AN EXPLORATORY INVESTIGATION IN THE USE OF

BIOGRAPHICAL DATA TO PREDICT SUCCESS OF

CHILD PSYCHOTHERAPY IN A PRIVATE

OUT-PATIENT CLINIC

by

Alonzo J. Davis, IV

Approved by

_____

Chairman, Thesis Committee

_____

Associate Professor of Psychology

_____

Chairman, Department of Psychology

_____

Dean of the Graduate School

_____

Professor of Psychology

AN EXPLORATORY INVESTIGATION IN THE USE OF

BIOGRAPHICAL DATA TO PREDICT SUCCESS OF

CHILD PSYCHOTHERAPY IN A PRIVATE

OUT-PATIENT CLINIC

———————

Alonzo J. Davis, IV

———————

Master's Thesis

Presented to
the Faculty of Psychology
Appalachian State University
Boone, North Carolina

ACKNOWLEDGEMENTS

I would like to express my appreciation to Dr. Barbara Hills, Director of Psychological Services at the clinic where the research was accomplished. She gave me free access to all clinic files and allowed me to conduct my research during my internship under her.

The four men who served on my committee also deserve some thanks. Most of the editorial work had to be accomplished on weekends, and this necessitated extra time at all hours of the day. Mr. Irvin Koffman was most helpful in the development of the statistics used. Dr. Richard Levin, Chairman of the clinical program, was influential in formalizing the proposal. Major support for the nature of the proposal came from Dr. Paul Fox, who served as chairman of my committee.

Finally, a special thanks goes to Dr. Basil Johnson, chairman of the department of psychology, who consented to replace Mr. Koffman on the committee when the latter left the university.

i

TABLE OF CONTENTS

LIST OF TABLES

ABSTRACT

Researchers have attempted many ways to predict
success in psychotherapy including; (1) demographic data,
(2) Projective measures, (3) objective test data, and
more recently, (4) Biographical data of the client and/ or
his family. This thesis investigated the hypothosis
that such biographical data could successfully predict
outcome of child psychotherapy. Biographical statements of
cases (N= = 131) in a private psychiatric out-patient
clinic were obtained on the following data: Race, age,
sex, previous psychiatric help for child, current grade in
school, number of grades behind in school, birth order of
child, marital status of parents, length of current
marriage of parents, length of marriage before birth of
first child, previous marriage for either parent, father's
age, mother's age, father's educational level, mother's
educational level, income of parents, number of children
in the family, previous psychiatric help for parents,
age difference between parents, and educational difference
between parents. Cases were randomly divided into two
groups and two independent studies were performed.

Significant predictors of success in Study I were race, length of marriage before first child, father's age, and age difference between parents. Significant indices of outcome in study I were length of marriage before first child, parental income, and educational differences between parents.

Results suggested study of culturally atypical family patterns might successfully predict outcome of child psychotherapy.

CHAPTER I

INTRODUCTION

Statement of the problem. Mental health personnel
have often asked, "Who benefits from child psychotherapy?"
Workers have always found results of therapy to be
inconsistent from one child to the next, even when two
children come from the same environment and background.
The importance of answering this question lies in the
ability of a worker to predict which children he can best
expect to serve. Should such predictability be available,
the worker could then give consideration for other means
of therapy or utilization of other mental health resources
with those children who could be predicted to have a low
probability of improvement in this particular therapeutic
milieu.

Background Information. To systematically study
this question, mental health researchers have looked to
several types of possible prognosticators of success in
therapy. Demographic data has been applied as one means
of predicting success. This term denotes descriptive data,
but several authors (Eaker, et al, 1969; Errera, et al,
1967; Luborsky, et al, 1971) have expanded the definition
to include "dynamics of personality" such as affect,
involvement with therapy, attitudes and general person-

ality traits. Other indices of success in therapy have come
of projective measures taken from the Rorschach inkblots,
Thematic Apperception Test, Draw-A-Person Test, and similar
material. Also used have been objective test data attempting
to quantify materials from demographic traits, intellectual
measures, and standardized personality test such as the MMPI,
California Psychological Inventory, 16 Personality Factor
Test, Personal Orientation Inventory, etc.

More recently, predictions of success have been attempted
with biographical data concerning the client and/or his
family. Lanyon and Goldstein (1971) reported results using
biographical data as a predictor of success in areas where
personality characteristics are considered to be a factor,
such as job success, dropout rate of employees, and leader-
ship ability.

Framework of Thesis. This thesis represents an
exploratory study into the use of biographical data as a
predictor of success in child psychotherapy. Specifics of
the individual datum statements and the literature concerning
this data will be presented in the methodology section
rather than as part of the introductory material.

Delimitation. Subjects used in this study came from a
child psychiatric clinic operating under the general outline
established by Freud and his associates in 1921, (Wolberg, 1954).

The general model of treatment to be explored was a team approach involving a social worker who usually saw the parents and a psychiatrist or psychologist who saw the child. The clinic operated as a private out-patient unit serving the rural and urban populations of two counties. Few children were seen without concurrent interviews with the parents or guardians, when possible. Cases were seldom undertaken unless both parents participated in therapy with the child. Exceptions were made for legally separated, divorced, widowed, or single parents. Public funds were made available to the clinic under research grants, federal and state aid, and the community fund, to insure that clients of all socio-economic backgrounds could be seen by the professional staff.

Research Data. Biographical data, or objective first-order descriptive traits of personal or family history, and similar descriptions of current characteristics have been used in several predictive studies. Nash (1970), studying college women, used biographical data to predict academic achievement. Mattson, et al, (1967) unsuccessfully attempted to use biographical and other types of data to delineate emergency referrals from regular patients in a psychiatric clinic.

Most studies deal mainly with biographical data of the

the client and his family rather than with therapist variables or the type of therapy used. This approach is supported by Luborsky, et al. (1971) who review the psycho-therapy outcome literature from 1946 to 1969 and reported that the majority of significant factors dealt with the client rather than the therapist or mode of treatment.

