Parental
Overall	.785	.481	.637	.551	.624	.410
Personal	.524	.802	.503	.392	.414	.340
Social	.668	.485	.835	.535	.587	.400
Educational	.632	.391	.567	.813	.520	.300
Emotional	.653	.400	.591	.477	.753	.400
Parental	.409	.286	.376	.258	.400	.796

Note: 247 < N < 279.

Note: All correlations are significant ( $p = .000$ ).

simplicity in reporting results. The justification for this is its high correlation with the other scales.

### Description of the Child Guidance Center

The Des Moines Child Guidance Center and its clientele will be described in this section. Results of descriptive analyses will be presented in frequency tables with respect to variables such as age, sex, number of siblings, etc. Complete data for every subject on every variable were not available. The accompanying tables indicate frequencies and percentages of available data as well as reporting the amount and proportion of missing data when appropriate.

There were a total of 303 individuals and their families who constituted the study's sample.

#### Demographic characteristics

Sex There were almost twice as many boys as girls in the sample studied ( $N = 303$ ), as Table 9 shows.

Age group Examination of Table 9 indicates that approximately 33% of the clients were in the young latency age, followed in frequency by preschoolers, who constituted 25% of the sample, and adolescents who comprised 22% of the sample ( $N = 303$ ). The mode of the age distribution was 14, with a mean of 8.66, and a standard deviation of 4.06.

Grade The grade level of subjects ranged from preschool or kindergarten through twelfth grade. The frequencies are displayed in Table 10 ( $N = 222$ ). The mode of the grade distribution was first

Table 9. Age distribution by sex

Age group	Sex		Total
	Females	Males	
AD	32	34	68
IN	2	2	4
LL	19	38	57
PR	32	43	75
YL	30	69	99
Total	117	186	303

Note: AD = adolescents, IN = infants, LL = late latency (10-12 years old), PR = preschoolers (2-5 years old), YL = young latency (6-9 years old).

Note: Mean = 8.66, SD = 4.06, Range: 1-17.

grade, the mean was 4.57, with a standard deviation of 3.24. Twenty-seven percent of the data were missing.

Prior contact with the DMCGC Two hundred and ten people (nearly 70% of the subjects) had not been seen at the DMCGC before ( $N = 303$ ).

Presence of a man in the home, his relationship with the client, and his employment status There was a man living in the household of 164 families seen at the DMCGC during the year of 1983 (55% of the sample) ( $N = 300$ ). One percent of the data was missing.

Table 11 indicates that approximately 67% of the men living in the clients' homes were natural fathers, followed by 21% who were stepfathers ( $N = 164$ ). Forty-six percent of the data were missing.

Examination of Table 12 suggests that nearly 22% of the men who



Table 10. Grade distribution of the children in the sample

Grade	Frequency	Percent
1	34	11
3	24	8
8	24	8
Kindergarten <sup>a</sup>	20	7
2	20	7
6	20	7
4	19	6
5	17	6
9	15	5
7	13	4
10	10	3
11	3	1
12	3	1
Total	222	100

Note: Missing data = 81 (27%).

Note: Mean = 4.57, SD = 3.24, Range: 0-12.

<sup>a</sup>Kindergarten includes preschool and kindergarten age children.

lived in the clients' homes held unskilled jobs, followed by 21% who were professionals, and 15% who had semi-skilled occupations, 15% who were unemployed ( $N = 137$ ). More information about the job status of the man present in the household may be obtained in Table 12. Approximately 55% of the data were missing.

Table 11. Relationship between the male adult in the household and the client

Relationship	Frequency	Percent
Natural father	106	67
Stepfather	35	21
Adoptive father	10	6
In-living boyfriend	5	3
Foster father	4	2
Grandfather	2	1
Other	2	1
Total	164	100

Note: Missing data = 139 (46%).

Presence of a woman in the home, her relationship with the client, and her employment status There was a woman living in the household in 297 cases (about 98% of the sample) (N = 302).

As indicated in Table 13, nearly 89% of the women living in the clients' homes were natural mothers, followed by 4% who were step-mothers. Three percent of the data were missing.

Reference to Table 14 indicates that most mothers were unemployed (27%), or received help from the government through Medicaid or Title XIX (24%). Most of the employed women held semi-skilled jobs (21%). Fourteen percent of the data were missing.

Table 12. Job status among male adults present in the clients' household

Job status	Frequency	Percent
Unskilled	30	22
Professional	28	21
Semi-skilled	20	15
Unemployed	20	15
Skilled	19	14
Title XIX	15	11
Disabled	5	4
Total	137	100

Note: Missing data = 166 (55%).

Table 13. Relationship between the female adult in the household and the client

Relationship	Frequency	Percent
Natural mother	260	89
Stepmother	12	4
Grandmother	7	2
Adoptive mother	6	2
Foster mother	6	2
Other	2	1
Total	293	100

Note: Missing data = 10 (3%).

Table 14. Job status among female adults present in the clients' household

Job status	Frequency	Percent
Unemployed	71	27
Title XIX	61	24
Semi-skilled	54	21
Professional	44	17
Unskilled	21	8
Skilled	9	4
Total	260	100

Note: Missing data = 43 (14%).

Marital status of clients' natural parents Examination of

Table 15 reveals that in 142 families (54%), the natural parents were divorced ( $N = 264$ ). Nearly 35% of the cases were composed of families in which the natural parents were married and were living together. Thirteen percent of the data were missing.

Presence and number of siblings in the client's family Two hundred and twenty-five (76%) of the children in the sample ( $N = 296$ ) had at least one sibling. Two percent of the data were missing.

Perusal of Table 16 shows that most of the children in the sample had either one (46%) or two (31%) siblings ( $N = 235$ ). Approximately 13% of the children in the sample had three siblings while only 4% of them were singletons. Twenty-two percent of the data were missing.

Table 15. Marital status of clients' natural parents

Marital status	Frequency	Percent
Divorced	142	54
Married	93	35
Separated	17	6
Father died	7	3
Mother died	3	1
Parents died	1	< 1
Adoptive parents	1	< 1
Total	264	100

Note: Missing data = 39 (13%).

Table 16. Number of siblings in the client's family

Number of siblings	Frequency	Percent
1	109	46
2	72	31
3	30	13
0	10	4
4	8	3
> 4	6	3
Total	235	100

Note: Missing data = 68 (22%).

Note: Mean = 1.74, SD = 1.09, range: 0-7.

Income distribution Examination of Table 17 indicates that about 20% of the families in the sample ( $N = 173$ ) had an income between \$10,001 and \$15,000 yearly. Twenty percent had an income between \$5,001 and \$10,000. Forty-three percent of the data were missing. The mean income of the sample was \$10,214, with a standard deviation of \$10,644.

Table 17. Income distribution

Income bracket	Frequency	Percent
10,001-15,000	47	27
5,001-10,000	35	20
20,001-30,000	30	17
15,001-20,000	29	17
< 5,000	19	11
> 30,000	13	8
Total	173	100

Note: Missing data = 130 (43%).

Note: Title XIX clients are included in the < 5,000 category.

Note: Mean = 10,214, SD = 10,644, range: 0-60,000.

Religious preference of the sample The religious preferences of the sample are conveyed in Table 18. Approximately 28% of the families ( $N = 134$ ) declared their religious preference as Protestant, while 22% preferred Catholicism. No information concerning religious preference was provided for 56% of the families in the sample.

Table 18. Religious preference

Religion	Frequency	Percent
Protestant	38	28
Catholic	30	22
Lutheran	9	7
Mormon	2	2
Jewish	1	1
Other	54	40
Total	134	100

Note: Missing data = 169 (56%).

Racial distribution Examination of Table 19 indicates that most of the families ( $N = 267$ ) seen were Caucasian (88%), with only 10% being Black. Twelve percent of the data were missing.

Medication Forty-four (18%) of the children in the sample ( $N = 243$ ) were taking prescribed medication at the time of the initial interview. Twenty percent of the data were missing.

#### Characteristics of services sought and provided in the Center

Frequency of service requests Table 20 indicates that during the months of February, April, January, and March, there was a higher frequency of intake services provided at the Center ( $N = 302$ ) than other times of the year. In other words, more initial face-to-face contact was made with the Center for services during these months, with the mode being the month of February. On the other hand, there

Table 19. Racial distribution of the families

Race	Frequency	Percent
Caucasian	235	88
Black	26	10
Hispanic	3	1
Other	3	1
Total	267	100

Note: Missing data = 36 (12%).

was a lower frequency of first contact and face-to-face contact with the Center during the months of July, December, and June. Less than 1% of the data were missing.

Preintake waiting time: Time between the first call and the initial interview Table 21 shows that 110 cases, or 36%, were seen for an initial visit at the Center from zero to five days after a telephone call was made in which service was requested. Twenty-three percent of the cases were seen for an initial interview between six and ten days after making contact with the Center through a telephone call. Only about 6% of the cases in the sample waited over 35 days for an initial interview after the family had made contact with the Center.

The mean of the preintake waiting period time is 10.75, with a standard deviation of 9.91.

Family members who had been seen at the DMCGC before the 1983 interview Examination of Table 22 reveals that none of the members of 222 families (73%) had been seen for services before the 1983 visit.



Table 20. Request for services at the Des Moines Child Guidance Center by month

Month	Frequency	Percent
2	39	13
4	38	13
1	37	12
3	35	12
5	26	9
10	26	9
9	23	8
8	21	7
11	20	7
6	15	5
12	12	4
7	10	3
Total	302	100

Note: Missing data = 1 (< 1%).

In 20% of the cases, the child who was referred for services during the 1983 year had been seen previously at the DMCGC.

Who made the initial contact seeking services? Table 23 shows that in 260 of the cases (86%, N = 303), the child's mother made the initial contact seeking services at the DMCGC.

Who referred children to the DMCGC? Table 24 indicates that mothers referred their children in 92 cases (30%, N = 302). Other

Table 21. Preintake waiting time: time in days between the request for service and the intake interview

Number of days	Frequency	Percent
0-5	110	36
6-10	70	23
11-15	55	18
16-20	23	8
31 or higher	18	6
21-25	17	6
26-30	10	3
Total	303	100

Note: Mean = 10.75, SD = 9.91, range: 0-63.

Table 22. Family members who had been seen at the DMCGC before the 1983 interview

Who was seen	Frequency	Percent
Nobody	222	73
Self	59	20
Sibling	16	5
Other	6	2
Total	303	100

Table 23. Who made the initial contact seeking services

Who called	Frequency	Percent
Mother	260	86
Father	25	8
Other person	9	3
Parents	7	2
Dept. of Human Services	2	1
Total	303	100

Table 24. Who referred children to the DMCGC

Referral	Frequency	Percent
Mother	92	30
Other individual	59	20
School	45	15
Dept. of Human Services	33	11
Other institution	30	10
Physician	23	8
Father	13	4
Court	4	1
Parents	3	1
Total	302	100

Note: Missing data = 1 (< 1%).

individual (20%), school (15%) and the Department of Human Services (11%) also served as referral sources.

Presence of parents at the intake interview The child's mother was present in the initial interview in 255 of the cases (99%,  $N = 257$ ). Fifteen percent of the data were missing. In contrast, the child's father was present in the interview in 29 of the cases (28%,  $N = 105$ ). Sixty percent of the data were missing.

Clients' levels of psychological functioning assessed at the time of the initial interview Statistics of each of the assessed levels of psychological functioning is provided in Table 25.

A rank ordering of level of functioning ratings suggests that, taking into consideration each scale range, the highest ratings were associated with the level of educational functioning (Mean = 4.14, out of a maximum of 6). On the other hand, the lowest ratings were accorded to the level of overall (Mean = 5.17, out of a maximum of 9) and social functioning (Mean = 4.55, out of a maximum of 8).

Coded diagnosis at the time of the initial interview Table 26 indicates that 65 children (22%) were diagnosed as having an Adjustment Disorder. Fifteen percent of the children were diagnosed as having a Parent-Child Problem, whereas 12% of the clients were classified as a Conduct Disorder. Four percent of the data were missing.

Frequency of overcontrolled behavior clusters at the time of the initial interview Forty-seven (73%) of the cases were categorized in the undercontrolled behavior cluster. In contrast, 17 children (27%) were categorized in the overcontrolled group. Two hundred and thirty-nine children were not in either group due to missing data

Table 25. Means of clients' levels of psychological functioning assessed at the time of the initial interview

Scales	N	Mean	Statistics		
			Standard deviation	Mode	Range
Overall	272	5.17	1.55	5	1-9
Personal	279	2.88	.81	3	1-4
Social	280	4.55	1.55	5	1-8
Educational	258	4.14	1.22	4	1-6
Emotional	278	4.13	1.06	4	1-7
Parental	286	5.00	1.44	5	1-9

Note: Scales of level of psychological functioning have different ranges, as indicated above. For all scales, 1 represents the lowest level of psychological functioning.

or due to the fact that their diagnosis did not belong to either cluster.

Intake worker characteristics Two hundred and one cases (66%) were seen by a female clinician for an initial interview. Note that there were almost twice as many female (N = 21) as male therapists (N = 11).

Examination of Table 27 indicates that 95 cases (39%) were seen by a clinician who had between six and ten years of experience at the clinic. In contrast, only 26 cases (11%) were seen by a clinician who had between 16 and 30 years of experience.

Table 27 suggests that most of the intake interviews were conducted by clinicians who had been working at the DMCGC between six and

Table 26. Coded diagnosis at the time of the initial interview

Diagnostic code	Frequency	Percent
Adjustment disorders	65	22
Other disorders	57	20
Parent-child problem	45	15
Conduct disorder	36	12
Deferred	33	11
Oppositional disorder	32	11
V codes	24	8
Total	292	100

Note: Missing data = 11 (4%).

Table 27. Number of cases seen by clinicians who varied in years of experience at the DMCGC

Number of years	Number of clinicians	Number of children	Percent of children
6 to 10	8	95	39
11 to 15	3	65	26
0 to 5	8	44	18
16 to 30	4	26	11
Students/interns	8	16	6
Total	31	246	100

Note: Missing data = 57 (19%).

fifteen years. The senior staff as well as the students and interns conducted a lower number of intake interviews. Fifty-seven cases (19%) were missing.

Although there were nearly as many social workers as psychologists, social workers conducted 169 intake interviews (58%), whereas psychologists conducted 125 (42%) intake sessions. Three percent of the data were missing.

Location of proposed service Table 28 reveals that 220 cases (74%) were seen at the Center location of the DMCGC. Fifty-eight (20%) were seen by the Outreach program, and 20 (7%) of the cases were seen at the Satellite clinics in Indianola and Ankeny.

Table 28. Location of proposed services

Location	Frequency	Percent
Center based	220	74
Outreach <sup>a</sup>	58	20
Ankeny	12	4
Indianola	8	3
Total	298	100

Note: Missing data = 5 (2%).

<sup>a</sup>Outreach = clients seen at the Des Moines Public Schools and/or in the City of Des Moines (in their homes).

Treatment modalities recommended at the time of the intake interview Frequencies of recommended treatment modalities are depicted in Table 29.

Table 29. Distribution of the various treatment modalities recommended to clients at the completion of the initial interview

Recommended treatment	Frequency	Percent
Combination of treatments	65	22
Play and parent therapy	50	17
Family therapy	49	16
Individual therapy	34	11
Follow-up visit	32	11
No further treatment	26	9
Preschool group	25	8
Other singular treatment	17	6
Total	298	100

Note: Missing data = 5 (2%).

Table 29 reveals that play and parent therapy were the most common type of therapy offered by themselves (22%), followed by family therapy (17%). A combination of treatment modalities was the most frequent type of therapy offered, and examples of this category include parent group with activity group, individual therapy with family therapy, etc. Two percent of the data were missing.

Compliance with treatment recommendations Two hundred and fifty-two people (83%) agreed with recommendations given by clinicians



at the time of the intake interview. However, only 155 people (52%) complied with treatment recommendations. Two percent of the data were missing.

Waiting time between the initial interview and the first therapy visit Examination of Table 30 indicates that 38 (25%) of the families waited six to ten days to start therapy after they had been seen for an initial interview. Thirty-four people (22%) waited over 30 days to have their first therapy visit. The mean of the waiting time between the intake interview and the first therapy visit was 24.90, and the standard deviation was 35.22. The range of this variable was 0-193 days.

Table 30. Waiting time between the initial interview and the first therapy visit

Interval of time in days	Frequency	Percent
6 to 10	38	25
More than 30	34	22
16 to 30	30	20
11 to 15	27	18
Zero	20	13
1 to 5	5	3
Total	154	100

Note: Missing data = 149 (49%).

Note: Mean = 24.90, SD = 35.22, Range: 0-193.

Therapists' characteristics      Although there were nearly the same number of psychologists as social workers, 85 (62%) of the children were treated by social workers, whereas 53 (39%) were seen by psychologists. Fifty-four percent of the data were missing.

Seventy-three children (52%) were treated by female therapists ( $N = 139$ ). Note that there were almost twice as many female ( $N = 21$ ) as male therapists ( $N = 11$ ).

Thirty children were seen by therapists who had between six and ten years of experience (30%). Thirty-six (29%) of the children were seen by therapists who had 11 to 15 years of experience.

Table 31 indicates that most of the therapy cases were seen by therapists who had between six and fifteen years of experience. Senior therapists (16-30 years of experience) and students and interns saw a lower frequency of therapy cases. Fifty-eight percent of the data were missing. Note that there were relatively less therapists with 16 years of experience or more working at the DMCGC than clinicians with fewer years of experience.