The body of information using biographical data in the prediction of success in therapy is limited, and most of the reported studies actually use demographic data instead of biographical statements. The literature on predictive success in child therapy is more limited, with only a handful of studies reported since World War II that purport to use biographical data as a prognostic index. Most of these studies have poor or non-existant controls and generally use non-parametric statistics such as X^2 or Median; i.e., Mattson (1967), Imber, et al. (1970), Haskell, et al. (1969). However, as indicated by Luborsky, most studies in clinical settings suffer from these short-comings.

CHAPTER **II**

METHODOLOGY

Restatement of Problem. The basic question dealt with
is "How can mental health personnel objectively and accur-
ately predict which children show improvement at the end of
psychotherapy?" Specifically, this study is confined to
investigating this question in an out-patient clinic using a
team approach to therapy.

Hypothesis. The premise of this thesis is that bio-
graphical statements about the child and his family can be
used to successfully predict success of therapy in the child
guidance clinic before the child goes through the therapy
process.

Research Design. Data was collected on all children
seen at the clinic during the July, 1970-June, 1971 fiscal
year. Cases were screened according to previously set
criteria, to be outlined later, and a final sample defined.
Cases were then assigned randomly into groups and two
individual studies were run to analyze the data. This
allowed for replication of research to correct for possible
spurious findings.

Subjects. Children chosen as part of this study came
from the clinic-served population during the 1970-1971
fiscal year. Approximately 265 children were seen during

this period of time. The major criteria for inclusion in this study were (1) referral for therapy on a voluntary basis and (2) continuation in therapy at least through the stage of the diagnostic evaluation. General clinic procedure for this latter condition included an intake interview with parents or guardians, followed by an extensive evaluation of four to six sessions involving both parents and child. If further care was indicated, treatment on a regular basis was offered to the family. Interviews were conducted on an hourly basis once a week with exceptions made for emergency referrals and individual needs of families or children in severe distress.

Those children referred from juvenile, domestic, or other court systems for compulsory psychiatric or psychological evaluation were excluded from this study. Also excluded were those families who requested private psychological evaluations for such uses as summer camps or special school enrollment. The cases in which mental retardation was the primary diagnosis were excluded if there were no other significant diagnoses or contributing factors to the families' contacts with the clinic.

Specifically, children were included in this study if clinic services were terminated during the 1970-1971 fiscal year regardless of length of evaluation and possible

treatment follow-up. The vast majority of these were short-term in the sense that the evaluation process marked the end of therapy. Cases which went into more extensive therapy and were terminated during this year were also included. Research done by Hoehn-Saric, et.al. (1969), Haskell, et. al. (1969), Imber, et.al. (1967), and Mattson, et. al. (1967) indicated there were no significant differences in rate of improvement between short-term and long-term remainer clients.

There were only a few psychotic children seen at the clinic during the study period. Katz, et. al. (1967), Warren (1969), Hoehn-Saric, et. al., Mattson, et. al., and McDermott reported conflicting findings regarding rate of change in psychotic versus non-psychotic children. Children diagnosed as psychotic were not included in the final tallies because of this disparity of findings.

Independent Variables. Biographical statements used as independent variables were divided into two categories, depending on whether they applied more to descriptions of the child or descriptions of the parents or family. There was some overlap between the two groups of variables and some statements applied equally to child and family. Inclusion of these statements in either group was not thought to be critical to this study.

Variables explored in this research were race of child, age of child, sex of child, previous psychiatric help for child, current grade in school, number of grades behind in school, birth order of child, marital status of parents, length of current marriage of parents, length of marriage before birth of first child, previous marriage for either parent, father's age, mother's age, father's educational level, mother's educational level, income of parents, number of children in the family, previous psychiatric help for parents, age difference between parents, and educational difference between parents.

Race of child: Masterson (1956) found race not to be a factor in predicting success of therapy, and the Mattson study supported this conclusion. Hills and Bettinelli, in a yet-to-be published study, reached the same conclusion. However, all the studies they investigated used matched pairs of white and non-white families and excluded all families which were not intact. A simple evaluation of this clinic's population with regard to race indicated that such criteria for matching pairs could systematically exclude the majority of non-white families from any study (see Appendix I).

Age of child at time of referral: Traditional

psychotherapy has not been thought to be especially
successful with pre-adolescents. More success has been
associated with play therapy.(Axline, 1947) modern dynamic
therapy, (Sullivan 1953) and behavior modification,(Yates,
1970) among others. The Masterson study found that
children 14 years or older did better in dynamic psycho-
therapy than did younger children. The Mattson study
indicated an age difference with respect to type of
referral but no significant differences in rate of recovery.

Sex of child: Mattson and Masterson found sex not to
be a significant factor in outcome of therapy. Gottschalk,
et al. (1967) and Rosenbaum, et al. (1956) found no sex
differences in adult studies. Mintz, et al. (1971), in a
study of adults, found women to be more likely to improve
in therapy than men.

Previous psychiatric help for the child: In adult
literature, Arthur (1971) indicated that good pre-induction
mental health was significant in predicting successful
adjustment to military life. Luborsky, et al. (1971) found
good pre-morbid adjustment to be a factor in success of
psychotherapy for adults. Warren (1965), Birctchnell (1970),
and Maclay (1967) all indicated that previous psychiatric
help for an individual was not a significant factor in
predicting success of treatment for emotional problems.

For the purposes of this study, previous psychiatric help was considered to be evaluation and/ or treatment of the child by a psychiatrist, psychologist, or psychiatric social worker prior to his entry into present clinic services. Services provided for the child which led to his current referral to the clinic were considered to be part of current evaluation rather than previous psychiatric aid. Referrals with previous services consisting only of psychometric evaluation were not included in the "previous help" group.

Current grade in school: A search of the literature did not reveal studies which dealt specifically with this issue.

Birth order: Clum, et. al. (1970) found that first- and only-born children had a poorer prognosis of adjustment after hospitalization for mental illness. Hinsehlwood (1970) found that next-to-last-born children did better in therapy than did other sibling positions but had a higher incidence of mental illness. Maclay found no significant relationship between birth order and mental illness. Gunderson and Arthur (1968) showed first- born children to be no more successful in military service than other sibling positions, and Taintor (1970) found that first-born children were more likely to remain in

service than were other groups.