Location where therapy was delivered      Table 32 shows that 96 (62%) of the cases were seen at the Center in Des Moines. In contrast, 47 (30%) of the cases were seen at the Outreach program, and 11 (7%) of the cases were seen at the Satellite clinics in Indianola and Ankeny. Forty-nine percent of the data were missing.

Treatment modalities implemented      One hundred and fifty-two cases received no treatment (50%), as indicated in Table 33. The modality play and parent therapy was implemented for 41 families (14%).

Table 31. Number of cases seen by therapists who varied in years of experience at the DMCGC

Number of years	Number of therapists	Number of children	Percent of children
6-10	8	37	30
11-15	3	36	29
0-5	8	30	24
Students/interns	8	13	10
16-30	4	10	8
Total	31	126	100

Note: Missing data = 177 (58%).

Table 32. Cases treated in the various locations

Location	Frequency	Percent
Center based	96	62
Outreach	47	30
Satellite clinics	11	7
Total	154	100

Note: Missing data = 149 (49%).

Table 33. Treatment modalities implemented

Treatment	Frequency	Percent
No treatment	152	50
Play and parent therapy	41	14
Combination of treatments	30	10
Family therapy	26	9
Individual therapy	22	7
Preschool group	13	4
Other singular treatment	10	3
Follow-up visit	9	3
Total	303	100

Duration of therapy in months . Table 34 reveals that 40 therapy cases (30%) lasted one month, 19 families were seen for a period of two months (14%), and 14 cases (10%) lasted less than a month.

Table 34 also indicates that the mean duration of therapy in months was 3.55, with a standard deviation of 3.86, and a range of zero to 19 months. Fifty percent of the data were missing.

Number of therapy visits One hundred and sixty-one (53%) of the cases had no therapy visits following the initial interview as shown in Table 35. Sixty-two (20%) of the families had between one and five visits, whereas 21 families (7%) had more than 25 visits.

Table 35 reveals that the mean number of therapy visits was 11.28, with a standard deviation of 13.94, and a range of zero to 65 visits.

Table 34. Duration of therapy (in months)

Number of months	Frequency	Percent
1	41	30
2	19	14
0	14	10
3	14	10
4	13	10
5	8	6
6	7	5
7	4	3
10	4	3
8	3	2
9	2	2
11	2	2
13	1	1
15	1	1
16	1	1
17	1	1
19	2	2
Total	137	100

Note: Mean = 3.55, SD = 3.86, Range: 0-19.

Note: Missing data = 166 (55%).

Table 35. Number of therapy visits

Number of visits	Frequency	Percent
Zero	161	53
1 to 5	62	20
6 to 10	23	8
More than 25	21	7
11 to 15	19	6
16 to 20	12	4
21 to 25	5	2
Total	303	100

Note: Mean = 11.28, SD = 13.94, Range: 0-85.

Appointments missed      The average number of appointments missed with notice to the therapist was .54 with a standard deviation of 1.75. The mode of the distribution was zero, and the range was 0-15. Thirty-three percent of the data were missing.

The mean number of appointments missed without notice to the therapist was 2.17 with a standard deviation of 1.35. The mode of the distribution was zero and the range was 0-25. Thirty-four percent of the data were missing.

Clients' levels of psychological functioning at the time of termination of services with the DMCGC      Table 36 indicates the assessed levels of clients' psychological functioning in different areas at termination of contact with the DMCGC.

The meaning of the above results becomes more clear when the

Table 36. Means of clients' levels of psychological functioning assessed at the time of termination of services at the DMCGC

Scale	N	Mean	Statistics		
			Standard deviation	Mode	Range
Overall	276	5.67	1.69	5	1-9
Personal	279	3.07	.78	3	1-4
Social	281	4.98	1.62	6	1-8
Educational	264	4.42	1.18	5	1-6
Emotional	282	4.56	1.19	5	1-7
Parental	280	5.34	1.66	5	1-9

reader looks at the differences of the assessed clients' levels of functioning from the initial interview to the time of termination of contact with the DMCGC.

Table 37 suggests that the mode of change in clients' levels of functioning was zero, i.e., clients were seen to not have improved from the time of the initial interview to termination of contact with the DMCGC. On the average, however, there was an improvement in the clients' levels of functioning (all means are higher than one). However, the range — which goes from negative to positive points — indicates that negative impact was also judged to have happened in some cases of the sample.

Reason for termination of contact with the DMCGC      As indicated in Table 38, 102 cases (34%) terminated contact with the DMCGC with staff advice. Seventy-one (24%) of the cases interrupted their contact

Table 37. Means of clients' changes in level of psychological functioning from the initial interview to termination of services

Scale	N	Mean	Statistics		
			Standard deviation	Mode	Range
Overall	271	.48	1.07	0	-3 to 6
Personal	278	.19	.50	0	-2 to 3
Social	279	.44	.91	0	-2 to 6
Educational	258	.29	.73	0	-2 to 5
Emotional	277	.43	.81	0	-2 to 4
Parental	277	.31	1.10	0	-3 to 5

Note: Positive numbers indicate change for the better.

with the DMCGC, and 51 families (17%) terminated contact with the Center against staff advice. Two percent of the data were missing.

Change in the diagnostic category after intervention One hundred and seventy-one children (65%) did not have their diagnosis changed from the time of the initial interview to the end of contact with the DMCGC. Thirteen percent of the data were missing.

Overcontrolled and undercontrolled behavior clusters Forty children (80%) had diagnosis at the time of the termination of contact with the DMCGC which belonged to the undercontrolled behavior cluster. Twelve children (21%) were categorized in the overcontrolled clusters. Finally, 245 children did not categorize in either cluster either due



Table 38. Reason for termination of contact with the DMCGC

Reason	Frequency	Percent
Mutual decision	102	34
Lack of contact	71	24
Against staff advice	51	17
Other reason	35	12
Against staff advice and lack of contact	26	9
Moved	12	4
Death	1	< 1
Total	298	100

Note: Missing data = 5 (2%).

to missing data or due to the fact that their diagnosis did not belong to any of the two behavior clusters.

#### Treatment Modality Recommended

The variable treatment modality proposed was recoded from the original categories (see Appendix A for a complete list of the various treatment modalities offered at the DMCGC in 1983) into four classes, namely family therapy, play therapy and/or parent therapy, no further treatment recommended, and other treatment modality.

Age group

Table 39 indicates a significant relationship between the child's age group and the treatment recommended ( $\chi^2 = 26.54$ ,  $df = 9$ ,  $p = .002$ ).

Preschoolers (PR) were mostly recommended to receive other therapy modality — which was predominantly preschool and parent therapy combined — whereas young latency children were recommended to receive play therapy and/or parent therapy more than other age groups.

Table 39. Proposed therapy by age group

Therapy/age group	AD	LL	PR	YL	Total
Family therapy	9	13	13	14	49
Play/parent therapy	22	16	7	39	84
No therapy	15	10	18	15	58
Other therapy	20	18	40	29	107
Total	66	57	78	97	298

Note: AD = adolescents; LL = late latency; PR = preschoolers; YL = young latency.

Note: Missing data = 5 (2%).

Note:  $\chi^2 = 26.54$ ,  $df = 9$ ,  $p = .002$ .

Other demographic variables

Other demographic variables were not significantly associated with recommended treatment modality. These variables were: sex of child, race, and religion.

### Previous contact

Individuals who conducted the intake interview (intake workers) did not recommend different types of treatment for clients or their family members as a function of prior contact with the DMCGC.

### Referral

Recommended treatment modality was not significantly associated with the referral source either.

### Family constellation

This aggregate consisted of the following separate variables: presence of a male in the household and his job status, presence of a female in the household and her job status, natural parents' marital relationship, presence and number of siblings, and income. None of these variables were significantly associated with recommended treatment modality.

### Clients' psychological characteristics

For the purposes of performing chi-square analyses, diagnostic categories were recoded as described earlier in this study and delineated in Appendix G: Adjustment Disorder, Oppositional Disorder, Conduct Disorder, Parent-Child Problem and Other Disorders.

Proposed service was not significantly associated with the client's psychiatric diagnostic category at the time of the initial interview. The clients' levels of functioning in all areas (overall, personal, educational, social, emotional, parental) were correlated with whether the client was recommended to receive any kind of treatment or no

Table 40. Proposed treatment modality by child's psychiatric diagnostic category

Treatment	Diagnosis				
	Adjustment disorder	Conduct disorder	Oppositional disorder	Other disorder	Parent/child problem
Family	10	6	7	13	12
No therapy	9	5	3	28	10
Play/parent	26	13	9	26	7
Other	20	12	12	44	16
Total	65	36	31	111	45

Note: Missing data = 15 (5%).

Note:  $p = .092$ .

treatment at all (all  $p$  levels are lower than .01).

Table 41 indicates that clients with higher levels of overall functioning were recommended to receive further treatment at the DMCGC less often than lower functioning clients.

#### Intake worker characteristics

Social workers did not significantly differ from psychologists in the treatment modality they recommended to clients. Also, male and female intake workers did not vary in treatment modality recommended. Finally, there was no significant relationship between the intake workers' years of experience and type of treatment recommended.

Table 41. Association between clients' levels of functioning at the time of the initial interview and whether treatment was proposed

Statistics	Scales						
	Overall	Personal	Social	Educational	Emotional	Parental	Total
Correlations	-.243	-.190	-.202	-.181	-.231	-.117	-.278
p level	.000	.000	.000	.004	.000	.048	.000
N	272	279	280	258	278	286	243

Proposed treatment and received treatment

The treatment received was the same as the proposed treatment 48% of the time ( $\chi^2 = 117.70$ ,  $df = 9$ ,  $p = .000$ ).

Table 42 indicates that 11 families who were recommended to receive family therapy received this type of treatment (this represents 24% of the families who were recommended to receive family therapy). In contrast, 49 families who were recommended to receive no treatment did not receive any (this represents 84% of the families who were recommended to seek no further treatment after the initial interview). Finally, when families were recommended to receive the play therapy and/or parent therapy modality, 47 families did indeed receive this modality of therapy and this represents 57% of the families who were recommended this treatment modality at the time of the initial interview.

Table 42. Proposed treatment by received treatment

Received	Proposed				Total
	Family	None	Play/parent	Other	
Family	11	1	4	10	26 (10%)
None	31	49	27	40	147 (55%)
Play/parent	3	2	47	11	63 (24%)
Other	0	6	4	22	32 (12%)
Total	45 (17%)	58 (22%)	82 (31%)	83 (31%)	268 (100%)

Note: Missing data = 35 (11%).

Note:  $\chi^2 = 117.70$ ,  $df = 9$ ,  $p = .000$ .

## Treatment Received

Age group

Age group was significantly associated with treatment received ( $\chi^2 = 29.86$ ,  $df = 9$ ,  $p = .000$ ).

Table 43 indicates that preschoolers received more "Other treatment" modality — which included mostly the preschool group and parent therapy — than other age groups did. Adolescents and late latency children received mostly individual therapy and/or parent therapy.

Table 43. Received treatment by age group

Therapy	Age group				Total
	AD	LL	PR	YL	
Family therapy	7	4	7	8	26 (10%)
No therapy	36	28	43	45	152 (56%)
Play/parent therapy	13	16	6	28	63 (23%)
Other therapy	4	2	19	7	32 (12%)
Total	60 (22%)	50 (18%)	75 (27%)	88 (32%)	273 (100%)

Note: Missing data = 30 (10%).

Note:  $\chi^2 = 29.86$ ,  $df = 9$ ,  $p = .000$ .

Income

Analysis of variance reveals that income was significantly associated with type of treatment received ( $F = 6.88$ ,  $dfs = 3$ ,  $74$ ,  $p = .000$ ). Higher income families (average = \$15,370) received more family therapy than other families. A group of families with an average

income of zero dollars received no treatment at all. Families with an average income of \$9,524 received more play therapy and/or parent therapy than other families with different income levels.

#### Clients' psychological characteristics

Treatment received was not significantly associated with the diagnostic category attributed to clients at the time of intake. In other words, children did not receive differential treatment modalities according to the various disorders they presented.

Also, no significant results were found in the association between overcontrolled and undercontrolled behavior clusters and therapy modality received. No relevant association was found between the clients' level of overall functioning and type of treatment received nor between the parental level of functioning and the type of treatment received.

#### Place where service was received

Family therapy was a significantly more popular treatment modality received at the location of the DMCGC than in the Outreach and Satellite Clinics. By contrast, play therapy and/or parent therapy were the most used treatment modalities in the Outreach cases ( $\chi^2 = 131.60$ ,  $df = 6$ ,  $p = .000$ ).

The reader should be informed that the variable location where families received treatment was found to be significantly associated with another treatment variable, the total number of therapy visits ( $F = 6.58$ ,  $dfs = 2, 151$ ,  $p = .002$ ).



Table 44. Type of treatment received according to place where service was provided

Treatment	Place			Total
	Center based	Outreach	Satellite	
Family	23	1	2	26 (10%)
No treatment	145	0	0	145 (55%)
Play/parent	22	37	4	63 (24%)
Other	27	5	0	32 (12%)
Total	217 (82%)	43 (17%)	6 (2%)	266 (100%)

Note: Missing data = 37 (12%).

Note: Warning: 42% of the cells have expected counts less than 5. This results in a conservative chi-square.

Note:  $\chi^2 = 131.60$ ,  $df = 6$ ,  $p = .000$ .

Table 45 suggests that Outreach cases seemed to have attended more therapy visits than people who were seen at the Center or at the Satellite Clinics.

#### Therapist characteristics

Sex of therapist was found to be significantly associated with treatment modality received ( $\chi^2 = 15.70$ ,  $df = 3$ ,  $p = .001$ ).

As Table 46 indicates, male counselors delivered significantly more often play therapy and/or parent therapy than other types of therapy.

Social workers and psychologists did not differ in the treatment modality they delivered.

Table 45. Least square means of total number of therapy visits as a function of the location where services were provided

Location	Mean	N
Center Based	8.18	96
Outreach	16.77	47
Satellite Clinics	12.27	11

Note:  $F = 6.58$ ,  $dfs = 2, 151$ ,  $p = .002$ .

Table 46. Treatment modality received according to sex of therapist

Treatment	Sex of therapist		Total
	Female	Male	
Family	15	9	24 (21%)
No treatment	2	0	2 (2%)
Play/parent	23	38	61 (55%)
Other	20	5	25 (22%)
Total	60 (54%)	52 (47%)	112 (100%)

Note: Missing data = 191 (63%).

Note:  $\chi^2 = 15.70$ ,  $df = 3$ ,  $p = .001$ .

Therapists' years of experience was found to be significantly associated with treatment modality received ( $F = 7.23$ ,  $dfs = 2, 97$ ,  $p = .001$ ).

Table 47 suggests that senior staff members conducted follow-up visits or further evaluations (or no treatment at all) more often

Table 47. Therapists' average years of experience according to treatment modality delivered

Treatment	Least square means of years of experience	N
Family	11.75	20
Play/parent	7.95	56
Other	11.75	24

Note:  $F = 7.23$ ,  $dfs = 2, 97$ ,  $p = .001$ .

than did other therapists. Clinicians with less years of experience provided more play therapy and/or parent therapy than other staff members.

#### Treatment variables

The different treatment modalities varied significantly in their duration ( $F = 5.53$ ,  $dfs = 2, 104$ ,  $p = .005$ ), as well as in their length measured in total number of therapy visits ( $F = 9.44$ ,  $dfs = 2, 118$ ,  $p = .000$ ).

As Tables 48 and 49 indicate, play therapy and/or parent therapy constituted a longer term therapy modality than family therapy or other types of treatment provided at the DMCGC.

#### Summary

A summary of the above findings follows:

1. The only demographic variable associated with recommended treatment was age of the client. Families whose preschooler children presented psychological symptoms were more often recommended to receive

Table 48. Average duration of therapy in months according to treatment modality delivered

Treatment modality	Least square means of therapy duration	N
Family	2.42	24
Play/parent	4.22	58
Other	1.56	25

Note:  $F = 5.53$ ,  $dfs = 2, 104$ ,  $p = .005$ .

Table 49. Average number of therapy visits according to treatment modality delivered

Treatment modality	Least square means of the number of visits	N
Family	5.54	26
Play/parent	14.25	63
Other	3.91	32

Note:  $F = 9.44$ ,  $dfs = 2, 118$ ,  $p = .000$ .

the treatment modality called other treatment modality. In these cases, other treatment modality consisted of a combination of preschool therapy group with parent therapy or parent group.

2. Treatment modality received was also associated with the child's age group. Preschoolers and their families received more other treatment. Also, families with the highest income seen at the DMCGC received more family therapy than other families with different income levels.

3. The clients' levels of psychological functioning were significantly associated with whether clients were recommended to receive treatment or not: clients with higher levels of psychological functioning were recommended to receive further treatment less often than clients with lower levels of psychological functioning. No other psychological variable — such as the client's psychiatric diagnostic category — was found to be significantly associated with whether clients were recommended to receive treatment or not.

4. No significant association was found between the clients' levels of psychological functioning and treatment received. Also, no association was found between the clients' psychiatric diagnostic category and treatment modality received.

5. Usually, the recommended treatment was the same as the received therapy.

6. Location where the treatment was delivered was significantly associated with type of treatment delivered. Family therapy was a more popular modality of treatment delivered at the Center than in the Satellite Clinics and in the Outreach program. In contrast, play

and/or parent therapy was the most popular treatment modality delivered in the Outreach program.

7. Finally, treatment delivered in the Outreach program was longer and had a greater number of therapy visits than treatment delivered at the Center and at the Satellite Clinics.

### Compliance to Treatment Recommendations

#### Demographic variables

There was no significant association between clients' demographic variables and compliance with treatment recommendations. The only variable approaching significance was whether the clients lived in Polk County or in another county ( $p = .046$ ).

#### Family constellation

Family constellation variables were not significantly correlated with treatment compliance. These were presence of a man in the household, his job status, presence of a woman in the household, her job status, natural parents' marital relationship, presence of siblings in the family.

#### Referral and previous contact

Families who were self-referred did not significantly comply more with treatment recommended than families who were referred by another individual or institution (such as the Department of Human Services).

Also, families who had been seen for services at the DMCGC before the 1983 visit did not significantly comply more to treatment

recommendations than families whose first visit to the Center occurred in 1983.

#### Clients' psychological characteristics

Compliance to treatment recommendation was not significantly associated with the psychiatric diagnostic category attributed to the child nor with the dichotomous classification of overcontrolled/undercontrolled behavior clusters.

Finally, compliance was not significantly correlated with the clients' levels of functioning at the time of the initial interview. In contrast, and as one would expect, compliance was significantly correlated with all the ratings of clients' levels of functioning after intervention at the DMCGC except the level of educational functioning ( $p = .020$ ).

Table 50 indicates that families who complied with treatment recommendations were judged to have higher levels of functioning in almost all areas than clients who did not comply with treatment recommendations.

Compliance was also significantly correlated with the changes in all ratings of clients' levels of functioning from the time of the initial interview to the termination of services with the DMCGC ( $p = .000$  for all scales of levels of psychological functioning).

Table 51 suggests that people who complied with treatment recommendations were judged to increase their levels of psychological functioning in all areas as opposed to people who did not adhere to treatment recommendations.

Table 50. Correlation between compliance and clients' level of functioning at the time of termination of services with the DMCGC

Statistics	Level						Total
	Overall	Personal	Social	Educational	Emotional	Parental	
Correlation	.222	.165	.218	.144	.307	.232	.263
p level	.000	.006	.000	.020	.000	.000	.000
N	271	274	276	260	277	275	245

Table 51. Correlation between compliance and change in clients' level of functioning from the time of the initial interview to the time of termination of contact with the DMCGC

Statistics	Level						Total
	Overall	Personal	Social	Educational	Emotional	Parental	
Correlation	.412	.338	.474	.389	.484	.369	.505
p level	.000	.000	.000	.000	.000	.000	.000
N	266	274	274	255	272	273	235



### Intake worker characteristics

Although results are not significant at the  $p = .01$  level, there appears to be a relationship between intake worker profession and compliance with treatment recommendations: families complied more with treatment recommendations when the intake worker was a social worker than a psychologist ( $\chi^2 = 6.36$ ,  $df = 1$ ,  $p = .012$ ).

There was no difference in clients' compliance to treatment recommendations whether the intake worker was a female or male. Also, there was no difference in compliance according to the clinicians' years of experience.

Table 52. Clients' compliance to treatment recommendations according to intake workers' profession

Complied	Profession		Total
	Psychologist	Social worker	
No	70	68	138
Yes	54	96	150
Total	124	164	288

Note: Missing data = 15 (5%).

Note:  $\chi^2 = 6.36$ ,  $df = 1$ ,  $p = .012$ .

### Intake variables

#### Presence of father (or father figure) in the initial interview

This variable was not significantly associated with compliance to treatment ( $p = .022$ ).

Location of proposed service      There was a significant relationship between place where service was proposed to be delivered (i.e., Center Based, Outreach, or Indianola and Ankeny Satellite Clinics) and compliance with treatment recommendations ( $\chi^2 = 16.58$ ,  $df = 2$ ,  $p = .000$ ).

Table 53 suggests that families seen by the Outreach Team complied more with treatment recommendations than families seen at the Center in Des Moines or in the Satellite Clinics in Indianola and Ankeny.

Table 53. Clients' compliance to treatment recommendations according to the location where service was proposed to be delivered

Location	Complied		Total
	No	Yes	
Center Based	118	100	218
Outreach	14	44	58
Satellite	9	11	20
Total	141	155	296

Note: Missing data = 7 (2%).

Note:  $\chi^2 = 16.58$ ,  $df = 2$ ,  $p = .000$ .

Waiting time between the intake interview and the first therapy session scheduled      There was a significant relationship between time on the waiting list and whether the client's family complied to treatment recommendations ( $r = .233$ ,  $p = .004$ ,  $n = 152$ ). Contrary to the literature reviewed in this paper, the longer the time on the waiting list, the higher the compliance to treatment recommendations.

### Summary

A summary of the findings concerning the study of the relationship of the variables compliance to treatment recommendations with other variables follows:

1. No demographic variables were found to be significantly associated with compliance to treatment. Also, source of referral as well as previous contact with the DMCGC were not related with compliance to treatment.

2. The only therapist variable which showed a tendency for a relationship with compliance with treatment recommendations was the intake workers' profession: there was a tendency for families to comply with treatment more often when the intake worker was a social worker rather than a psychologist.

3. Families complied more with treatment recommendations when the clients were seen in the Outreach program rather than in the Center or in the Satellite Clinics in Indianola and Ankeny.

4. The time a family had to wait for a therapy session was also significantly correlated with compliance: the longer a family had to wait to start therapy, the more often they complied with treatment recommendations.

### Treatment Outcome

The measures of treatment outcome utilized in this study were derived from the forms completed by clinicians described earlier in this paper. A detailed explanation of the treatment outcome measures

used in this section was provided in the Methods chapter of this work. A brief review of the measures follows.

The first treatment outcome measure was defined as a change in the child's diagnostic classification from the time of the first interview to the time of termination of contact with the DMCGC. This is a dichotomous variable.

A second treatment outcome variable was called the reason for termination of contact with the DMCGC. This is also a dichotomous variable and it was defined as whether the clients terminated therapy with or without staff advice.

A third treatment outcome variable was given the name change of level of psychological functioning in the different areas such as overall, personal, social, educational, emotional, and parental. The clients' assessed level of functioning at the time of the first interview was subtracted from the level of functioning at the time of termination of contact with the DMCGC.

Finally, a more sophisticated measure of treatment outcome was called "Outcome" and it was defined as follows: If a family terminated contact with the DMCGC with the staff's advice and it was judged that the child's level of overall functioning improved, outcome was seen as positive. All other alternatives were seen as not having a positive outcome.

We now turn to the reporting of the results concerning the above variables.

Change in the child's diagnostic classification from the time of the first interview at the DMCGC to the occasion of termination of contact with the DMCGC

None of the clients' demographic and psychological variables nor the clinicians' characteristics were significantly associated with change in the diagnostic category attributed to patients at the initial interview and at the time of termination of contact with the DMCGC.

Location where service was provided This variable was significantly associated with change in diagnostic category ( $\chi^2 = 10.78$ ,  $df = 2$ ,  $p = .005$ ).

Table 54 suggests that there was less relative change in children's diagnostic category in cases seen for therapy at the Center than in cases seen by the Outreach team and Satellite Clinics in Ankeny and Indianola.

Table 54. Change in the child's diagnostic category according to the location where services were provided

Change in diagnosis	Location			Total
	Center	Outreach	Satellite	
Changed	48	20	5	73
Did not change	172	27	6	205
Total	220	47	11	278

Note: Missing data = 25 (8%).

Note:  $\chi^2 = 10.78$ ,  $df = 2$ ,  $p = .005$ .

Received treatment      There was a significant relationship between treatment received and change of diagnostic category ( $\chi^2 = 25.35$ ,  $df = 3$ ,  $p = .000$ ).

Table 55 indicates that a change in diagnostic category took place more often for children receiving play/parent therapy than children receiving other treatment modalities.

Table 55. Change in the child's diagnostic category according to the type of treatment received

Treatment	Changed		Total
	Yes	No	
Family	5	20	25 (10%)
No treatment	25	113	138 (55%)
Play/parent	27	33	60 (24%)
Other	1	30	31 (12%)
Total	58 (23%)	196 (77%)	254 (100%)

Note: Missing data = 49 (16%).

Note:  $\chi^2 = 25.35$ ,  $df = 3$ ,  $p = .000$ .

Even when the above analysis was repeated with the exclusion of the "no treatment" category from treatment modalities provided, the association between type of treatment provided and change in diagnosis was still significant ( $\chi^2 = 18.64$ ,  $df = 2$ ,  $p = .000$ ).

Compliance      Clients who complied with treatment recommendations were more likely to have their diagnosis changed at the time of

termination of services with the DMCGC than people who did not comply with treatment recommendations ( $\chi^2 = 8.17$ ,  $df = 1$ ,  $p = .004$ ).

Table 56. Change in the child's diagnostic category according to whether the family complied with treatment recommendations or not

Changed	Complied		Total
	No	Yes	
Yes	23	49	72
No	106	100	206
Total	129	149	278

Note: Missing data = 25 (8%).

Note:  $\chi^2 = 8.17$ ,  $df = 1$ ,  $p = .004$ .

Therapy length (number of visits)      The families who had a higher number of therapy visits had more change in the child's diagnostic category after intervention than the families who were seen for a short-term duration treatment ( $r = -.20$ ,  $p = .000$ ,  $n = 283$ ).

Reason for termination of contact with the DMCGC      Families who terminated contact and services with the DMCGC with the staff's advice were more likely to have their diagnostic category changed at the time of termination of services than families who terminated contact with the DMCGC without the staff's advice ( $r = -.187$ ,  $p = .002$ ,  $n = 279$ ).

Clients' psychological levels of functioning      The child's level of social functioning at the time of the initial interview was the only variable which approximated a significant relationship with change of diagnostic category ( $r = -.146$ ,  $p = .017$ ,  $n = 267$ ). Children who were rated to have higher levels of social functioning had their diagnosis changed less often than children who were rated to have lower levels of social functioning at the time of the initial interview.

All levels of the patient's functioning assessed at the time of termination of services with the DMCGC were significantly associated with the change of diagnosis as a consequence of intervention. The children with higher levels of functioning at the time of termination of services with the DMCGC had more change in their diagnosis than the children with lower levels of functioning.

Table 57. Change in the child's diagnostic category as a function of the child's assessed levels of functioning in the various areas at the time of termination of contact with the DMCGC

Level	Statistics		N
	Correlation	p level	
Overall	-.208	.000	264
Personal	-.220	.000	267
Social	-.227	.000	268
Educational	-.227	.000	252
Emotional	-.255	.000	269
Parental	-.188	.002	265



Differences of level of functioning in all areas — except the level of parental functioning — were significantly associated with change in diagnosis: the higher the change in levels of child functioning, the higher the frequency of change in the child's diagnosis.

Table 58. Correlation between change in the child's diagnostic category and change in the child's levels of functioning at the time of termination of services at the DMCGC

Level	Statistics		N
	Correlation	p level	
Overall	-.180	.004	259
Personal	-.145	.018	266
Social	-.146	.017	266
Educational	-.187	.003	246
Emotional	-.218	.000	264
Parental	-.140	.024	262
Total	-.194	.004	225

Summary A summary of the above findings follows:

1. Children from families who complied with treatment recommendations had their psychiatric diagnostic category changed at the time of termination of services more often than the youngsters who belonged to families who did not comply with treatment recommendations.

2. In the same line, children of families who terminated services with the DMCGC with staff advice had their diagnosis changed

more often than children who belonged to families who terminated contact with the DMCGC without staff advice.

3. Children seen in the Outreach program had their diagnosis changed more often than children seen at the Center or at the Satellite Clinics.

4. Also, children who received play/parent therapy had their diagnostic category changed more often than the ones who received other treatment modality.

5. Children from families who had a greater number of therapy visits had their diagnosis changed more often than the ones who had a fewer number of visits.

6. Finally, children who were judged to have improved their levels of psychological functioning due to intervention were also judged to have changed with respect to diagnosis at the time of termination of contact with the DMCGC.

#### Reason for termination of contact with the DMCGC

None of the clients' demographic variables nor her/his parents' job status were significantly associated with the reason for termination of contact with the DMCGC. However, the presence of other children in the family was significantly associated with the reason for termination ( $\chi^2 = 8.37$ ,  $df = 1$ ,  $p = .004$ ).

Table 59 suggests that families with more than one child terminated their contact with the DMCGC without staff advice more often than families with only one child.

Previous contact with the Center as well as referral source

Table 59. Reason for termination of contact with the DMCGC according to presence of other children in the home

Terminated	Other children present		Total
	No	Yes	
Without staff advice	36	153	189
With staff advice	35	67	102
Total	71	220	291

Note: Missing data = 12 (4%).

Note:  $\chi^2 = 8.37$ ,  $df = 1$ ,  $p = .004$ .

were not significantly associated with reason for termination of services with the DMCGC.

Clients' psychological variables      The diagnostic category attributed to the client was not associated with the reason for termination of services. In other words, families with children with various psychiatric diagnostic categories did not differentially terminate services with the DMCGC following staff advice. In contrast, as it was described above, children whose families terminated contact with the DMCGC with the staff's advice had their diagnostic category changed at the time they terminated services more often than children whose families stopped treatment without the staff's advice ( $r = -.187$ ,  $p = .000$ ,  $n = 279$ ).

Families with children whose levels of social functioning were higher at the time of the initial interview terminated contact with the DMCGC with the staff's agreement more often than children who had

lower levels of social functioning at that time ( $r = .156$ ,  $p = .010$ ,  $n = 276$ ). Level of parental functioning at the time of the initial interview was also highly correlated with reason for termination of treatment ( $r = .222$ ,  $p = .000$ ,  $n = 281$ ). The higher the level of parental functioning, the more frequent the termination of services with staff advice.

Levels of all kinds of children's psychological functioning at the time of termination of contact with the DMCGC were significantly correlated with reason for termination.

Table 60 suggests that families with children with higher levels of functioning in all areas at the time of the end of intervention terminated services with the Center with staff advice more often than families with children who were assessed to have lower levels of psychological functioning in all areas.

A more clinically sound result is the very high correlation between the variable reason for termination (with or without the staff advice) and the change of children's levels of psychological functioning in all areas.

Table 61 indicates that the higher the change in the level of children's and parental functioning, the higher the frequency of termination of services with the DMCGC with staff advice. In other words, families with children whose levels of functioning improved and whose parents' ability to parent their children were also assessed to have improved at the time of termination of contact with the Center finished treatment more often with staff advice than families whose levels of functioning did not show an improvement at the end of treatment.

Table 60. Reason for termination of contact with the DMCGC as a function of the child's assessed levels of functioning in the various areas at the time of termination of contact with the DMCGC

Level	Statistics		N
	Correlation	p level	
Overall	.421	.000	272
Personal	.314	.000	275
Social	.352	.000	277
Educational	.223	.000	261
Emotional	.390	.000	278
Parental	.415	.000	276
Total	.418	.000	246

Table 61. Reason for termination of contact with the DMCGC as a function of the clients' change in levels of psychological functioning over the period of the intervention at the DMCGC

Level	Statistics		N
	Correlation	p level	
Overall	.445	.000	267
Personal	.260	.000	274
Social	.373	.000	275
Educational	.230	.000	255
Emotional	.402	.000	273
Parental	.347	.000	273
Total	.415	.000	234

Treatment variables      The treatment modality received (family therapy, play/parent therapy, or other therapy modality) was not significantly associated with reason for termination of services with the DMCGC.

Location where services were provided was significantly associated with reason for termination of therapy ( $\chi^2 = 19.80$ ,  $df = 2$ ,  $p = .000$ ).

Table 62 suggests that only 68 (29%) of the cases seen at the Center terminated services with staff advice; 4 (36%) of the families seen at the Satellite Clinics in Indianola and Ankeny terminated services with staff advice. In contrast, 29 (63%) of the Outreach cases terminated treatment with staff advice.

Table 62. Reason for termination of contact with the DMCGC according to the location where services were delivered

Location	Terminated		Total
	Without staff advice	With staff advice	
Center Based	167	68	235
Outreach	17	29	46
Satellite clinics	7	4	11
Total	191	101	292

Note: Missing data = 11 (4%).

Note:  $\chi^2 = 19.80$ ,  $df = 2$ ,  $p = .000$ .

Terminating services with staff advice was positively associated with the number of total therapy visits ( $r = .212$ ,  $p = .000$ ,  $n = 298$ ). Duration of treatment was not significantly associated with reason of termination of services, but a relationship was found between these two variables ( $r = .208$ ,  $p = .015$ ,  $n = 136$ ). Thus, the families who had a higher number of therapy visits — and a longer term therapy — terminated services with staff advice more often than families who were seen for a fewer number of therapy visits at the DMCGC.

Clinicians' characteristics      The intake worker and the child therapists' profession and sex were not significantly associated with reason for termination of contact with the DMCGC. Although not quite significant, clients who were treated by clinicians with more years of professional experience tended to terminate services without the clinicians' recommendations more often than families who were seen for treatment by therapists with less years of experience ( $r = -.228$ ,  $p = .0104$ ,  $n = 125$ ).