Number of grades currently behind in school: Masterson found good school adjustment to be a significant indicator of success in treatment of children. No other studies dealing with this variable could be found in the literature.

The variables mentioned above dealt primarily with the child as he or she came into the clinic. Family factors may have influenced or determined the condition of these variables, but this data basically described the child's status. Another area of concern was the family situation. Most clinical researchers consider the family to play an important role in the development of the child and thus to influence the child's mental health. The next set of variables to be included in this study attempted to describe the family's status.

Marital status: Maclay found marital status did not affect success of child psychotherapy. The studies of Hoehn-Saric, Gunderson and Anderson, and Robenbaum found marital status not to be correlated with outcome of adult therapy.

For purposes of this study, it was decided to divide cases into intact current marriages and broken marriages, regardless of which parent had custody of the child or reason for the absence of one parent. Grouped in the

sample of broken marriages were single parents resulting
from legal separation, divorce, death of a spouse, departure
of spouse due to incarceration, and single mothers who had
never married.

Length of current marriage: No studies were found
covering this variable as an index of success of therapy
in either child or adult literature. Cases were divided
between those in which neither parent had been previously
married and those in which either parent had previously
been married.

Length of marriage before birth of first child: No
studies were found which investigated this variable. The
reasons for the birth of a child at any particular stage
of marriage were not considered here. In those cases
where prior marriages were concerned, children brought
into the current marriage from previous unions were
classified with those cases in which a child was born
within the first year of marriage.

Current age of parents: The Gottschalk study suggested
that, in adult psychotherapy, persons under 45 years of
age showed more improvement than adults over 45 years old.
Separate categories were set up for father and mother,
although the two correlated highly. This technique was
used to eliminate errors due to averaging the ages of parents.

Educational level of parents: No studies were found
which dealt specifically with this variable. However, if
educational level can be assumed to correlate with intell-
igence, education can be an indirect, if less accurate
measure of intelligence. The Gottschalk study indicated
that, for adults, there was a direct correlation between
amount of education and success in psychotherapy. As
with age, separate measures were taken for education of
each parent to prevent averaging errors.

Income of parents: McDermott, et al. (1970) and Katz,
et. al. (1958) found social class, as measured by income
levels, not to be related to degree of success in therapy.
The Maclay and Rosenbaum studies substantiated these
results. The Luborsky and Birtchnell studies found social
class to be slightly significant, with upper class indivi-
duals having a higher incidence of recovery or improvement.

Number of children: No studies were found which dealt
with this factor as a predictor of success in therapy.

Previous psychiatric help for parents: No studies
were found in either adult or child literature which dealt
with this issue. For purposes of this research, only those
cases in which parents were seen for reasons other than
those directly related to the present referral of the child
were included as having undergone such treatment. "Nervous

breakdowns" were not included unless the person was treated by mental health personnel. Treatment by a physician other than a psychiatrist was not considered to be a valid instance of psychiatric help.

Age difference between parents: No studies were found which dealt with this variable as a predictor of therapy outcome.

Educational difference between parents: As with age difference, no studies were found which used this factor to predict success of treatment.

Dependent Variables. This study used the child worker's determination of condition of the child at the end of therapy as the index of improvement. The general system used for classifying condition of the child was taken from North Carolina Mental Health Guildelines as listed on face sheet DMH 611 (revised 7-63). Conditions at the end of therapy were listed as (1) recovered, (2) improved, (3) unchanged, (4) worse, and (5) undetermined.

Few children seen in the clinic during the study period were listed as recovered. Categories labeled "recovered" and "improved", therefore, were pooled to provide the improved sample. No cases investigated listed a child as worse at the termination. Cases listed as "undetermined" at the end of therapy were deleted from the study.

Source of Information. Biographical data gathered on each child were taken entirely from the case records in the clinic files. Information was obtained from fee sheets and folders containing interview material. Objective test material of any kind was seldom found in these records, eliminating the possibility of using normative measures as an indication of improvement in therapy. As is often the case in clinical material, many records stated no personality status or index of possible change in the child, yet an improvement in the child was noted at the end of a page.

Where case notes conflicted with face sheet information, the face sheet was taken as the standard. This method led to the possibility of errors, especially in the analysis of improvement at the end of therapy. Some attempt to correct possible errors was made. In several of the records children were rated as improved but were later seen in the clinic for the same difficulties. It was felt that, in such instances, a false-positive indication had been given. Therefore, if a child was referred to the clinic for the same difficulty within ninety days after being discharged as improved, that child was considered not to have improved but to have been unchanged at the time of termination. No material was available to indicate subsequent improvement in any cases listed as unchanged at the end of therapy,

although there might have been such cases.

Statistical Limitation. Scattergrams and analysis of

the raw scores used revealed several points of consideration

for technique. The dependent variable "improved" versus

"unchanged" is a bi-model variable, as were the independent

variables of sex and previous psychiatric help. Other

independent variables were ordinal or nominal in nature,

introducing discrete data. In continuous data, distribution

was skewed in one or more directions. The entire population

of remainer clients was used in the study, indicating that

samples were not independently drawn.

Statistical Techniques. The parametric analyses of

variance techniques could not be legitmately used because

underlying assumptions of independent samples, continuity,

of data, and normal distribution were violated. However,

as a check, simple analysis of variance was run on each

variable and on the two samples.

The most powerful technique found which could handle

each of the independent variables was X^2 because it makes

no assumptions as to distribution or continuity of data.

X^2 was run on each of the independent variables.

In addition to X^2 it was decided to analyze data for

possible correlational trends on the individual variables.

Biserial correlation was used in this study because it

accomodates a dependent variable as long as there are more than two levels of the independent variable. In those instances where both the independent and dependent variables were bi-modal tetrachoric coefficients were used.

Prior to investigation strict increments were established for each condition in the independent variables. However, because of the nature of X^2 and the necessity for certain frequencies in each cell, some levels of several variables had to be pooled. Such poolings were somewhat inconsistent between the two studies because of the individual differences among subjects within each study. This will be discussed as part of the results for each variable.