The variable reason for termination of contact with the DMCGC was also significantly associated with whether the intake worker who saw the family for an initial interview offered to be their therapist ( $F = 7.76$ ,  $dfs = 1$ ,  $255$ ,  $p = .006$ ). Families whose intake workers were the same person as the therapist terminated contact with the DMCGC more often with the advice of the clinician than families who had contact with different clinicians in the intake and therapy times.

Summary      A summary of the above findings follows:

1. Families who had two or more children terminated treatment with the DMCGC without staff advice more often than the ones who only had one child (who was originally referred for services).

2. Parents who were judged (at the time of the initial interview) to have a higher level of parental functioning terminated services with the staff advice more often than the ones who were judged to have a lower level of parental functioning.

3. All of the children's levels of functioning at the time of termination of contact with the DMCGC as well as the judged change in the children's levels of psychological functioning were found to be significantly associated with reason for termination of treatment: Families with children with higher levels of functioning at the time of the termination of services terminated services with staff advice more often. In the same manner, families with children who were judged to have improved their levels of functioning terminated contact with the DMCGC with staff advice more often.

4. Families who received treatment terminated services more often with staff advice than the ones who did not receive treatment. Families who were treated in the Outreach program terminated services with staff advice more often than the ones who received treatment in the Center or in the Satellite Clinics.

5. Also, families who had a greater number of visits terminated contact with the DMCGC with staff advice more often than the ones who had a fewer number of visits.



6. Families who saw clinicians with more years of experience terminated services without the staff's advice more often than the ones who saw more experienced clinicians.

7. Finally, families who saw the same clinician for the initial interview and therapy terminated contact with the Center with staff advice more often than the ones who saw different clinicians for intake and treatment.

#### Change in the child's level of psychological functioning

The results pertaining to this outcome variable which have already been reported in previous sections will not be repeated. The reader is reminded that the changes in the clients' level in all areas of psychological functioning were very highly correlated (see Table 7).

Treatment variables Families who received treatment were judged to have improved their levels of psychological functioning more often than clients who did not receive any treatment at all. An analysis of variance of the various treatment modalities received reveals a significant relationship between the treatment modality received and change in the clients' levels of psychological functioning ( $F = 7.25$ ,  $df = 2$ ,  $110$ ,  $p = .001$ ).

As Table 64 indicates, children who received play and/or parent therapy were judged to improve their level of overall psychological functioning more than children from families who received family therapy and other types of treatment.

The total number of visits was also found to be positively

Table 63. Correlation between the change in the clients' levels of psychological functioning and whether they received treatment or not

Level	Statistics		N
	Correlation	p level	
Overall	.426	.000	271
Personal	.320	.000	278
Social	.443	.000	279
Educational	.388	.000	258
Emotional	.497	.000	277
Parental	.340	.000	277
Total	.496	.000	237

Table 64. Average of change in clients' level of overall psychological functioning as a result of intervention through the various therapy modalities offered at the DMCGC

Treatment modality	Average change	N
Family therapy	.400	25
Play/parent therapy	1.350	59
Other treatment	.621	29

Note:  $F = 7.25$ ,  $dfs = 2, 110$ ,  $p = .001$ .

correlated with improvement of clients' level of psychological functioning in all areas.

Table 65. Change of clients' levels of psychological functioning as a function of the number of therapy visits

Level	Statistics		N
	Correlation	p value	
Overall	.422	.000	271
Personal	.351	.000	278
Social	.501	.000	279
Educational	.456	.000	258
Emotional	.446	.000	277
Parental	.383	.000	277
Total	.527	.000	237

Therapists' characteristics      Years of experience of therapists  
was found to be significantly correlated with the change in some of the clients' levels of psychological functioning as a result of intervention.

Table 66 indicates that the more experienced therapists judged that their clients improved their levels of overall and total psychological functioning as well as the level of parental functioning more often than the less experienced therapists.

Although not significant, an association was found between the change in the child's level of overall psychological functioning and whether the clinician who interviewed the family for an initial

Table 66. Change in clients' levels of psychological functioning as a function of therapists' years of experience

Level	Statistics		N
	Correlation	p-value	
Overall	-.226	.014	117
Personal	-.253	.005	122
Social	-.229	.012	121
Educational	-.116	.211	117
Emotional	-.218	.016	121
Parental	-.281	.002	116
Total	-.257	.008	107

interview offered to become their therapist ( $F = 6.43$ ,  $dfs = 1, 255$ ,  $p = .012$ ). When the clinician who saw a family for an intake interview became their therapist, the child's level of overall functioning improved more than when the intake worker referred the family to another clinician for therapy.

Summary A summary of the above findings will be presented as follows:

1. Although not significant, there was a tendency for the child's levels of psychological functioning to be higher when the clinician who saw the family for an initial interview was also the child's therapist. In other words, when the clinician "picked up" the case for therapy, the child's levels of functioning were judged to have improved more often than in cases in which the intake worker

recommended the family for therapy to another clinician in the DMCGC.

2. Children who received any treatment at all were judged to improve their level of psychological functioning more often than children who did not receive any treatment at all. Also, children who received play/parent therapy were judged to improve their level of psychological functioning more often than children who received other kinds of treatment.

3. Children who had a greater number of visits were judged to improve their levels of psychological functioning more often than children who had a fewer number of therapy visits.

4. Finally, therapists with more years of experience judged that their clients improved their levels of psychological functioning more often than therapists with fewer number of years experience.

#### Outcome of therapy

This variable is defined as follows: If a family terminated contact with the DMCGC with the staff's advice and the child's overall level of functioning changed for the better, then outcome of treatment (or intervention) was positive. All other possibilities were considered to not have had a positive outcome.

None of the clients' demographic variables nor her/his parents' job status were significantly associated with the outcome of therapy. Not even the presence of the father (or father figure) in the initial interview was significantly associated with treatment outcome, as it was predicted by the reviewed literature in the beginning of this paper. The absence of significant relationship was also found in

the study of the association between treatment outcome and clinicians' characteristics.

Treatment variables Treatment was more successful when the clinician who saw the family for the initial intake interview became the clients' therapist, i.e., when the intake worker "picked up" the case for treatment instead of referring it to another clinician in the DMCGC ( $r = .299$ ,  $p = .000$ ,  $n = 257$ ).

Treatment outcome was better when clients did receive therapy as opposed to no therapy at all ( $r = .410$ ,  $p = .000$ ,  $n = 267$ ). Although results were not significant at the  $p = .01$  level, it is worth mentioning that when the family did receive treatment after the initial interview, therapy outcome tended to be better when the treatment received was play and/or parent therapy as opposed to other types of treatment ( $\chi^2 = 8.64$ ,  $df = 2$ ,  $p = .013$ ), as shown in Table 67.

Location where service was delivered was significantly associated with therapy outcome ( $\chi^2 = 38.98$ ,  $df = 2$ ,  $p = .000$ ), as shown in Table 68.

Outreach cases were more successful in therapy than cases treated at the Center and at the Satellite Clinics.

Finally, treatment outcome was significantly related with total number of visits ( $r = .320$ ,  $p = .000$ ,  $n = 267$ ). Cases with the greatest number of therapy visits were more successful than those which had fewer number of visits at the DMCGC.

Summary A summary of the above findings will be presented as follows:

1. Therapy was more successful when the clinician who saw the

Table 67. Therapy outcome as a function of the type of treatment received

Outcome	Treatment			Total
	Family	Play/parent	Other	
Not positive	18	28	22	68 (61%)
Positive	6	30	7	43 (39%)
Total	24 (22%)	58 (52%)	29 (26%)	111 (100%)

Note: Missing data = 192 (63%).

Note:  $\chi^2 = 8.64$ ,  $df = 3$ ,  $p = .013$ .

Table 68. Therapy outcome as a function of location where service was provided

Outcome	Location			Total
	Center	Outreach	Satellite	
Not positive	182	21	6	209 (79%)
Positive	27	24	4	55 (21%)
Total	209 (79%)	45 (17%)	10 (4%)	264 (100%)

Note: Missing data = 39 (13%).

Note:  $\chi^2 = 38.98$ ,  $df = 2$ ,  $p = .000$ .

family for an initial interview was also their therapist. In other words, when the intake worker "picked up" the case for therapy, therapy was more successful.

2. There was a tendency for play/parent therapy to be more successful than other treatment modalities, although this result was not significant.

3. Families who received treatment from the Outreach program had a better treatment outcome than families who received treatment at the Center and at the Satellite Clinics.

4. Finally, families who had a greater number of visits were more successful in therapy than the ones who had a fewer number of therapy visits.

#### Summary Analyses

Study of predictions of treatment proposed, treatment received, compliance to treatment and treatment outcome.

#### Recommended treatment modality

In order to predict the recommended treatment modality, variables were selected as predictors to be used in a discriminant analysis. The variables selected as predictors were the ones which had significant relationships with proposed treatment modality in previous univariate analyses. Age, level of overall functioning, and level of parental functioning were used as predictors in a discriminant analysis.

Results indicated that the groups of people who were recommended



the different treatment modalities (family, play/parent, or no therapy) could be predicted by the predictor variable age, and levels of overall and parental functioning ( $F = 3.39$ ,  $df = 9$ ,  $p = .000$ ).

The generalized squared distances between the four treatment modalities are presented in Table 69.

Table 69. Generalized squared distance of the proposed therapy modalities according to the independent variable age of child, and levels of overall and parental functioning

Treatment	Treatment			
	Family	No therapy	Play/parent	Other
Family	.00			
No therapy	.33	.00		
Play/parent	.10	.48	.00	
Other	.09	.74	.23	.00

Note.  $F = 3.39$ ,  $df = 9$ ,  $p = .000$ .

Table 69 suggests that the people who were proposed to receive no treatment are distant from the other three groups of therapy (play/parent therapy, family therapy, and other therapy). Also, those three groups are relatively close to each other. In other words, the discriminant analysis performed may offer some prediction about whether clients are recommended to receive therapy or not: the higher their level of psychological functioning, the less often they are recommended to receive any type of treatment.

The linear discriminant equation for placing individuals into categories of recommended treatment can be found in Table 70.

Finally, a classification matrix is presented in Table 71.

Table 70. Linear discriminant function of proposed therapy given the child's age, level of overall and parental functioning

Variables	Therapy			
	Family	None	Play/parent	Other
Constant	-9.58	-11.93	-10.07	-8.50
Age	.38	.37	.46	.36
Overall	1.56	1.88	1.55	1.38
Parental	1.57	1.68	1.53	1.57

Table 71. Classification matrix: hit rates using a discriminant function to predict recommended treatment modality

Actual group	Predicted group				Total
	Family	None	Play/parent	Other	
Family	<i>1 (2%)</i>	12 (27%)	16 (36%)	16 (36%)	45 (100%)
None	3 (6%)	<i>26 (55%)</i>	10 (21%)	8 (17%)	47 (100%)
Play/parent	2 (3%)	27 (35%)	<i>29 (37%)</i>	20 (26%)	78 (100%)
Other	7 (7%)	23 (24%)	28 (29%)	<i>38 (40%)</i>	96 (100%)
Total	13 (5%)	88 (33%)	83 (31%)	82 (31%)	266 (100%)

Note. Missing data = 37 (12%).

Note. Values on the diagonal are "hits" and are typed in italics. There are a total of 94 hits, or 35%. Conversely, the 172 misses account for 65% of the cases.

The reader may note in Table 71 that the predicted membership can be compared with actual membership in the sample in which the function was calculated. The rows in Table 71 indicate the treatment actually proposed to families (actual group), whereas the columns indicate the therapy predicted by the linear discriminant function (predicted group). Hits, or correct predictions, are indicated in the diagonal of Table 71. Incorrect predictions, or misses, are indicated in other locations of the table. There were a total of 94 hits ( $N = 266$ ), or 37%. Conversely, the 172 misses accounted for 65% of the cases.

Table 71 indicates that for the 45 cases which were actually recommended to receive family therapy, only one was classified in that category of therapy modality by the discriminant analysis. In contrast, over half of those proposed to receive no treatment were so classified. For the 47 cases which were actually recommended to receive no treatment, 26 were classified in that category. Twenty-nine cases were predicted to receive recommendation to receive play/parent therapy, yet, the number of cases which were actually recommended to receive that treatment modality was 78. Finally, of the 96 cases which were actually recommended to receive other therapy modality, only 28 were classified by the linear discriminant function into that category of treatment modality proposed.

Thus, the linear discriminant function (see Table 70) predicts best the clients who were proposed to have some kind of therapy rather than the specific therapy modality. However, in some instances, the same therapist who recommended therapy judged the clients' levels of psychological functioning.

### Received treatment

In order to predict received treatment modality, variables were selected as predictors to be used in a discriminant analysis. The variables selected as predictors were the ones which had significant relationship with type of treatment received in previous univariate analyses. Age of the child, income, and place where service was proposed were used as predictors in a discriminant analysis.

Results indicated that the groups of people who received the different treatment modalities could be predicted by the predictor variables child's age, income, and place where the service was provided ( $F = 9.35$ ,  $df = 9$ ,  $p = .000$ ).

The generalized squared distances between the four treatment modalities are presented in Table 72.

Table 72. Generalized squared distance of the received therapy modalities according to the independent variables age of child, income, and location of proposed services

Treatment	Treatment			
	Family	None	Play/parent	Other
Family	.00			
None	.07	.00		
Play/parent	1.70	1.61	.00	
Other	1.16	.72	1.98	.00

Table 72 suggests that the treatment modalities, no therapy and family therapy, do not differ according to the independent variables

income, age of the child, and location where services were proposed. Play/parent therapy modality differs from all other treatment modalities, and so does other therapy modality, which is distant from all other types of treatment. In other words, the discriminant analysis may offer some prediction about which clients receive play/parent therapy, other therapy modality, or no therapy and family therapy given the predictor variables age of child, family income, and location where services were proposed.

The linear discriminant function for placing individuals into categories of received treatment can be found in Table 73.

Table 73. Linear discriminant equation of received therapy given the child's age, income, and location of proposed service

Variables	Therapy			
	Family	None	Play/parent	Other
Constant	-5.32	-5.12	-3.48	-3.75
Age	.58	.57	.63	.45
Income	$5.0 \times 10^{-5}$	$2.0 \times 10^{-5}$	$1.5 \times 10^{-5}$	$3.5 \times 10^{-5}$
Location	5.70	5.90	3.01	5.87

Finally, a classification matrix is presented in Table 74.

An examination of Table 74 reveals that there were a total of 86 hits ( $N = 234$ ), or 37%. Conversely, the 148 misses accounted for 63% of the cases. The classification matrix, Table 74, also suggests that of the 24 families who actually received family therapy, 10 were classified in that category of therapy according to the linear

Table 74. Classification matrix: hit rates using a discriminant function to predict received therapy

Actual group	Predicted group				Total
	Family	None	Play/parent	Other	
Family	<i>10</i> (42%)	3 (12%)	4 (17%)	7 (29%)	24 (100%)
None	39 (32%)	<i>22</i> (18%)	17 (14%)	45 (37%)	123 (100%)
Play/parent	11 (20%)	2 (6%)	<i>35</i> (62%)	8 (14%)	56 (100%)
Other	3 (10%)	4 (13%)	5 (16%)	<i>19</i> (61%)	31 (100%)
Total	63 (27%)	31 (13%)	61 (26%)	79 (34%)	234 (100%)

Note. Missing data = 69 (23%).

Note. Values on the diagonal are "hits" and are typed in italics. There were a total of 86 hits, or 37%. Conversely, the 148 misses accounted for 63% of the cases.

discriminant analysis. Only 22 cases were categorized into the no treatment therapy modality, yet, 123 families actually received no treatment. Of the 56 families who actually received play/parent therapy, 35 were classified in this category by the discriminant analysis. Finally, of the 31 cases that actually received other treatment modality, 19 cases were classified in this category.

Thus, the linear discriminant function (see Table 73) suggests that one cannot predict which cases will receive no treatment. One can best predict who will receive play/parent therapy. Most of the cases which were predicted to receive other treatment modality actually received no treatment.

### Compliance to treatment recommendations

In order to predict compliance of treatment, variables were selected as predictors to be used in a regression analysis. The variables selected as predictors were the ones which had significant relationships (or tendencies of significant relationships) with treatment compliance in previous univariate analyses, namely area of residency, profession of the intake worker, waiting time between the intake and the first therapy appointment scheduled, and location where treatment was proposed to be received.

Table 75 indicates that the whole model is significant ( $F = 14.68$ ,  $dfs = 2, 144$ ,  $p = .000$ ). Of the five predictors, only the profession of the staff ( $p = .000$ ) and waiting time ( $p = .000$ ) were significant. So, another regression analysis was performed with the use of just the two predictor variables: profession of the staff and waiting time.

The parameter estimates for predicting compliance to treatment is obtained from Table 76.

Results indicated that as little as 17% of the variance of compliance to treatment could be explained by the predictor variables area of residency, profession to the intake worker, waiting time, and location of proposed treatment ( $R^2 = .17$ ). It could be that as much as 40% ( $R = .40$ ) of variance of the variable compliance to treatment could be explained if the predictor variables could be determined with precision. However, because this regression analysis was done based on an exploitation of the data, that is, on the variables which were found to be significantly associated with compliance in the univariate analyses, one can assert that less than 40% of the compliance

Table 75. Regression analysis of the variables county of residency, profession of the intake worker, waiting time, and location where service was proposed on the compliance variable

Variables	df	Statistics	
		Parameter estimate	p value
Intercept	1	.19	.418
County	1	-.04	.710
Profession of intake worker	1	.19	.000
Waiting time	1	.0025	.000
Location (Center vs. others)	1	-.02	.756
Location (Outreach vs. others)	1	.02	.690

Note.  $F = 5.08$ ,  $dfs = 3, 130$ ,  $p = .000$ .