CHAPTER III

STUDY I

Results and Discussion.   Sixty-four children and their
families were included in this group.   Complete data for
each variable was not available for each subject and the
number of reporting cases will be included in the presentation
of each variable.   Analysis was run on the clinic-oriented
variables dealing with delay of referral and source of
referral.   Results will be presented in Appendices III and,
IV, respectively.

There was no measurable effect of diagnosis on out-
come of therapy.   Discussion of this variable will be
presented in Appendix V.

Race: Children were divided into white or non-white
groups.   There were too few non-white children in either
study to meet criteria for the use of X^2.   Subjects in
the two studies were pooled and the X^2 performed.   Results
were significant for race as a predictor of success in
therapy $(X^2((2 \times 2)) = 4.41,$ $N = 131,$ $df=1,$ $p < .05)$, but
tetrachoric coefficient for trends was non-significant.

18

White children had a greater chance of benefitting from therapy than did non-whites, at least as seen by the clinic workers. These results contradicted the Mattson and Masterson studies. Race proved to be the only child variable which predicted success in therapy better than chance.

Age of child at time of referral: Children were divided into the following age ranges; (1) four-to-eight years, (2) nine-to-12 years, and (3) 12-18 years, or corresponding roughly to pre-pubescent, pubescent, and adolescent age ranges, respectively. Results were non-significant for age as an index of success $(X^2((2x3))^* = 1.25$, N=64, df=2). Biserial correlation was also non-significant for this variable.

Extrapolated from the notion that pre-adolescents are not amenable to traditional psychotherapy, it was predicted that pre-adolescents would have a poorer prognosis in therapy than adolescents. This prediction was not substantiated.

* Parenthesis after X^2 will note design, given as ((dependent x independent variable)). N equals number of cases reporting and, to avoid confusion, df equal degrees of freedom instead of the more common n.

Sex of child: Predictive value of this variable was non-significant ($x^2((2 \times 2)) = 0.36$, N =64, df=1). Tetrachoric coefficient was non-significant.

In the study it was noted that boys were referred to to the clinic in a 3:2 ratio over girls, regardless of age. However, prognosis of success was the same for both sexes, bearing out research by Mattson and Masterson and refuting the Mintz study.

Previous psychiatric help for the child: Children were placed in either a "yes" or "no" category for previous psychiatric help. Results for this variable were non-significant ($x^2((2 \times 2)) = 0.91$, N= 64, df=1), as was tetrachoric coefficient. Arthur and Luborsky had found pre-morbid adjustment to be a predictor of success in the treatment of adults. It was felt that the same situation would be applicable in the study of children. This study refuted the contention and bore out the results of investigation by Warren, Birtchnell, and Maclay. No link was found between previous mental distress and prognosis of success in current therapy.

Grade in school: Originally, data was gathered for each individual grade in school, including pre-school. Frequencies were too low in some grades to meet x^2 criteria, and grades were collapsed into the following

groups; (1) pre-school through second grade, (2) third through fourth grade, (3) fifth through seventh grade, and (4) eight through twelfth grade. Different frequencies did not permit the direct correlation between age and current grade. Results for this variable were non-significant $(x^2 ((2x4)) = 3.50, N=62, df=3)$. Biserial correlation was also non-significant. It was assumed that age and grade were highly correlated and grade served as a check for age of the child. No relationship was found between this variable and success of therapy.

Birth order: Pre-data collection categories were established to compare each birth position, including only child (i.e., only child, first child, second child, etc.). Frequency criteria dictated the following grouping changes; (1) only child and first-born, (2) last-born, and (3) middle born. If only two children were in a family the second child was placed in the last-born group. Results were non-significant $(x^2 ((2x3)) = 0.73, N=64, df=2)$. Biserial cofficient was non-significant.

This study found no correlation between success in therapy and the child's position in the family. While not as extensive as some authors, current investigation tended to support the Maclay study and to refute the work of Hinshelwood, Gunderson, and Arthur.

Number of grades behind in school: Pre-arranged cells called for investigation of each number of grades currently behind. Low frequency of children behind in grades necessitated the pooling of all cases into the categories of (1) grade placement equivalent to age, and (2) grade placement below age expectancy. No children in this study had been placed above age expectancy. Results were non-significant ($X^2((2x2)) = 0.01$, N=62, df=1). Tetrachoric coefficient was non-significant.

Masterson reported that good pre-morbid adjustment in school correlated with success of therapy. It was decided that one possible index of adjustment was being promoted with age peers in school. This investigation failed to find any significant relationship between grade and outcome of therapy.

Family Variables. Marital status: Children were classified as coming from currently intact homes or currently broken homes. Results were non-significant ($X^2((2x2))=$ 1.92, N=58, df=1). Tetrachoric correlation was non-significant.

The majority of the literature, as evidenced by the Gunderson, Hoehn-Saric, and Rosenbaum studies, reported that marital status did not affect the outcome of child or adult therapy. This investigation corroborated these results.

Previous marriage of parents: Cases were divided into
the categories of (1) neither parent having been previously
married and (2) either parent having been previously married.
Results approached significance $(X^2((2x2))=3.15, \quad N=58, df=1$
$p < .10)$, with children from first marriage having a
higher chance of improvement at the end of therapy.
Tetrachoric correlation was non-significant.

No literature was found which dealt with this issue.
Results tended to suggest that children from families in
which either parent had previously been married had a poorer
prognosis of success in therapy than did children of first-
marriage parents. However, X^2 was not conclusive for
either direction.

Length of marriage before birth of first child:
Original categories called for investigation of this variable
for each year of marriage. Low frequency counts forced a
collapse to the categories of (1) cases in which the child
was born within the first year of marriage and (2) cases
in which the child was born later than one year after the
marriage. As previously stated, those cases involving the
introduction of children into the marriage from previous
unions were placed with the "within one year" category.
Results were highly significant $(X^2 ((2x2))= 11.89, N=34,$
$df=1, p < .01)$, with children from parents who introduced

a child early in marriage having a poorer prognosis in therapy. Tetrachoric correlation was non-significant. No research was found on this issue, but it was thought that the entry of a child into the family before initial conflicts between the couple could be ironed out or entry that caused a sever shift of life-style of the couple would make the family less able to cope with emotional problems of the children. This study found that children from families in which a child entered the household within the first year of marriage had a significantly lower probability of being improved at the termination of psychotherapy. This held true regardless of whether or not the child in therapy was the first-born.