Note.  $R^2 = .16$ .

variable can be explained by the predictor variables.

In sum, results suggest that compliance is expected to be more likely for clients who would be seen by social workers for the initial interview, and who would wait a long time for their first therapy session.

#### Treatment outcome

In order to predict treatment outcome, variables were selected as predictors to be used in a regression analysis. The variables selected as predictors were the ones which had significant relationship



Table 76. Regression analysis of the variables profession of the intake worker and waiting time on the variable compliance to treatment

Variables	df	Statistics	
		Parameter estimate	p value
Intercept	1	.06	.723
<u>Profession:</u>			
Intake worker	1	.21	.000
Waiting time	1	.0026	.000

Note.  $F = 14.68$ ,  $df = 2, 144$ ,  $p = .000$ .

Note.  $R^2 = .17$ .

with the variable called treatment outcome in previous univariate analyses. The variables which were chosen for predictors were total number of visits, whether the intake worker "picked up" the case for treatment, and location where treatment was received.

Results indicated that as little as 9% of the variance of treatment outcome could be explained by the predictor variables number of therapy visits, whether the intake worker "picked up" the case for treatment, and location where treatment was received ( $R^2 = .09$ ). It could be that as much as 3% ( $R = .30$ ) of the variance in the variable outcome could be explained by the predictor variables used in this regression analysis. However, because the regression analysis was done based on an exploitation of data, one can predict that even less than 3% of the outcome variable can be explained by the predictor variables.

Table 77. Regression analysis of the variables total number of visits, pickup<sup>a</sup>, and location where service was received on treatment outcome

Variables	df	Statistics	
		Parameter estimate	p value
Intercept	1	.31	.005
Total number of visits	1	.00	.124
Pickup <sup>a</sup>	1	.14	.093
Location (Center vs. others)	1	-.13	.179
Location (Outreach vs. others)	1	.09	.277

Note.  $F = 3.32$ ,  $dfs = 4, 135$ ,  $p = .012$ .

<sup>a</sup>Pickup variable refers to whether the intake worker worked with the family in therapy also, i.e., whether the clinician "picked up" for therapy the case he/she had seen for an initial interview.

In sum, results indicated that overall, none of the variables were significantly related with treatment outcome in this analysis. Thus, none of the predictor variables could predict treatment outcome *when they were used altogether*.

### Summary

The summary analyses suggest that, in sum, clinicians may be able to predict from the initial judgment of the clients' level of functioning whether therapy will be proposed. Also, clinicians may also predict that if cases are seen by a social worker for an initial interview and if they wait a long time for their first initial therapy

session, they are more likely to comply than other cases. However, there was little evidence that the other two variables, namely treatment received and treatment outcome, could be predicted by the regression analysis performed in this section.

The above analyses were designed through the selection of variables found to be significant in univariate analysis. Thus, the findings are only applicable to the sample studied and not to others (Cureton, 1950).

The results indicated that in this investigation, in general, demographic and intake variables cannot be used to predict treatment modality recommended, received, compliance, and treatment outcome. Thus, although the use of discriminant and regression analyses may be very useful in studies of this nature, the aggregate of variables in this study proved to not be a good predictor of treatment modality, of compliance, and of treatment outcome.

The results of this section will not be discussed in further sessions of this investigation due to the lack of clinical implications found in the analyses performed.

## DISCUSSION

The discussion in this section proceeds along the following lines: Initially, a discussion of the primary findings of this study will be presented. Then, implications of the results for clinical practice will be proposed as well as suggestions for further research in the area of evaluation of services in child focused mental health. Finally, the limitations, as well as the unique aspects of this study will be reviewed.

### Primary Findings

#### Variability of clinicians' ratings of clients' levels of functioning

Overall, there was variability among clinicians in the average ratings they ascribed to their clients. This occurred for the data collected during the initial interview, at the time of termination of contact with the DMCGC, and also for the differences between the ratings at these two time periods.

The above results reveal that the clinician was a source of variability, and this variability was present in all the data. The reasons for it could be the following: (a) certain clinicians treated children with different levels of functioning (e.g., some clinicians treated more lower functioning families than others); (b) clinicians used the rating scales of levels of functioning differently; (c) any combination of the two possibilities described above.

### Correlation between clients' various levels of psychological functioning

All measures of levels of psychological functioning were highly correlated. There appears to be a general factor permeating all these ratings. It would appear that the various ratings of functioning in different domains reflects more clinician perceived overlap between the domains rather than ratings of discrete and distinct behavior.

### Description of the DMCGC

Demographic characteristics      There were almost twice as many boys as girls in the sample studied, and the study of sex distribution according to age revealed that the predominance of boys was accentuated for latency age children. This represents the typical sex ratio of children seen at child guidance centers in the country, especially in the latency or school ages as has been indicated by previous research (Adams & Kagnoff, 1983; Beitchman, Bell, & Simeon, 1978; Hunt, 1961; Lurie, 1974; Marine & Cohen, 1975; Ramsey-Klee & Eiduson, 1969; Roach et al., 1958; Wersh et al., 1982). However, unlike previous studies, it was found that there was an equal number of boys and girls in the infancy stage and also for the group of adolescent clients.

It is possible that the predominance of boys in the group of latency age children was a reflection of symptoms presented more often by boys than girls, namely undercontrolled behaviors presented at school such as hyperactivity, or aggressive behaviors (Beitchman et al., 1981). These suggestions may be supported by the fact that the mode of the distribution for grade level was first grade. This

is usually the time when children are requested for the first time to remain in place for long periods of time which, in turn, may present problems for youngsters whose prior experience has been one characterized by protracted physical activity. In fact, 73% of the cases studied were categorized in the undercontrolled behavior cluster at the time of the initial interview. Also, most of the clients were judged to have a rated level of social functioning below other areas of psychological functioning (such as the level of educational functioning). Thus, it is possible that the typical client at the DMCGC was a boy who was in the first years of elementary school and who was presenting problems of socialization and adaptation to the rules of school. These problems do not appear to have originated with academic difficulties, but they were probably expressed at a behavioral level at home and at school. Gardner's (1979) description of a hyperactive child may be illustrative of the above speculations:

"... in the classroom hyperactive children's excessive activity may irritate their teachers and interfere with classmates' learning. Instead of sitting still in their seats, they are constantly up and about, flitting from one aimless activity to another, rarely remaining for long at one activity.... At home, as well, they fidget at the meal table, knock things over, rock in their seats, and give everyone at the table 'knots in the stomach.'" (pp. 364-365)

Descriptive data indicated that clients were predominantly caucasian and protestant, and that they came from all socio-economic levels, but that lower socio-economic clients were heavily represented. This model description likely reflects the demographic characteristics of the geographical area where the center is located.

In half of the families, parents were divorced and most families

had more than one child. The child referred for services was most often living with the mother. The natural mother was also who contacted the DMCGC and took the child to the DMCGC 99% of the time. In contrast, fathers were present in the initial interview only 28% of the time despite the fact that 29% of the fathers who were living in the home were not working (either unemployed, disabled, or received financial help from the government). This family constellation reflects the traditional model in which the mother was the primary caretaker of her children.

Characteristics of services provided at the DMCGC      The months in which the greatest number of referrals were made were January, February, March, and April. The months in which least referrals were made were June, July, and December. It is possible that the frequency of referrals is a reflection of the periods of time when children attended school, such as January, February, March, and April. This is also the time when conferences are scheduled with parents for the end of the semester. In contrast, June and July were likely vacation times when children were allowed to play more freely outdoors, and times when they were not under academic pressure. School personnel also did not make referrals during these months. Finally, December was possibly a period when families were more focused in preparing for holidays, rather than on their children's symptoms. These trends may have resulted in fewer referrals during the month of December.

Who provided services      Results indicated that senior clinicians as well as interns/students did not conduct as many intake interviews

and did not hold as many therapy cases as staff members who had been working at the DMCGC between 6 and 15 years. One possible explanation for this finding may be that senior staff held responsibilities other than intake interviewing, such as coordinating programs, administering activities, and conducting training services. Students were more likely more occupied in receiving training and supervision than did other staff members.

Social workers conducted more intake interviews and carried more therapy cases than psychologists. One possible reason for this difference may be that psychologists also conducted psychological evaluations which is a time-consuming activity unique to these professionals.

Location of services Most of the intake services were provided at the Center location (74%), followed by Outreach cases (20%), and finally Satellite clinics (6-7%). However, the percentage of cases actually treated at Outreach was 30%, and for the Center was 62%. Thus, the reader may conclude that the Center-based cases were either not followed up for treatment as often as cases elsewhere or were recommended to be seen by the Outreach staff, or in the Satellite clinics.

Treatment compliance Although 83% of the families agreed with treatment recommendations, only 52% of the cases complied with treatment recommendations. This percentage is higher than the one found by Jones (1975) but in the range of the results encountered by Reeves (1978) who found that 30 to 65% of clients complied with treatment recommendations. Why did some families state to the



intake worker at the time of the initial interview that they agreed with their recommendations, but did not comply with them when they were offered treatment? One possibility may be that when some clients were offered treatment, they had already resolved their issue, or altered their perception of the importance of services necessary or helpful to resolve their symptoms.

Health psychology research may offer an alternative explanation for the above results. Studies in the area of practitioner-patient relationship (Francis et al., 1969; Korsch et al., 1968) indicated that congruence of patients' and practitioners' expectations with respect to the type of relationship developed during the first meeting may lead to greater patient satisfaction and greater treatment compliance. Thus, the relationship developed between the client family and the intake worker seems to crucially influence compliance. Clients' understanding of the clinician's assessment of their needs, as well as the clinician's ability to explain the recommended treatment seem to be very important to compliance to treatment. Studies in the area of continuation of treatment in mental health clinics also emphasized the importance of the client-clinician communication for compliance to treatment. Clients who were not clear about their role in therapy were less likely to return and were less likely to feel satisfied by the treatment received (Burck, 1978; Jacobs et al., 1972, King, 1981; Plunkett, 1981). Such factors were not assessed in this study, but it is a fertile topic for future research. Clinicians might increase compliance with treatment recommendations by investing special efforts in explaining to clients what therapy is, which treatment

modality they recommend (and why), and the importance of parents' participation in their children's treatment. Clinicians should also attempt to listen carefully to clients' real concerns, and to attend to their needs during the initial interview.

Termination of contact      Only 34% of the cases terminated contact with staff advice. Twenty-four percent of the cases were terminated due to lack of contact, i.e., they did not attend sessions and were either not available for contact via telephone or did not respond to letters written by the staff. The suggestions presented above concerning differences in expectations about treatment as well as difficulty in communication between practitioners and patients may be used to explain the high percentage of termination of contact with the clinic due to lack of contact or premature termination. There may be some lack of communication between the clinician and client concerning the ideal time to terminate treatment (Korsch et al., 1968). Perhaps if clinicians adopted the behavioral analysis model suggested by Tracy (1977) and defined the clients' problems in behavioral terms by stating the clients' strengths and resources, and explicitly negotiating therapy goals from the time of the initial interview, more cases would be terminated with success. Note that even if the therapist did not apply behavioral methodologies to her/his therapeutic endeavors, she/he could still use behavioral analysis during the time when the contract for therapy was designed by clinician and client.

Change in diagnosis      There was no change in diagnosis in 65% of the cases. As a matter of fact, 50% of the cases did not

receive treatment after an initial interview, so they were probably the ones which did not have their diagnoses changed. The lack of change in diagnosis does not necessarily reflect lack of treatment success because in some cases, children might have entered and left the clinic with the same diagnosis but they might have increased their levels of psychological functioning. A hypothetical example could be a hyperactive child who, after the initial interview, was medicated, attended play therapy, and the parents were seen for parent therapy. After these interventions, parents learned how to deal with their hyperactive child, how to control the medication, and how to develop contingencies to diminish inadequate habits which had been developed by the client. The child also might have had the chance to express her/his frustrations and conflicts in therapy.

#### Recommended and received treatment modality

Most of the demographic variables were not significantly associated with the recommended and the received treatment modality. Age of the child was an exception: preschoolers were recommended and indeed received the treatment modality called other treatment modality (which was most likely the combination of preschool group and parent therapy group) than other treatment modalities. On the other hand, for adolescents and children in their late latency, individual therapy was recommended and received more often than other treatment modalities. One possible reason for the above trend may be that staff members who treated preschoolers could have attended to their needs by providing treatment modalities which would be less

structured and less verbally oriented than individual therapy. In other words, preschoolers may have needed special arrangements for treatment, such as activity group, rather than the traditional one-to-one therapy model. As a matter of fact, literature suggests that there is a trend for younger children to be treated with short consultative or direct intervention strategies than for older children who are treated with more traditionally oriented therapy modalities (Wersh et al., 1982).

Another demographic variable which was found to be significantly associated with received treatment was income. Higher income clients received more family therapy than lower income clients. Age of the client may be a confounding variable in this case: it was found that higher income families contained older children. Thus, older children received more family therapy than younger ones. Another viable explanation for the above results is that during the year of 1983, a staff member whose favorite modality of treatment was family therapy was designated to treat the highest income families seen at the DMCGC.

The diagnostic category of the child was not associated with the recommended treatment nor with the received treatment modality. The absence of a significant relationship was also found in the study of the presence of the undercontrolled and overcontrolled behavior clusters and treatment modality. The only significant relationship found between the child's psychological variables and recommended treatment was that children with lower levels of psychological functioning were recommended to receive further treatment more often than children with

higher levels of psychological functioning. Thus, the reader may conclude that the types of treatment clinicians recommended to their clients at the time of the initial interview was not based on a rationale that only took into account the client's diagnosis. The clinicians' judgments of the clients' levels of psychological functioning were decisive factors in only whether clients were recommended to receive treatment or not.

The diagnostic category of the child was not associated with received treatment either, nor was her/his level of psychological functioning. It is possible that the measures used in this investigation were not sensitive to the rationale clinicians actually used to recommend different treatment modalities. Perhaps factors other than the needs of patients impinged on the intake decision, such as resource capacity, staff ideology and interest (Levin, 1974; Runyan, 1977). However, one would still expect that the child's diagnosis as well as her/his ratings in the different scales of psychological functioning would be crucial tools for developing a rationale for treatment recommendations. For example, a family whose child was diagnosed with a parent-child problem and whose levels of psychological functioning were high might be more likely to benefit from family therapy than a family whose adolescent child was diagnosed with oppositional disorder and whose parents' levels of parental functioning were extremely low. For the latter case, more benefit may be derived from a combination of individual therapy for the teenager and parent training of parent therapy for the parents. The above examples are not illustrative of the therapy modalities that should be recommended for the specific

examples provided but they may serve as an illustration of how rich demographic as well as psychological variables can be in helping clinicians develop rationales to recommend various treatment modalities.

Cole and Magnussen's (1966) work is in agreement with the above suggestion. They also suggested that actuarial assessment is very useful for relating information about a patient in order to develop appropriate disposition for the specific case. In fact, an empirically and rationally based combination of variables which would be gathered during the initial evaluation with clients should be used for the development of decision-making procedures for treatment recommendations (Levin, 1974). In other words, according to some views, patients should be assigned to specific categories of treatment interventions on the basis of specific assessment information which were found to empirically relate to each category of therapy (Rosenblum et al., 1981). Ideally, clinicians would utilize what Runyan (1977) called the intervention reasoning. This method suggests that clinicians should base their decision about treatment recommendations on three sources of information: (a) scientific-empirical reasoning about the past; (b) valiative or ethical reasoning; (c) and technical and economic consideration.

Treatment modalities      A study of the various treatment modalities delivered in the Center, Outreach, and Satellite Clinics revealed that family therapy was delivered more frequently at the Center than at the other locations. Conversely, play/parent therapy was delivered more often in the Outreach program. Why was family therapy a more

popular treatment modality in the Center than in the Outreach program? Did the nature of the cases seen at the Center specifically call for family therapy more often than the cases seen by the Outreach team and by the Satellite clinic staff? Consultation with the DMCGC staff revealed that the Outreach team had developed a tradition of providing play/parent therapy as their most frequent therapy modality. Reasons for the choice of this type of therapy over other modalities will be explained in a future section of this discussion which is dedicated specifically to the Outreach program.

#### Compliance to treatment

Analyses attempting to associate compliance with treatment recommended with demographic variables revealed no significant results. The lack of such significant results also was found by Gaines and Stedman (1981).

Although the county of residency was not significantly associated with compliance at a  $p < .01$  level, it approached significance, and, thus, it deserves some discussion. Significant results were found in previous studies concerning the distance of clients' homes and compliance with treatment recommendations. Lefebvre et al. (1983), for example, found that a higher percentage of out-of-town families did not keep their appointments. Other investigations reflected the difficulty of transportation as the most significant barrier to compliance to treatment (Kolko et al., 1985). However, some clinics have addressed these issues by providing transportation issues already proposed by some clinics/researchers who provided trans-

portation for clients to the clinic (Powell, 1984). Another means of dealing with the issue of client access to clinics has been the development of programs in which clinicians go out of the clinic to see clients in their own environment. The DMCGC has developed such a program, the Outreach program. In fact, one of the reasons for the development of this program was to attend to clients who lived in areas distant from the main center and who would have problems of transportation in going to the main location of the DMCGC. As mentioned before, the Outreach program will be discussed separately in a future section of this discussion.

Although previous research indicated the importance of the presence of all family members in the initial interview to enhance the probability of compliance (Gaines & Stedman, 1981; Sirles, 1984; Webster-Stratton, 1985), this relationship was not observed in the present investigation.

The most unexpected result found in this study was the one concerning the relationship between the time between the initial evaluation and the first therapy appointment and compliance. Results indicated that the longer clients had to wait for their first therapy appointment, the more frequently they complied with treatment recommendations. All previous research reviewed revealed the opposite result, i.e., an inverse relationship between time on the waiting list and compliance with treatment recommendations: the longer people had to wait for their first therapy appointment, the less frequently they attended their appointment. Lefebvre et al. (1983) found that the long waiting period was the major factor for nonattendance. Others



also agreed that the percentage of nonattendance to mental health appointments increased in direct proportion to the length of a clinic waiting list (Haynes, 1979; Inman, 1956; Woods, 1974). The reader may ask: What was characteristic of the DMCGC clientele and staff/services provided that created a different relationship between time on the waiting list and compliance from all studies reviewed? Some possible explanations will be presented. The first explanation demands some consideration about types of clients seen at mental health centers. Usually, mental health centers attend clients with problems with varying levels of chronicity: Some clients seek treatment because they are facing an acute type of problem (for instance, a five-year-old child suddenly started wetting the bed). If these clients had to wait a shorter period to receive treatment after they had been seen for an initial interview, they would probably comply with treatment recommendations. If, however, these clients with acute problems had to wait a longer period of time to start treatment, they would probably seek treatment some place else or they would redefine their problem, or sometimes the problem would be eliminated with time. On the other hand, clients who seek treatment due to a chronic problem might operate under a different framework: these clients have lived with the problem for quite some time, and, thus, they are better "survivors" of the waiting time between the initial interview and the first therapy session.

According to Dr. John F. Tedesco, Chief Psychologist at the DMCGC (personal communication, October 27, 1987), referral sources in the Des Moines community have carried a stereotype of the DMCGC as treating cases

which "could not be treated by any other institution in the city." In other words, referral sources probably believed that the DMCGC staff was the best qualified group of clinicians to provide treatment to chronic cases. Thus, according to the above conjecture, the majority of cases seen at the DMCGC were more likely to be chronic rather than acute. In sum, the above reasoning suggested that the waiting period may have affected clients with different problems in different ways.

Chronic cases may also require additional evaluative interviews, as well as multiple contacts with other agencies and professionals, before treatment was initiated. Thus, a second explanation for the direct relationship between length of time on the waiting list and compliance is that it is possible that intake workers kept constant contact with their clients who were placed on the waiting list until they actually started treatment. In fact, clinicians were expected to keep contact with the clients who were placed on the waiting list at least once a month. Thus, although technically these clients were not receiving treatment, they may have felt that they were at least "taken care of."

A third possible reason for the direct relationship between time on the waiting list and compliance may be that, due to cognitive dissonance, clients decided that given that they had to wait so long for therapy, treatment should be good. Thus, clients may have created the following cognitive scheme: "I waited so long for treatment, the DMCGC must be a famous place where many people receive treatment, so it must be good!" Finally, there is a possibility that there were no alternative services offered in the community for the families who

were seen at the DMCGC who were mostly from lower income levels, and who could only afford to receive treatment from a clinic in which a sliding fee scale was used for billing purposes, such as was the case with the DMCGC.

One may conclude from the above speculations that a study of the relationship of chronicity of problems presented by clients, length of time clients had to wait to receive their first therapy appointment, and compliance would be very beneficial for the present discussion. Also, clinicians may want to evaluate the chronicity of the presented problem in order to predict compliance, depending on the time he/she believes a family will have to wait for their first therapy appointment. According to the rationale presented above, the diagram in Figure 1 suggests the following hypothetical relationship between degree of chronicity, waiting time, and compliance.

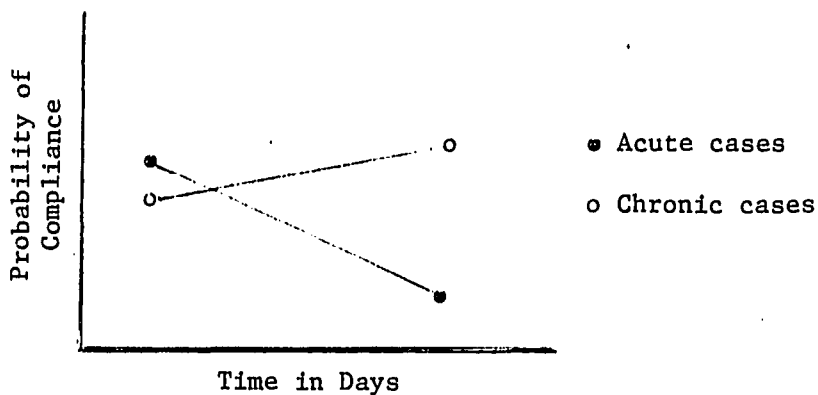


Figure 1. Hypothetical probability of compliance to treatment according to waiting time and to the chronicity of the presented problem

The hypothesis summarized in the above diagram and previously in the text would be a fertile topic for future research. Unfortunately, data provided in this investigation did not include a scale of chronicity of the presented problem, thus, there was not the possibility of studying this variable and its relationship to compliance.

#### Treatment outcome

No significant relationship was found between clients' demographic variables and the various measures of treatment outcome, as it was expected (Plunkett, 1981; Rivara, 1985). One exception was the significant relationship found between the reason for termination of contact with the DMCGC (with or without staff advice) and whether there were two or more children in the family: families with two or more children terminated therapy without staff advice more often than the ones with only one child. Possibly families with two or more children faced sudden illnesses more often than the ones with one child. Also, families with multiple children had to confront problems with baby-sitting, dressing children in the cold weather, and the coordination of the whole family's schedule in order to attend therapy appointments.

Another explanation for the better attendance of families with singletons than with multiple children may be that parents of singletons may be more anxious, inexperienced, thus, they recognize their difficulties and more readily request help in parenting.

In general, treatment outcome was positive more often if the intake worker who had seen a family for the initial interview also

became the child or family therapist. This result has great implications to the manner in which the DMCGC staff conducted the different stages of intervention, namely, initial evaluation, disposition, and treatment. Usually, clinicians who saw families for an initial interview staffed their cases in treatment teams, and placed their clients' names on the waiting list. In general, whenever a clinician had available time for therapy, she/he looked at the waiting list and attempted to contact the cases which were placed in that document in chronological order. Thus, there was not a specific procedure or rule at the DMCGC which required the intake worker to "pick up" the cases she/he saw for an initial interview: clinicians picked up some of their intake cases and placed others on the waiting list.

Why was treatment more successful when the intake worker "picked up" the case for treatment? One viable explanation is the difficulty that clients might have in self-disclosing with professionals: if they expect to meet a different clinician for therapy, they may predict that they would have to talk about their concerns again, after they had already presented their issues to the intake worker. Thus, clients would need to develop trusting relationships with two different strangers (clinicians) before any real treatment even started! Health psychology studies (Francis et al., 1969; Korsch et al., 1968) on the practitioner-patient relationship suggested that once a positive relationship was established in an initial interview, the continuation of this relationship was observed to be relevant. Thus, in this study, clients probably preferred to relate to the same clinician once they were seen for their first face-

to-face interview.

Following the same line of thought presented above, clinicians may also act differently with the families seen at the intake session if they believe that they will follow-up with the case for treatment. Clinicians may be more actively involved in developing a relationship with clients at the time of the intake session. Previous research has shown that the relationship developed between the practitioner and client has tremendous impact in compliance as well as treatment outcome (Gelso & Carter, 1985). Thus, there is reason to believe that the absence of interruption in the relationship developed between a professional and the client in different stages of intervention is advantageous for both sides of the relationship.

Finally, the Outreach program was found to have significantly better treatment outcome when compared with the cases seen at the main center and at the Satellite clinics. Also, contrary to what Gass (1975) suggested, long-term therapy was more successful than short-term treatment. Finally, families who received any kind of treatment were evaluated to have improved more than families who did not receive treatment at all. Thus, the reader may conclude that treatment worked at the DMCGC. More specifically, play/parent therapy was found to have better outcome than other treatment modalities.

The reader may be reminded at this point that the Outreach program was the one which offered therapy with the greatest number of visits and the one which also offered play/parent therapy significantly more often than the other locations. Because cases treated by the Outreach program were found to have complied and to have succeeded

in therapy significantly more often than the cases treated in the main center and at the Satellite clinics, careful review of the unique characteristics of the Outreach program as well as its evaluation will be the topic of the next section.

### The Outreach Program:

#### More Compliance and More Success in Therapy

The Outreach program was developed in 1975 as a result of a comprehensive survey of the Des Moines community needs. Although the program is usually referred to by the DMCGC staff as the "Outreach Program," its official name is even more interesting, "Preventative, Clinical, and Consultative Reachout Services for Children in Crisis" (PCCR).

A survey conducted in the Des Moines community indicated that certain areas of greater Des Moines had a school suspension rate four times as great as the overall Des Moines district. These areas were also the locations with the highest percentages of illegitimate births, number of protective service referrals, and the highest level of referrals to Juvenile Court. Unfortunately, families from those areas were not being seen at the DMCGC, or if they were referred for services, they did not follow through with recommended services.

According to Shafer (1983), the PCCR was developed to:

"... assure that appropriate mental health services, including clinical, consultative, and preventative services were provided to high risk children and parents who have

restricted access or evident barriers to mental health services and that these services are provided in such a way that they are useable and effective" (p. 3).

The Outreach team was developed through the hiring of professionals who were usually just starting their careers in the field of mental health services. This, according to the coordinator of the program, facilitated the development of a flexible and cohesive team. Also, although the Outreach program was subject to the personnel policies of the DMCGC, it had its own staff, accounting system, bank account, supervisor, and to some extent, bookkeeping system. These characteristics of the Outreach team may be an explanation to the findings concerning the more homogeneous use of the scales of clients' psychological levels of functioning by the Outreach team. This group usually staffed their cases within their Outreach group, which was composed of clinicians who, in the year of 1983, had been working together for six or more years. Thus, the procedures as well as the elements of the Outreach team were probably more homogeneous than the group of clinicians at the DMCGC in general.

Many satellite offices were developed since the time the PCCR was initiated, all of them in multiproblem neighborhoods, distant from the main location of the Center, and where low socio-economic classes and minorities lived. With time, the number of referrals to the PCCR or Outreach program increased significantly, and to the point that the team provided treatment almost anywhere according to the needs of the clients. Shafer stated (1983):



"By making these services convenient the program experienced very few missed appointments, and had a very high rate of follow through with treatment recommendations" (p. 8).

Shafer (1983) provided relevant information about the great advantages as well as the uniqueness of the PCCR program. These are certainly very crucial elements relevant to the results found in this investigation:

"Many of the individual child sessions were conducted in the child's school. This offered several advantages besides the obvious convenience to the parent. Many of the children referred to the PCCR Program were experiencing problems at school. These were the children that could least afford to miss out on their school program. By conducting the sessions in the school building and working around the child's academic schedule, interference with the child's school program was kept to a minimum. Had the child been taken out of school and transported to the main center of the Des Moines Child Guidance Center, the child would likely have missed practically half a day at school. Also, by working with the youngsters at school, PCCR staff were able to observe the child's behavior and offer consultation with school staff. Communication with the school gave the therapist another source of information, besides the parent, by which to assess the effectiveness of the treatment. If the child was in difficulty at school, the PCCR usually knew it and could incorporate it into the therapy sessions" (pp. 8-9).

Shafer (1983) also explained the reasons why the predominant treatment modality provided by the Outreach team was play/parent therapy. As indicated above, most of the time, the referred child was seen at school for individual sessions. Parents and families received home therapy visits. This modality of therapy, according to Shafer (1983) had various advantages:

"Many of the families referred for the service had a difficult time making it even to the satellite offices which were often within walking distance. Most of these families had other children which meant problems in finding babysitting or dressing a bunch of kids up with a cold and

walking to a satellite. The logistics involved in collecting all of the family and meeting at a satellite for family sessions were overwhelming for many of these families" (p. 9).

Finally, Shafer (1983) called attention to another advantage in providing mental health services in the client's own environment:

"... there were therapeutic and diagnostic advantages to offering services in the home. Visiting a family in the home gives the therapist a great deal of information about how the family lives and conducts its business. Often the stresses under which the family lives were very apparent in the home environment" (p. 9).

An evaluation of the eight years of existence of the Outreach Program, or PCCR (Shafer, 1983), revealed that immediacy of service was obtained: Most cases were seen for a face-to-face interview five days after the referral was made. More important, in most cases, the clinician who conducted the initial evaluation with the family continued to do the therapy when treatment was actually indicated. Thus, there was no interruption between evaluation and treatment. In addition to that, Shafer (1983) indicated that the Outreach team did not have a waiting list.

Other very positive results of the 1983 evaluation of the PCCR program was that 90% of the clients kept their appointments, and that 91% complied with treatment recommendations.

The information provided by the eight-year evaluation of the Outreach program (Shafer, 1983) is certainly very supportive of the results of this study. Results indicated that families seen by the Outreach staff indeed complied more with treatment recommendations than families who were seen at the main center and Satellite clinics. Thus,

the Outreach program was successful in decreasing significantly the failure to comply with treatment rates. The success of this program should certainly be advertised to other institutions in which there is a high incidence of failure to comply with treatment recommendations. The fact that clinicians in this program "reach out" to clients in their own environment not only has practical advantages (such as eliminating the problem of transportation of clients and their family members), but also cultural, as was expressed by Shafer (1983):

"The family was more likely to act out its natural patterns at home than in a foreign office. Also, the therapist could actually demonstrate intervention techniques for parents in their natural environment rather than having to describe the technique apart from the situation.... Techniques taught in the natural setting did not have to be carried over to the 'real world' as did techniques taught in the therapist's office" (p. 9).

In other words, providing services in the client's own environment, rather than imposing a white, middle class practice which is, for instance, to go to an office housed in a hospital building, might help the clinician to become more sensitized to her/his clients' values, as well as to their primary and immediate needs for therapy.

Results indicated that a greater number of therapy visits were offered by the Outreach program as compared to the main center and Satellite clinic cases. Although the Outreach team predicted that their therapy cases would be mostly a crisis intervention and thus short-term therapy oriented, families stayed in therapy for longer periods than predicted. Perhaps once the crisis was diminished, the family became aware of other chronic problems, and at that time were more committed to treatment and believed in the potential of therapy

for their solutions.

Outcome measures of therapy utilized in this study indicated that the Outreach cases were significantly more successful than the main center and Satellite clinic cases. The reader may ask: Why was the Outreach program more successful than the other two? Did the Outreach program treat less severely disturbed children? Did the clinicians at the Outreach program use the scales of levels of psychological functioning more favorably than other clinicians? Or was the Outreach program actually more successful in therapy?

Comparison among therapists at the study of the least square means of each individual therapist ratings of her/his clients suggested that overall, Outreach clinicians judged that their clients' levels of psychological functioning improved after intervention. Questions may be addressed concerning these findings such as: What elements of the Outreach program were responsible for the clinicians' overall positive evaluation of their clients' improvement in levels of psychological functioning after intervention? Did clinicians from this program use the rating scales differently? As was mentioned before, the clinician as a source of variability was present in all the data, and it is recognized.

A Chi-square test and an ANOVA were performed to investigate whether the Outreach cases were less severe than the ones seen at the main center and Satellite clinics. Results indicated that the Outreach clients were not judged with significantly higher levels of overall functioning than the other programs ( $F = .98$ ,  $dfs = 2$ ,  $265$ ,  $p = .377$ ). Outreach clients were also not differentially attributed

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various diagnostic categories ( $\chi^2 = 10.016$ ,  $df = 8$ ,  $p = .264$ ), nor did they categorize more often in the overcontrolled behavior cluster ( $\chi^2 = .019$ ,  $df = 1$ ,  $p = .889$ ), as compared to the Center-based and Satellite Clinic clients.

The reader may conclude from the results reported above that the Outreach program did not provide services to clients with higher levels of psychological functioning. As a matter of fact, Shafer (1983) believed that the population served by the Outreach team was composed of poor therapy candidates, and the family characteristics of the cases treated by the Outreach team is typical of multiple problem families which are certainly the hardest to be treated, the ones which usually need the most treatment, but who are least served (Lurie, 1974).

The positive results of this investigation concerning treatment outcome in the Outreach program are in agreement with Shafer's (1983) report on the eight-year evaluation of this program from 1975 to 1982: Seventy-five percent of the children were rated as functioning at a higher level following treatment, and 63 of the parents were rated as functioning at a higher level following treatment.

In sum, results of this investigation presented many indicators of the success of the Outreach program over the interventions provided at the Center and at the Satellite Clinics. What are some implications of these results to the DMCGC staff? The next section will consist of a discussion of the implications of the findings of this study to practitioners, as well as to researchers who are committed to conducting investigations in the real world, and who

adopt the scientific/practitioner balance in their professional endeavors (Gelso, 1985).