In this study adults who brought one or more children into the marriage were included with the families who bore a child within the first year of marriage. Slightly less than half of the remarried couples brought in such children. The significance of the current results are somewhat clouded by the tendency toward significance of the "previous marriage" variable discussed earlier.

Length of current marriage: Categories for this variable were as follows: (1) married ten years or less, (2) married 11 to 15 years, and (3) married 16 years or more. Results were non-significant (x^2((2x3)) =1.58 =N=32, df=2). Biserial

correlation was non-significant.

No literature could be found on this variable as it related to psychotherapy. It was reasoned that marriages of an undetermined "median" duration would have worked through initial conflicts and still be flexible enough to aid their child through therapy. No such relationship was found in this study.

Previous psychiatric help for parents: This variable was investigated as a yes-or-no question, with restriction that such help not be in conjunction with therapy sought for the child in this clinic. Results were non-significant $(X^2((2x2))=1.23$, N=59, df=1), and tetrachoric correlation was non-significant.

It was hypothesized that parents with a history of emotional distress might be less able to help their children through difficulties than would mentally healthy parents. This study failed to support that notion.

Father's age: Levels for this variable were divided along each decade of age. Low frequency counts forced a shift to the following levels; (1) 33 years or younger, (2) 34 years through 45 years, and (3) 46 years and older. Results approached significance $(X^2((2x3))=5.80$, N=55, df=2, p < .10), with children from younger parents having a better prognosis in therapy. Levels were collapsed

again to those of (1) 45 years or younger, and (2) over 45 years. Results became significant ($x^2((2x2))= 5.79$; N= 32 df= 1. P $\angle$ .05). Biserial correlation on the original data and tetrachoric coefficient on the 2x2 design were non-significant.

Gottschalk found that adults 45 years or younger did better in therapy than did older adults. Extending this notion it was thought that children of parents 45 years or younger might show more improvement than children of older parents. This study tended to support this hypothesis

Mother's age: Age of mother did not correspond with that of father's. Therefore, levels dividing age into decades were used; (1) 29 years or younger (2) 30 through 39 years and (3) 40 years or older. Results were non= significant ($x^2((2x3))=0.21$, N=58, df=2). Biserial correlation was non-significant.

The same general assumptions and operations were performed for mother's age as for that of the father. No significant findings were established. It should be noted that there were not enough mothers over 45 years of age to justify the use of x^2 in a 2x2 table as was done for father's age.

Father's education: Cases were divided into the following levels of father's educational achievement; (1)

less than twelth grade, (2) high school graduates, and (3) 13 or more grades of education. Results were non-significant ($X^2((2\times3)) = 0.02$, N=55, df=2). Biserial correlation was non-significant.

No studies were found which considered parental education as an index of success in therapy. It was hypothesized that, within limits, children of more educated parents would have a better prognosis in therapy than children of ill-educated parents. This study failed to find any relationship between father's education and success in treatment.

Mother's education: The same levels were established for this variable as established for father's education. Results were non-significant ($X^2((2\times3)) = 2.45$, N=55, df=2), and biserial correlation was non-significant.

As with age, mother's education differed somewhat from that of the father in many cases. Mother's education was considered separately from father's as a check. No significant relationship was found between mother's education and therapy outcome.

Parental income: Investigation of this variable was conducted on guidelines established by the North Carolina Public Health Authority for gross income brackets. Cases were classified as (1) medically indigent (income less than

$7,000 annually), (2) middle class (income of $7,000-$12,999 anually), and (3) upper class ($13,000 or more anually). Results approached significance ($X^2((2x3))=3.39$, N=65, df=2, p < .10), but biserial correlation was non-significant.

Results in this study were inconclusive, but subjects from middle and upper class families tended to have a higher probability of improvement at the end of therapy than did children from medically indigent families.

Number of children: Separate categories were established for each number of children through six, and families with seven or more offspring were placed in the category with six children. Results were non-significant ($X^2((2x6))=0.21$, N=63, df=5). Biserial correlation was non-significant.

A search of the literature did not reveal studies dealing with this issue as it related to outcome of therapy. This investigation did not find any significant difference between small and large families with respect to the outcome of psychotherapy for any child in the family.

Age difference between parents: Two categories were established: (1) wife older than husband and (2) wife and husband of equal age or husband older. Results were significant ($X^2((2x2)) = 5.17$, N=54, df=1 p < .05), with children from "husband older or equal age" families

improving over " wife older" families. Tetrachoric
correlation was non-significant.

It was assumed to be somewhat atypical for men in
North Carolina to marry women older than themselves,
although there are numerous exceptions to the premise. The
clinic population tended to confirm the suggested trend.
It was thought that children from a "wife older" marriage
might reflect some of the differences exhibited by their
parents and might be less likely to benefit from typical
child therapy. This study found that children from
parents of equal age or "father older" had a higher
probability of improvement after therapy than did children
from "mother older" families.

Educational difference between parents: Cases were
divided into the categories of (1) wife more educated than
husband and (2) wife and husband of equal education or
husband more educated. Results were non-significant
$(X^2((2x2)) = 0.03$, N=52, df=1). Tetrachoric correlation
was non-significant.

AS with age difference between parents, it was thought
that "more-educated mother" families were less common than
not and might reflect some of the same problems to psycho-
therapy approaches as age difference between parents. This
investigation failed to support the hypothesis and found

educational differences not to be a predictor of success in therapy.

In viewing these results it should be cautioned that X^2 used in this study is less powerful than possible parametric analysis. Twenty investigations of individual statements, by chance, are prone to present more false-positive differences than one investigation with twenty components. Therefore, the significant findings and tendencies suggested by this study should be viewed as tentative rather than conclusive, and further investigation is necessary to substantiate the results.