### Implications of the Findings to Clinical Practice and Suggestions for Further Research

#### Implications of the positive results of the Outreach program

The discussion of the implications of the positive results of the Outreach program as compared to Center-based and Satellite Clinic interventions is initiated. The results may have important implications to mental health providers. The shift from traditionally oriented mental health centers in which long-term therapy for the middle class was the predominant picture to a diversified institution with an advocacy stance, involving a large percentage of minority clients, decentralized offices and linkage to the client's socioeconomic class has been shown to have a positive effect in other centers (Sands & Young, 1973). In the same line, Tittle and Cook (1981) proposed a systems approach to working with families-school-clinic. These authors believed that separating each would provoke an emotional detachment between institutions and families.

It is possible that only when mental health professionals provide services in the clients' community will the group of people with most need for services, the multiproblem families, attend and succeed in treatment. Mental health professionals are used to the tradition of the medical model: If a patient is sick, she/he needs to go to the doctor's office. In the case of a physician, this is

justified nowadays due to the difficulty in transporting necessary equipment which physicians need to utilize when examining and evaluating patients (such as X-ray, laboratory work). However, mental health providers can leave their offices and use their most important tool, the relationship, in clients' own environments. This would bring some disadvantages to the professional, who would have to spend time travelling. However, as Shafer (1983) noted, the travel time can certainly be compensated by the significant decrease of appointments missed which was a problem at the Center-based cases.

Another aspect of the possible resistance from the clinician's point of view in reaching out to clients was that, once the clinician visits families in their homes, the powerful and safe surroundings of her/his office -- which are usually helpful to define the client-practitioner relationship -- are not present. Thus, these visits may present some threat.

Thus, if mental health providers do indeed change their focus of treatment from a centralized treatment delivery to a decentralized mode of therapy, they will certainly have to alter their medically oriented concepts and shift to the socialized, outreach manner of service delivery.

#### Other clinical implications

Other implications originating from the results of this study will be presented in the remaining part of this section. Results indicated that the DMCGC treated a large percentage of boys in the latency age,

who probably were presenting undercontrolled behaviors at school and at home. Problems with relationship, aggressiveness, and impulse behavior seemed to be common in the population seen at the DMCGC. Given this picture of the most probable type of client and presenting problems seen at the DMCGC, staff might receive training in the area of undercontrolled behavior clusters: how to work with the child, with his family, and research results that provide recommended strategies for intervention.

A very important result of this study which has implications for the procedure utilized at the DMCGC in the various stages of intervention, is the finding that clients complied more often with treatment recommendations when the intake worker "picked up" the case for treatment. These results suggest that, in the future, the DMCGC staff consider possible changes in the way staff members are assigned to cases, and that they give priority of providing services to the cases they see for an initial interview.

Another broad suggestion which originated from the results of the study was the need for clinicians' awareness of the importance of certain areas of their practice to treatment outcome. For instance, the clarity in which therapists communicate with the clients, especially during the time of the initial contact, when the evaluation as well as the relationship with the clinic is established, may be crucial for compliance. Professionals might pay special attention in listening to their clients' reasons for seeking treatment, as well as to their very immediate needs. The explanation of the procedures and logistics of the DMCGC to clients in a manner that clients can



understand clearly is also important. Maybe clinicians and clients could discuss certain topics of the initial contact, such as (a) re-definition of the presented problem; (b) assessment of the client's needs; (c) disposition and treatment recommendation when the intake worker would offer alternatives to the client and explain the rationale behind the disposition in a way that the client would understand; (d) intake worker would learn of possible practical barriers the client would have in attending therapy at the Center; and finally (e) a contract for the length of treatment, with a date for an evaluation of goal achievement of therapy, would be designed.

Perhaps clinicians could express more clearly their rationale in recommending treatment. As was mentioned earlier, Runyan's (1977) intervention reasoning is an example of a framework staff could be trained to utilize in recommending treatment. This method takes into account three elements in treatment recommendations decisions: scientific knowledge, valuative and ethical reasoning, and technical and economical consideration.

Some of the areas discussed above were based mostly on speculations due to the scarcity of research developed in the field of child psychotherapy. Topics such as rationale of treatment recommendations, as well as the client-practitioner relationship influence on compliance and treatment outcome deserve future investigations. Another important topic to be studied which was also cited earlier in this discussion is the study of the relationship among chronicity of the presenting problem, waiting time for therapy, and compliance with treatment. Finally, the area of child guidance clinics' procedures and logistics of the different

stages of intervention is recommended, with specific emphasis in the study of whether clinicians who provide services to families in the intake procedure become their therapist and its implication to compliance and treatment outcome.

Finally, case studies such as this one are proposed to enhance the understanding of individual mental health centers in order to diagnose their strengths and weaknesses to provide better treatment to the public. The commitment of this investigator with the case study methodology is expressed in the next section, which consists of methodological aspects of this study as well as suggestions for further work.

#### Final Methodological Considerations

##### Instruments and measures

Suggestions concerning measures of treatment compliance and treatment outcome to be used in future research are proposed. The present investigator agrees with Ramsey-Klee and Eiduson's (1969) comment that the difference in record keeping practices from one mental health center to another makes it hard to group statistical data into a meaningful fashion to permit other investigators to use results with other settings in a meta-analysis. Ramsey-Klee and Eiduson's (1969) suggestion for the recoding of data as an attempt to create a common data bank for all mental health centers is fascinating. For example, with the recent revised third edition of the Diagnostic and Statistical Manual of Mental Disorders (American Psychiatric As-

sociation, 1987), the DSM-III-R, clinicians throughout the country are provided with a scale of general psychological functioning called the "Global Assessment of Functioning Scale," the GAF Scale.

This scale is supposed to be a measure of the client's psychological, social, and occupational functioning, and it is designed as a continuous variable with the range between one and ninety. Perhaps clinicians might think about using the difference of the ratings attributed to clients before and after treatment as a measure of treatment outcome.

However, even if all mental health centers used the same instruments to evaluate treatment outcome, one could not compare the results among the centers because each center is composed of different clinicians, and each clinician treats different groups. The present study is a good example of how much the outcome measures of studies of this nature depend on clinicians' judgments or ratings. Thus, very little data obtained in this study, as well as in others, is independent of the therapist. A suggestion to diminish this problem would be to give parents questionnaires to complete in the various stages of intervention. The provision of alternative measures might provide evidence of convergent validity. Another example of alternative measures would be the case in which therapists would be given more objective questionnaires to respond to right after the intake interview and at the termination of treatment.

Two measures which are less dependent on the therapists' judgment and thus on their variability, were the number of appointments missed by the clients, and also whether clients followed up treat-

ment recommendations. These two measures could be used as a good reflection of clients' satisfaction with services.

Finally, future research may define the measure of compliance with treatment recommendations in a finer way. In the present investigation, compliance to treatment was defined as a dichotomous variable: clients either complied with treatment recommendations (if they came for at least the first therapy appointment) or they did not. Studies which would divide compliance in more than two groups would provide better understanding of the whole process of compliance with treatment recommendations.

#### Limitations of this study

This was a case study of the DMCGC and, thus, results are limited to this institution only. If the DMCGC is studied during the years of 1987-1988, many changes will probably take place. For instance, a very significant change in referrals made during the last few years in regard to child abuse and the need for evaluation and special treatment of child abuse cases. The DMCGC has developed many programs in an attempt to attend to the needs of the community for treatment in that area: there are sexual abuse groups for preschoolers and latency age children, a group for sexual abuse perpetrators (and their parents), and special evaluations have been designed recently to assess children's reactions to child abuse. The development of new programs as well as therapy modalities during the last five years may have changed the demographic characteristics of the children who were seen at the DMCGC. Thus, the reader may conclude that one should

be careful in generalizing the results of this study to the DMCGC's services during the year of 1987 due to changes which have occurred lately.

Another possible weakness of this study is its omission in studying the preintake stage of intervention. In other words, this investigation did not consider the cases in which the parent or guardian made a telephone call, made the initial appointment, but did not attend the intake session. Klein's (1980) study may serve as a good guide for future research in this important area of study.

However, this study is an example of the development of a diagnostic tool to evaluate many aspects of a mental health center. Similar studies may be developed to study other centers in order to answer questions (specifically asked for the institution under study) such as: What are the demographic characteristics of the clientele in the center? Which therapies proposed are most successful? Can one predict compliance to treatment?

Although in the present investigation, discriminant analysis did not provide clinically useful information, it is suggested that researchers continue to attempt to analyze treatment compliance and treatment outcome data via discriminant function analysis as an attempt to select the best grouping of predictor variables that cumulatively predicts the treatment modality decisions, compliance, and treatment outcome (Rosenblum et al., 1981).

Final note: Call for case studies

The present study is an example of the clinical power a case study may have. It served as a diagnostic tool of the DMCGC in a specific time, and it raised numerous questions which can be investigated in the future.

There has been increased support for case studies in the field of psychology (Gelso, 1985; Heinemann & Shontz, 1985; Hill, Carter, & O'Farrell, 1983; Smith, 1987). Smith (1987) explained that qualitative research, such as a case study, can be empirical. The investigators collect sensible data about the phenomenon they study and organize them in a logical way. Researchers then compare their data with ideas, hypotheses, and categorical definitions as a way of testing them. This study followed the above steps.

Finally, the present investigator is also in agreement with Smith's (1987) idea that qualitative research, such as in this case study, should take into consideration the context where the entity under study is situated. In other words, the idea behind research such as the present one, which was performed in a clinical setting rather than in a laboratory, is that there are no context-free research endeavors in the area of psychology. Thus, as Bronfenbrenner (1977) suggested, more ecologically valid research is needed in various areas of social sciences.

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APPENDIX A:  
CODING SHEET



Coding Sheet

- |  |                   |       |
|--|-------------------|-------|
| 1. Subject code  |                   | _____ |
| 2. Sex   | Female            | (0)   |
|  | Male              | (1)   |
| 3. Age   |                   | __    |
| 4. Grade in school   |                   | __    |
| 5. Date of request of first visit                            |                   | __/_  |
| 6. Date of first visit                                       |                   | __/_  |
| 7. Time in between the 2 above in days (line 6 minus line 5) |                   | __    |
| 8. Previous family contact with C.G.C.?                      | Yes               | (1)   |
|  | No                | (0)   |
| 9. Who was referred as patient before?                       | Nobody            | (0)   |
|  | Self              | (1)   |
|  | Sibling           | (2)   |
|  | Other             | (3)   |
| 10. Referral (who made the phone call)                       | Mother            | (01)  |
|  | Father            | (02)  |
|  | Parents           | (03)  |
|  | School            | (04)  |
|  | DHS               | (05)  |
|  | Court             | (06)  |
|  | MD                | (07)  |
|  | Other individual  | (08)  |
|  | Other institution | (09)  |
| 11. At suggestion of   | Mother            | (01)  |
|  | Father            | (02)  |
|  | Parents           | (03)  |
|  | School            | (04)  |
|  | DHS               | (05)  |
|  | Court             | (06)  |
|  | MD                | (07)  |
|  | Other individual  | (08)  |
|  | Other institution | (09)  |

Living arrangements

- |   |   |       |
|---|---|-------|
| 12. Living with a man?                  | Yes   | (01)  |
|   | No  | (02)  |
| 13. Age                                 |   | --    |
| 14. Relation to patient                 | Natural father  | (01)  |
|   | Stepfather  | (02)  |
|   | In living boyfriend   | (03)  |
|   | Adoptive father   | (04)  |
|   | Foster father   | (05)  |
|   | Grandfather   | (06)  |
|   | Other   | (07)  |
| 15. Address (zip code)                  |   | ----- |
| 16. County                              | Polk  | (01)  |
|   | Warren  | (02)  |
|   | Dallas  | (03)  |
|   | Story   | (04)  |
|   | Granger   | (05)  |
|   | Marion  | (6)   |
|   | Marshall  | (07)  |
|   |   | (08)  |
|   | Other   | (09)  |
| 17. Place of employment or job position | Disabled  | (0)   |
|   | Unemployed and Title XIX  | (98)  |
|   | Unemployed  | (99)  |
|   | Others: coded according to the Dictionary of Occupation Titles, D.O.T., two-digit coding system (U.S. Department of Labor, 1977). |       |
| 18. Living with a woman?                | Yes   | (01)  |
|   | No  | (02)  |
| 19. Age                                 |   | --    |
| 20. Relation to patient                 | Natural mother  | (01)  |
|   | Stepmother  | (02)  |
|   | In living girlfriend  | (03)  |
|   | Adoptive mother   | (04)  |
|   | Foster mother   | (05)  |
|   | Grandmother   | (06)  |
|   | Other   | (07)  |

21. Place of employment of job position
- Disabled (0)
  - Unemployed and Title XIX (98)
  - Unemployed (99)
  - Others: Coded according to the Dictionary of Occupation Titles, D.O.T., two-digit coding system, (U.S. Department of Labor, 1977).
22. Natural parents' marriage status
- Married and living together (01)
  - Separated (02)
  - Divorced (03)
  - Father died (04)
  - Mother died (05)
  - Father and mother died (06)
  - Adoptive parents (07)
23. Siblings?
- Yes (01)
  - No (0)
24. How many?
- 
25. From the oldest to the youngest, 1st digit = sex: 0 for female, 1 for male; 2nd and 3rd digit = age; 4th digit = relationship to patient
- 100% sibling (01)
  - Half sibling (02)
  - Step sibling (03)
  - Child of in living adult (04)
  - Foster sibling (05)
  - Adoptive sibling (07)
26. Income:
- (       )
27. Staff member who did the intake
- --
28. Religion preference
- Catholic (01)
  - Protestant (02)
  - Lutheran (03)
  - Mormon (04)
  - Jewish (05)
  - Other (06)

29. Racial origin	Caucasian	(01)
	Black	(02)
	Asian	(03)
	Hispanic	(04)
	Mulato	(05)
	Indian	(06)
30. Under medication?	Yes	(01)
	No	(0)

(Back of face sheet)

Presenting problem

Table for Service Plan

31. Method of payment	Private	(01)
	Title XIX	(02)
	Insurance	(03)
32. Staff note by	Staff member	--
33. Diagnosis:	Axis I	-----
	Axis II	-----
	Axis III	-----
	Axis IV	-----
	Axis V	-----
34. Current functioning	Overall level	-- (of 9)
	Personal level	-- (of 4)
	Social	-- (of 8)
	Educ./Learning	-- (of 6)
	Emotional	-- (of 7)
	Parental	-- (of 9)
35. Proposed Service Actions:		
0. No therapy recommended		
1. Family therapy		
2. Play therapy		
3. Family and play therapy		
4. Parent therapy		
5. Family therapy and parent therapy		
6. Play therapy and parent therapy		
7. Family, play, and parent therapy		
8. Activity group		
9. Family therapy and activity group		
10. Play therapy and activity group		
11. Parent therapy and activity group		
14. Psychiatric evaluation		
15. Medication		

16. Medication and family therapy
  17. Medication, parent and individual therapy
  18. Medication and parent therapy
  19. Medication, parent group, and activity group
  25. Parent group
  26. Individual therapy and parent group
  27. Activity group and parent group
  28. Activity group, parent group, individual therapy
  30. Preschool therapy group
  31. Preschool therapy group and parent group
  32. Preschool foster care group
  35. Adolescent group
  36. Adolescent group and family therapy
  40. Psychological assessment
  44. Psychological assessment and parent therapy
  45. Home-based evaluation
  50. No therapy recommended but education elsewhere (e.g., parent growth, bibliotherapy)
  51. No therapy recommended at the DMCGC but referral to another therapy center
  52. Therapy: emergency basis
  55. Visitation mediation
  60. Psychoeducational assessment
  64. Psychoeducational assessment and parent therapy
  70. Consultation with school only
  71. Collateral school work with play therapy and parent therapy
  80. Follow-up contact or interview at a later date
  81. Clinical evaluation
  82. Follow-up phone contact and bibliotherapy
  90. Therapeutic day care
  91. Therapeutic day care and parent group
  95. Alternative to foster care — in-home treatment
  96. Pretherapy group and family therapy
  99. Pretherapy group.
- 
35. a. Location of proposed treatment
    0. Center based
    1. Outreach Program
    2. Indianola
    3. Ankeny

#### Termination Summary

36. Intake evaluator	Child	
	Parent	— — —
	Family	— — —
37. Number of visits	Child	
	Parent	— —
	Family	— —

38. Parents agreed with recommendations	Yes	(01)
	No	(0)
39. Therapy began?	Yes	(01)
	No	(02)
40. Therapy: Time in between the intake or last clinical interview and the first therapy session	In days	--
41. Therapist	Child	--
	Parent	--
	Family	--
42. Duration of therapy	In months	--. --
43. Number of visits	Child	--
	Parent	--
	Family	--
44. Treatment summary (cursive)		
45. Final statistics	Axis I	-----
	Axis II	-----
	Axis III	-----
	Axis IV	-----
	Axis V	-----
46. Level of functioning	Overall	__ (of 9)
	Personal	__ (of 4)
	Social	__ (of 8)
	Educ./Learning	__ (of 6)
	Emotional	__ (of 7)
	Parental family	__ (of 9)
47. Treatment or service received	Same coding for tx recommended in category 35	--
47. a. Location of received treatment		

- |   |   |      |
|---|---|------|
| 48. Termination   | Mutual decision                             | (01) |
|   | Moved                                       | (02) |
|   | Death                                       | (03) |
|   | Against staff advice                        | (04) |
|   | Lack of contact                             | (05) |
|   | Other                                       | (06) |
|   | Against staff advice and<br>lack of contact | (07) |
| 49. Who signed the form?  | Staff member                                | --   |
| (from progress notes)   |   |      |
| 50. Which family members were<br>present in the intake interview? | Child                                       | (01) |
|   | Nat. mother                                 | (02) |
|   | Nat. father                                 | (03) |
|   | All siblings                                | (04) |
|   | Not all siblings                            | (05) |
|   | Stepmother                                  | (06) |
|   | Stepfather                                  | (07) |
|   | Grandparent(s)                              | (08) |
|   | Other                                       | (09) |
| 51. Number of missed appointments                                 |   | --   |

APPENDIX B:  
REQUEST FOR SERVICE SHEET



# DES MOINES CHILD GUIDANCE CENTER, INC.

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• DATE OF REQUEST FOR SERVICE: \_\_\_\_\_ DATE OF FIRST VISIT: \_\_\_\_\_ CASE NO: \_\_\_\_\_

- Patient's Name:
- Birthdate and age:
- Sex:
- School and grade:
- Physician:
- Previous Family Contact:

## REFERRAL INFORMATION:

- Referral:
- At Suggestion of:
- Address:
- Zip: \_\_\_\_\_ County:
- Phone:

### • Patient Now Living With:

- Man's Name:
- Age: \_\_\_\_\_ Relation to Patient:
- Address:
- County: \_\_\_\_\_ Zip: \_\_\_\_\_ Phone: \_\_\_\_\_
- Place of Employment:
- Job or Position: \_\_\_\_\_ Phone: \_\_\_\_\_

- Woman's name:
- Age: \_\_\_\_\_ Relation to Patient:
- Address:
- County: \_\_\_\_\_ Zip: \_\_\_\_\_ Phone: \_\_\_\_\_
- Place of Employment:
- Job or Position: \_\_\_\_\_ Phone: \_\_\_\_\_

### • Natural Parents (if different from above)

- Father:
- Address:
- Age: \_\_\_\_\_ Phone: \_\_\_\_\_
- Place of Employment:
- Phone: \_\_\_\_\_

- Mother:
- Address:
- Age: \_\_\_\_\_ Phone: \_\_\_\_\_
- Place of Employment:
- Phone: \_\_\_\_\_

Child and all siblings:	AGE	EDUCATION/OCCUPATION	REMARKS

### ALL OTHERS IN THE HOME & RELATIONSHIP


Income: \_\_\_\_\_ Fee: \_\_\_\_\_ Staff Member: \_\_\_\_\_

### PARENT'S STATEMENT OF CHILD'S PROBLEM:

Pertinent Environmental Factors:

Religion:  
Race:

Current Chemotherapy:  
Prescribed by:

# REQUEST FOR SERVICE

189

Remarkable Parental Circumstances \_\_\_\_\_  
\_\_\_\_\_

Presenting Complaint \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Calltakers Impression \_\_\_\_\_  
\_\_\_\_\_

Billing Arrangements: Private Pay \_\_\_\_\_ XIX \_\_\_\_\_ Other \_\_\_\_\_

First Visit: Day \_\_\_\_\_ Date \_\_\_\_\_ Hour \_\_\_\_\_ With \_\_\_\_\_

Clinic: Day \_\_\_\_\_ Date \_\_\_\_\_ Hour \_\_\_\_\_ With \_\_\_\_\_

Diagnostic: Day \_\_\_\_\_ Date \_\_\_\_\_ Hour \_\_\_\_\_ With \_\_\_\_\_

Action Taken: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Reports Requested \_\_\_\_\_

RFS Received By \_\_\_\_\_

RFS Processed By \_\_\_\_\_

Emergency: ☐

Time: \_\_\_\_\_

Type of Contact: Face to Face ☐

Phone ☐

APPENDIX C:  
SERVICE PLAN I

SERVICE PLAN  
(Part 1)  
191

Original Staffing  
Restaffing  
Medicaid Certification

STAFF CONFERENCE

NAME: \_\_\_\_\_ CASE NUMBER: \_\_\_\_\_

METHOD OF PAYMENT: Private \_\_\_\_\_ XIX \_\_\_\_\_ Ins. \_\_\_\_\_

DATE OF INITIAL: \_\_\_\_\_ DATE STAFFED: \_\_\_\_\_ STAFF NOTE BY: \_\_\_\_\_

THOSE PRESENT: \_\_\_\_\_

(PLEASE \* THE PRINCIPAL DIAGNOSIS)

DIAGNOSIS: Axis I: \_\_\_\_\_

CODE(S): \_\_\_\_\_

Axis II: \_\_\_\_\_ CODE: \_\_\_\_\_

Axis III: \_\_\_\_\_ CODE: \_\_\_\_\_

Axis IV: \_\_\_\_\_ CODE: \_\_\_\_\_

Axis V: \_\_\_\_\_ CODE: \_\_\_\_\_

CURRENT FUNCTIONING: (Overall Level \_\_\_\_\_ out of 9)

Personal Self-Care: (Level \_\_\_\_\_ out of 4)

Social: (Level \_\_\_\_\_ out of 8)

Educational/Learning: (Level \_\_\_\_\_ out of 6)

Emotional: (Level \_\_\_\_\_ out of 7)

PARENTAL/FAMILY: (Level of Functioning \_\_\_\_\_ out of 9)

CASE ADVOCATE: \_\_\_\_\_

PROPOSED SERVICE ACTIONS: \_\_\_\_\_

REPORTS TO: Referring Source: \_\_\_\_\_ Yes \_\_\_\_\_ No

BY: \_\_\_\_\_

BY: \_\_\_\_\_

BY: \_\_\_\_\_

This image shows a single sheet of white paper with horizontal blue or grey ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

APPENDIX D:  
TERMINATION SUMMARY FORM

TERMINATION SUMMARY  
194

1. Identifying Information

Child's Name \_\_\_\_\_ Case Number \_\_\_\_\_

Parent's Name \_\_\_\_\_ Birthdate \_\_\_\_\_

Referral Problem: \_\_\_\_\_

2. Intake/Evaluation

Evaluator(s): Child \_\_\_\_\_ Parent \_\_\_\_\_ Family \_\_\_\_\_

Dates of Intake and/or Evaluation: \_\_\_\_\_

Number of Visit(s): Child \_\_\_\_\_ Parent \_\_\_\_\_ Family \_\_\_\_\_

Please \* Principle Diagnosis

DSM Diagnosis - Axis I: \_\_\_\_\_

\_\_\_\_\_ CODE(S): \_\_\_\_\_

Axis II: \_\_\_\_\_ CODE(S): \_\_\_\_\_

Axis III: \_\_\_\_\_ CODE(S): \_\_\_\_\_

Descriptive Diagnosis (Child, Parent and/or Family): \_\_\_\_\_

3. Recommendations

Treatment Recommended: \_\_\_\_\_

Parents agreed with recommendations \_\_\_\_\_ yes \_\_\_\_\_ no

Treatment begun \_\_\_\_\_ yes \_\_\_\_\_ no

4. Treatment

Therapist(s): Child \_\_\_\_\_ Parent \_\_\_\_\_ Family \_\_\_\_\_

Dates of Treatment \_\_\_\_\_ to \_\_\_\_\_

Number of Visits: Child \_\_\_\_\_ Parent \_\_\_\_\_ Family \_\_\_\_\_

Treatment Summary: \_\_\_\_\_

5. Final Statistics

Please \* Principal Diagnosis

Diagnosis at Termination: Axis I \_\_\_\_\_

CODE(S) \_\_\_\_\_

Axis II: \_\_\_\_\_ CODE(S) \_\_\_\_\_

Axis III: \_\_\_\_\_ CODE(S) \_\_\_\_\_

Service(s) received \_\_\_\_\_

Type of Treatment \_\_\_\_\_

Levels of Functioning: Pre-Treatment

Post-Treatment

Pers. Care

1 2 3 4

1 2 3 4

Soc. F'ing

1 2 3 4 5 6 7 8

1 2 3 4 5 6 7 8

Ed. F'ing

1 2 3 4 5 6

1 2 3 4 5 6

Em. St. &amp; St. Tol.

1 2 3 4 5 6 7

1 2 3 4 5 6 7

Overall F'ing

1 2 3 4 5 6 7 8 9

1 2 3 4 5 6 7 8 9

Parent F'ing

1 2 3 4 5 6 7 8 9

1 2 3 4 5 6 7 8 9

Termination:

\_\_\_\_\_ Mutual Decision

\_\_\_\_\_ Against Staff Advice

\_\_\_\_\_ Moved

\_\_\_\_\_ Lack of Contact

\_\_\_\_\_ Death

\_\_\_\_\_ Other

Referred to \_\_\_\_\_

Reports to Referral Source \_\_\_\_\_ Yes \_\_\_\_\_ No

Reports to \_\_\_\_\_ By \_\_\_\_\_

By \_\_\_\_\_

By \_\_\_\_\_

Drugs \_\_\_\_\_ Fee Status \_\_\_\_\_

Signature \_\_\_\_\_

Date Termination Form Completed \_\_\_\_\_



APPENDIX E:  
INFORMED CONSENT FORM

---

197  
Informed Consent Form

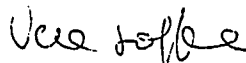
I wish to collect data for my dissertation at the Des Moines Child Guidance Center. My dissertation will consist of an actuarial research of this Center with focus on the predictive value of intake as well as treatment variables on treatment outcome.

I would like to examine a few terminated files at the Des Moines Child Guidance Center. No files will be removed from the Center nor any information which could jeopardize the release of patients' and therapists' identity. Such data will be translated into numerical codes at the Child Guidance Center by the major investigator of this study.

I am asking your permission to allow me to have access to files of patients to whom you delivered services such as conducting the intake work, clinical interviews, diagnostic work, therapy, or any other services.

If you decide to give me permission to study and collect data from files from patients you worked with, please sign the below line. I also would like to ask you to answer this form before August 10, 1986.

Thank you very much for your attention and cooperation,

  
Vera Joffe

I, \_\_\_\_\_, staff member at the Des Moines Child Guidance Center, give Vera Joffe permission to collect data from files from patients I delivered services to.

I understand that no files will be removed which could jeopardize the release of patients' and therapists' information and identity : such data will be translated into numerical codes at the Child Guidance Center by the major investigator of this study. I also understand that I may withdraw my consent and discontinue participation at any time without prejudice to me.

\_\_\_\_\_  
(your signature)

Date \_\_\_\_\_

APPENDIX F:

LETTERS OF APPROVAL FROM RESEARCH COMMITTEES

INFORMATION ON THE USE OF HUMAN SUBJECTS IN RESEARCH

IOWA STATE UNIVERSITY

(Please follow the accompanying instructions for completing this form.)

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1. Title of project (please type): Success of Therapy in a Child Guidance  
Center as a function of Intake and Treatment Variables

2. I agree to provide the proper surveillance of this project to insure that the rights and welfare of the human subjects are properly protected. Additions to or changes in procedures affecting the subjects after the project has been approved will be submitted to the committee for review.

Vera Ioffe 7/14/86 Vera Ioffe  
Typed Name of Principal Investigator Date Signature of Principal Investigator

Department of Psychology 294-1742  
Campus Address Campus Telephone

3. Signatures of others (if any) Date Relationship to Principal Investigator  
Sergey Wolina 7/14/86 Major Professor

4. ATTACH an additional page(s) (A) describing your proposed research and (B) the subjects to be used, (C) indicating any risks or discomforts to the subjects, and (D) covering any topics checked below. CHECK all boxes applicable.

- ☐ Medical clearance necessary before subjects can participate  
☐ Samples (blood, tissue, etc.) from subjects  
☐ Administration of substances (foods, drugs, etc.) to subjects  
☐ Physical exercise or conditioning for subjects  
☐ Deception of subjects  
☐ Subjects under 14 years of age and(or) ☐ Subjects 14-17 years of age  
☐ Subjects in institutions  
☒ Research must be approved by another institution or agency



5. ATTACH an example of the material to be used to obtain informed consent and CHECK which type will be used.

- ☒ Signed informed consent will be obtained.  
☐ Modified informed consent will be obtained.

6. Anticipated date on which subjects will be first contacted: Month Day Year  
07 21 86

Anticipated date for last contact with subjects: 08 30 87

7. If Applicable: Anticipated date on which audio or visual tapes will be erased and(or) identifiers will be removed from completed survey instruments:

Month Day Year

8. Signature of Head of Department Date Department or Administrative Unit  
[Signature] 7/19/86 Psychology

9. Decision of the University Committee on the Use of Human Subjects in Research:

- ☒ Project Approved ☐ Project not approved ☐ No action required

George G. Karas 7/24/86 [Signature]  
Name of Committee Chairperson Date Signature of Committee Chairperson



DES MOINES CHILD GUIDANCE CENTER, INC.  
ANNA R. BLANK MEMORIAL BUILDING  
1206 PLEASANT STREET • DES MOINES, IOWA 50309  
TELEPHONE 515-244-2267

August 11, 1986

George G. Karras, Chairman  
Human Subjects Committee  
201 Beardshear Hall  
Iowa State University  
Ames, IA 50011

Re: Vera Joffe Proposal

Dear Mr. Karras:

Vera has asked me to write this letter as a follow-up to my memo dated July 18, 1986. She has now met all of the "pending" conditions mentioned in the original approval. Specifically, she has been approved as a practicum student by our Training Committee. Secondly, she has changed the "Informed Consent Form" so that it is more similar to the wording in the actual proposal.

I also might mention that she has been very careful to make arrangements with our secretaries in advance so that coordination and efficiency will be maximized.

If you need further information, please do not hesitate to write or call.

Sincerely,

A handwritten signature in cursive script that reads "John F. Tedesco".

John F. Tedesco, Ph.D.  
Chief Psychologist

JFT/dm1

APPENDIX G:  
RECODING OF THE VARIABLES

Table G-1. Location of services provided by the DMCGC

Location	Description
Center based	Services provided at the DMCGC main office which is located in the Iowa Methodist Medical Center, downtown Des Moines
Outreach program	Services provided to clients in their schools and homes. These clients lived in distant areas from the main office. The most popular treatment modality was individual treatment of the child at school, and parent therapy at home
Satellite clinics	An average of two DMCGC staff members saw clients in a church located in Ankeny and another in Indianola

Table G-2. Diagram of the construct compliance to treatment

Treatment recommended	Treatment began	
	Yes	No
Yes	Compliance	No compliance
No	Nonapplicable	Compliance

Table G-3. Recoding of the age variable

Age	Recoded category
< 2	Infant
2-5	Preschoolers
6-9	Young latency
10-12	Late latency
> 12	Adolescence

Table G-4. Job categories: adapted from the Dictionary of Occupational Titles (U.S. Department of Labor, 1977)

Category	Explanation
Title XIX	
Unemployed	
Professionals	All two-digit occupational divisions in the professional, technical, and managerial occupations
Skilled	Sales occupations, mechanics and machinery repairers, occupations in assembly and repair of electrical equipment, occupations in fabrication and repair of plastics, synthetics, rubber, and related products, occupations in graphic art work
Semi-skilled	Stenography, typing, filing and related occupational; computing and account-recording occupations; protective occupations; occupations in fabrication, assembly, and repair of metal products; bench work occupations; electrical assembling, installing, and repairing occupations; painting, plastering, water proofing, cementing, and related occupations; motor freight occupations; transportation occupations
Unskilled	Miscellaneous clerical occupations; food and beverage preparation and service occupations; miscellaneous personal service occupations; apparel and furnishing service occupations; occupations in processing food, tobacco, and related products; occupations in processing of paper and related materials; paperworking occupations; occupations in machining stone, glass, and related materials; excavating, grading, and related occupations; construction occupations; packaging and material handling occupations; occupations in extraction of minerals



Table G-5. Recoding of the diagnostic categories from the Diagnostic and Statistical Manual of Mental Disorders (American Psychiatric Association, 1980), the DSM-III

Category	DSM-III classification
Conduct disorder	All conduct disorder categories
Adjustment disorder	All adjustment disorder categories
No diagnosis in Axis I	No diagnosis in Axis I
V codes	All V codes except parent-child problem
Parent-child problem	Parent-child problem
Diagnosis or condition deferred on Axis I	Diagnosis or condition deferred on Axis I
Oppositional disorder	Oppositional disorder
Others	All other diagnostic categories

Table G-6. Recoding of the DSM-III (American Psychiatric Association, 1980) Diagnostic Categories According to the Concepts of Overcontrolled and Undercontrolled Behavior Clusters (Achenbach & Edelbrock, 1978)

Behavior cluster	Diagnostic category
Undercontrolled	Attention deficit disorder with hyperactivity Attention deficit disorder without hyperactivity Attention deficit disorder, residual type Conduct disorders (all kinds)
Overcontrolled	Separation anxiety disorder Avoidant disorder of childhood or adolescence Overanxious disorder Elective mutism

Table G-7. Recoding of the treatment modalities

Category	Treatment modality
Family therapy	Family therapy
Play/parent therapy	Play therapy Parent therapy Both
No therapy	No treatment Follow-up visits Clinical evaluations Psychiatric evaluation Visitations mediation Psychological assessment Consultation with school Psychoeducational assessment Follow-up contact through telephone or through bibliotherapy Referral elsewhere Education elsewhere
Other treatment	Any treatment which was not cited before <sup>a</sup>

<sup>a</sup>See Appendix A for detailed listing of all treatment modalities offered by the DMCGC in 1983.