More significant findings were recorded from the family variables than from the child variables. Part of this could be due to the use of more parents statements than child statements. Results suggest there might be some relationship between the milieu provided by parents and improvement in child therapy. It is not possible, from this study, to go further and state some relationship between parental environment and onset of mental distress. Most schools of psychology and psychiatry do promote such a connection, and inferences in this direction might be discerned from this study.

Many of the variables studied failed to indicate a significant relationship to outcome of child therapy.

This investigation was limited, however, in the small samples and by the use of non-parametric tools of investigation. It was felt that research using parametric analysis would be more powerful and fruitful. Of interest is the fact that most of the significant variables were concerned with family situations which are atypical or abnormal, in the absolute sense. Future studies which emphasized such atypical behavior on the part of parents might offer better predictability of success in child therapy.

Summary. It was hypothesized that data concerning a child and his family could be used to successfully predict success of child psychotherapy in a private out-patient psychiatric clinic.

Twenty biographical statements were used as independent variables, including some for which previous research could not be found. X^2 was performed on each independent variable separately and biserial or tetrachoric correlations were computed to assess curvilinear trends in the data. No such trends were discovered.

Race was the only child variable which predicted success in child therapy better than chance. Of the family variables X^2 was significant for (1) length of marriage before birth of first child, (2) father's age,

and (3) age difference between parents. A tendency towards significance was found in (1) previous marriage for either parent , and (2) parental income. All other biographical statements failed to predict therapy outcome better than chance.

Limitations of X^2 were offered and a connection between parental mental health and emotional distress in children was tendered. It was suggested that further research in the use of biographical data to predict therapy success with children might center on abnormal cultural patterns established by parents.

TABLE I

CHILD AND FAMILY VARIABLES

(1) Race of child

(2) Age of child at time of referral

(3) Sex of child

(4) Previous psychiatric help for child

(5) Current grade in school

(6) Birth order

(7) Number of grades currently behind in school

(8) Marital status

(9) Length of current marriage

(10) Length of marriage before birth of first child

(11) Current age of father

(12) Current age of mother

(13) Educational level of father

(14) Educational level of mother

(15) Income of parents

(16) Number of children

(17) Previous psychiatric help for parents

(18) Age difference between parents

(19) Educational difference between parents

(20) Previous marriage of parents

TABLE II

Chi-Square Values

Variable	StudyI	Study II	Pop.
Race of Child	-----	-----	4.41*
Age of Child	1.25	1.98	
Sex of Child	0.36	0.98	
Previous Psychiatric Help - Child	0.91	1.78	
Grade in School	3.50	4.65	
Birth Order	0.73	2.22	
Number Grades Behind	0.01	0.33	
Marital Status	1.92	3.79	
Length Current Marriage	1.58	5.30	
Length Marriage Before First Child	11.89**	4.41*	
Previous Marriage	3.15	0.01	
Father's Age (3x2)	5.80	0.04	
(2x2)	5.79	0.86	
Father's Education	0.02	1.24	
Mother's Age	0.21	0.75	
Mother's Education	2.45	3.85	
Income	3.39	9.22 **	
Number Children	0.21	1.06	
Previous Psychiatric Help - Parents	1.23	0.56	
Age Difference	5.17	0.30	
Educational Difference (3x2)	0.03	8.86*	
(2x2)	not run	8.45**	

* = Significant at .05 level
**= Significant at .01 level

CHAPTER IV

STUDY II

Results.   Sixty-seven children and their families

made up this sample. Data for all variables were not

available in all cases, and the number of cases reporting

each variable will be listed. Data pertaining to the delay

between initial contact of a family with the clinic and

onset of therapy and of sources of referral are presented

in appendices VI and VII. Diagnosis was not related to

outcome of therapy and information on this variable is

assessed in appendix VIII.

Age of child: Age range in the levels of this

variable were the same as those of study I: (1) four to

eight years, (2) nine to 12 years, and (3) 13-18 years.

Results were non-significant $(X^2((2x3))=1.98$ N=67,df=2).

Biserial correlation was non-significant. These findings

failed to show any relationship between age of child and

therapy outcome and were in agreement with the results of

study I.

Sex of child: No relationship was found between sex

and prediction of therapy outcome $(x^2((2\times2))=0.98$, N=67, df=1). Tetrachoric correlation showed no significant trends.

Previous psychiatric help for child: This was a "yes" or "no" variable for psychiatric help not related to the present clinic referral. Results were non-significant $(x^2((2\times2))=1.78$ N=67 df=1). Tetrachoric correlation was non-significant. No correlation was found between previous therapy for emotional stress and the outcome of current therapy.

Current gradein school: As in study I, children were divided into following levels; (1) pre-school through second grade (2) third through fourth grade, (3) fifth through seventh grade and (4) eight through twelfth grade. This design did not show any significant relationship between grade and prediction of success in therapy $(x^2((2\times4))= 4.65$, N=67, df=3). Biserial correlation was non-significant.

Birth order: Groups for this study were the same as those for study I: (1) only and first-born children, (2) middle children, and (3) last-born children. No significant relationship was found between birth order and therapy outcome $(x^2((2\times3))=2.22$ N=66, df=2). Biserial correlation was non-significant.

Number of grades behind in school: Small frequencies

among those children behind their age peers in grade placement necessitated a pooling of all these children into one category as opposed to those children in the appropriate grades. Results of analysis of this variable were non-significant ($x^2((2x2)) = 0.33$, N=66, df=1), as was the tetrachoric correlation coefficient.

Family Variables. Marital status: Children were depicted as coming either from intact or broken homes at the time of current clinic referral. Results tended toward significance but were inconclusive ($x^2((2x2)) = 3.79$, N= 67, df=1, p $\angle$ .10). Tetrachoric correlation was non-significant.

There was a tendency for children from intact families to have a better prognosis of improvement at the end of therapy than children from broken homes. This is slightly contradictory to the findings of study I and to the general literature, all of which support the theme that marital status of parents is not related to therapy results.

Previous marriage of parents: Cases were divided into groups of (1) neither parent previously married or (2) either parent previously married. Results showed a failure of this variable to predict outcome of psychotherapy ($x^2((2x2)) = 0.01$, N=55, df=1). Tetrachoric correlation coefficient did not reveal any trends in the data.

This study found no relationship between previous marriages and outcome of therapy, a finding consistent with those of study I.

Length of current marriage: Levels established for this variable were identical to those of the first study; (1) married 10 years or less, (2) married 11-15 years, and (3) married 16 years or longer. Results tended toward significance ($x^2((2x3)) = 5.30$, N=31, df=2, p $\angle$ .10), but biserial correlation coefficient failed to demonstrate significant trends.

Results were inconclusive using the variable to predict outcome of therapy. A tendency existed for children of parents married 11 or more years to have a better prognosis of success in therapy than children of parents married ten years or less. In general, the longer the parents' marriage, the better the chances for improvement in child therapy. This tendency was not supported by findings in the first study, which found no relationship between length of marriage and therapy results.

Length of marriage before first child: Small frequency counts forced the pooling of all children born after the first year of marriage into one group and those children born within the first year of marriage into another group. Children brought into the family from a previous

marriage were placed in the "within one year" group.

Results were significant $(X^2((2x2)) = 4.41$, N=31, df= 1,

p $\angle$ .05). Tetrachoric correlation, however, was

non-significant.

Children from families in which a child entered the

environment within one year of the wedding had a poorer

prognosis of success in therapy than did children from

families who waited longer than one year to have a child.

It should be cautioned that, as in study I, families which

brought children into unions from previous marriages were

placed in the "within one year" group. This was the only

family variable which showed a significant relationship to

outcome of therapy in both studies.

Previous psychiatric help for parents: Children from

families where either parent had undergone psychotherapy

showed no difference in improvement from children of families

in which neither parent had sought such help $(X^2((2x2)) =$

0.56, N=66, df=1). Trend analysis was non-significant by

tetrachoric correlation, this being consistent with results

of the first study.

Father's age: Age categories for fathers were the

same as studyI ; (1) age 33 years or younger, (2) age 34

through 45 years, and (3) age 46 years and older. Results

were non-significant ($X^2((2x3)) = 0.04$, N=55, df=2), as

was the biserial correlation coefficient. Original categories were collapsed to (1) age 45 or younger and (2) age 46 or older and statistics were computed again. Findings were non-significant ($X^2((2x2)) = 0.86$, N= 55, df=1).

This study failed to support the contention that children of fathers age 45 years or younger had a better prognosis for successful treatment. This contradicts the results of study I which did find such a relationship.

Mother's age: Frequency counts varied slightly in this sample from those of study I, and the following levels were established; (1) age 30 years or younger, (2) age 31-39 years and (3) age 40 years and older. Results failed to show any relationship between age of mother and outcome of therapy ($X^2((2x3))= 0.75$, N=59, df=2). Biserial correlation was non-significant. Age of mother did not correlate with outcome of child psychotherapy, a finding consistent with study I.

Father's education: Distribution of this variable differed slightly from that of study I and the following cells were established in assessing data; (1) 10 or fewer grades of education, (2) 11-12 grades of education, and (3) 13 or more years of education. Results were non-significant relative to therapy success, as were

curvilinear trends measured by biserial correlation

$(X^2((2x3))$ = 1.24, N= 55, df= 2).

No relationship was demostrated between the amount of
a father's education and the rate of success in child
therapy, and no support was offered for the hypothesis
that children of more educated fathers had a better prognosis
in treatment. The results of study I using this variable
were substantiated.

Mother's education: Due to different frequency
distribution, mothers in this study were divided along
different lines than those in study I. Levels established
were; (1) nine or fewer grades of education, (2) 10-12
grades of education, and (3) 13 or more grades of education.
Results were non-significant ($X^2((2x3))$ = 3.85. N=58,
df=2). Biserial correlation was non-significant.

Similar to the findings concerning father's education,
no significant relationship was found between the amount
of mother's education and a child's improvement in therapy.
This was in agreement with the results of study I.

Parental income: Categories for this variable were
the same as for study I; (1) $6,999 or less annually, (2)
$7,000 - $13,999 annually, and (3) $13,000 and over
annually. Results were highly significant ($X^2((2x3))$=
9.22 N=67 df=2, p $<$ .01). This was the only variable
in either study to show a significant curvilinear trend

(r_b = .304, df=2, p $<$ .05).

There was a highly significant and direct relationship found between family income and rate of success in child psychotherapy. Trend analysis showed an ogive-shape function, with low income families having poor prognosis for a child, middle income having a 50-50 chance, and upper income children having a high probability of success in therapy.

Number of children: Families were listed under one of the following levels; (1) one child, (2) two children, (3) three children, (4) four children, (5) five children, or (6) six or more children. Results were non-significant (x^2 ((2x6)) = 1.06   N = 63 , df= 5), as was biserial correlation coefficient.

It was thought that children from large families might have a poorer prognosis in therapy due to possible limited family resources. The results of neither study I or study II supported this contention. It would appear that the amount of tangible resources might be more related to income than family size, thus limiting the validity of family size as an inverse index of resources.

Age difference between parents: Because of low frequency counts among cases where mother was older than father, the following groups were formulated; (1) wife older

than husband or husband not more than four years older

than wife, and (2) husband five or more years older than

wife. Results were non-significant ($x^2((2 \times 2)) = 0.30$,

N= 55, df=1), as was tetrachoric correlation.

Analysis of this variable was inconclusive. This

study failed to find a relationship between age

difference of parents and outcome of therapy. Results

are thought to be meaningless because the assumptions

made concerning families with "wife-older" could not be

met in the formulation of categories.

Educational difference between parents: Different

distribution allowed a more flexible analysis of this

variable in the current study than was available for study I.

The following levels were established; (1) wife more educated

than husband (2) equal education or husband not more than

two years education beyond wife, and (3) husband with three

or more years education beyond wife. Results were

significant ($x^2((2 \times 3)) = 8.86$, N=54, df=2, $p < .05$).

Biserial correlation was non-significant. Levels were

collapsed to the groups of (1) wife more educated and (2)

equal education or husband more educated, to compare with

categories of study I. Results were highly significant

($x^2((2 \times 2)) = 8.45$, N= 54, df=1, $p < .01$).

Investigation of this variable supported the hypothesis

that there is a direct relationship between age difference

of father and mother and the probability of improvement

in child therapy, at least to some point not established

in this research. These findings contradict the results

of study I, which reported no relationship between

educational differences and therapy outcome.

When reviewing the results of these individual

variables, the same cautions and limitatione concerning

x^2 apply to this study as applied to study I.

CHAPTER V

SUMMARY

This thesis investigated the hypothesis that bio-
graphical data concerning a client and his (her) parents
could successfully predict outcome of child psycho-
therapy in an out-patient clinic. Twenty datum statements
were taken from each case and subjected to analysis.
A review of the literature was made on each variable and
results from previous authors examined.

Cases meeting the general criteria established for
this thesis were randomly divided into two samples.
Separate studies were performed for each sample to cross-
validate findings. Each variable was subjected to X^2 and
to a curvilinear correlation coefficient.

In study I variables which successfully predicted
outcome of child therapy were race of child, length of
parents' marriage before first child, father's age, and
age difference between parent. Parental income and
previous marriage for either parent tended toward
significance. All other variables investigated failed to
demonstrate any relationship to therapy outcome.
Curvilinear coefficients failed to find any trends in the

data even for those variables with statistically
significant X^2.

Results of study II only partially substantiated
those of study I. Significant predictors of success in
therapy were length of parents' marriage before first
child parental income and educational differences
between parents Those variables tending toward signi-
ficance were length of current parental marriage and
marital status of parents. Trend analysis showed a
positive ogive correlation between parental income and
rate of success in child therapy but did not established
any correlations between other variables and therapy
outcome

Limitations of X^2 were offered and it was suggested
that future research using biographical data to predict
therapy outcome might center on atypical social and
cultural patterns exhibited by parents.

BIBLIOGRAPHY

1. Arthur, Ransom J. "Success is Predictable." _Military Medicine_. 1971, vol 136, (6).

2. Axline, Virginia S. _Play Therapy_ Boston: Houghton Mifflin 1947.

3. Birchnell, John. "Siblingship Size and Mental Illness." _British Journal of Psychiatry_, Vol 117, (Sept, 1970), (583) 303-308.

4. Clum, George A. and Clum M. Judith. "Sibling Position as a Factor in Psychiatric Illness and Prognosis in a Military Population." _Journal of Clinical Psychology_. Vol 26 (3), (July, 1970), 271-274.

5. Eaker, Hubert Alton. "Exploratory Study of Dermographic and Behavior Variables and their Differential Relationships to Referral Sources in a Crisis in Intervention Demonstration Project in an Elementary School System." _Dissertation Adstracts, International._ 1969,30 (6-13), 2905-2906.

6. Errera, Paul, Mckee, Braxton. "Length of Psychotherapy." _Archives of General Psychiatry._ 1967,(4) 454-458.

7. Gottschalk, L.A. Mayerson.P. Gottlieb, A.A. "Prediction and Evaluation of Outcome in an Emergency Brief Psychotherapy Clinic." _Journal of Nervous and Mental Diasease_ 1967,144,77-96.

8. Gunderson E.K.E. and Arthur,R.J. "Prognostic Indicators in Psychosis and Neurosis." _Journal of Adnormal Psychology._ 1968, 73, 468-473.

9. Haskell David; Pugotch, Donald, and McNair, Douglas M. " Time-Limited Psychotherapy for Whom." _Archives of General Psychiatry_, 1969, (5), 246-552.

10. Hinshelwood, R.D. " Evidence for a Birth Order Factor in Schizophrenia." _British Journal of Psychiatry_, 1970, Vol. 117 (588) 293-301.

11. Hoehn-Saric, Rudolf; Frank, Jerone D. ; Stone, Anthony R. and Imber, Stanley D. " Prognosis in Psychoneurotic Patients." <u>American Journal of Psychotherapy</u>, 1969,23 (2), 252-259.

12. Imber, Stanley D.; Pande, Schoshik; Frank, Jerome D.; Hoehn-Saric, Rudolf; Stone Anthony R. and Wargo, Donald G. " Time-Focuse Role Induction." <u>Journal of Nervous and Mental Disease</u> 1970, 150(1), 27-30.

13. Katz, M.M.; Lorr, M. and Rubbinstein E.A. "Remainer Patients' Attributes and their Relation to Subsequent Improvement In Psychotherapy." <u>Journal of Consulting Psychology</u>, 1958,22, 411-413.

14. Kummier Sister Mary Leo. " Biographic, Cognitive, Demographic and Personality Differences Between Adolescents from Families with Identifiable Alcohol Problems and from Families Without Identifiable Alcohol Problems." <u>Dissertations Abstracts International</u>, 1969,30 (4-A), 1398-1399.

15. Lanyon, Richard I., and Goodstein, Leonard D. "<u>Personality Assessment</u>, John Wiley and Sons, Inc. New York; New York. 1971.

16. Luborsky, Lester. Averbech, Arthur H., Chandler, Michael and Cohen, Jacob. "Factors Influencing the Outcome of Psychotherapy; Areas of Quantitative Research." <u>Psycholo-Bulletin</u>, 1971, Vol 75(3), 145-185.

17. Maclay, Inga. Prognostic Factors In Child Guidance Practice." <u>Journal of Child Psychology, Psychiatry and Allied Disciplines</u>, 1967, 8 (3-4), 207-215.

18. Matterson, J.F. "Prognosis in Adolescent Disorders." <u>Journal of Nervous and Mental Disease</u>, 1956, (124) 219-236.

19. Mattsson, Ake; Hawkins, James W. and Seese, Lynne R. "Child Psychiatic Emergencies, Clinical Characteristics and Follow-up Results." <u>Archives of General Psychiatry</u>, 1967 17 (5) , 584-595.

20. McDermott John. F., Harrison Saul I., Schragner,Jules; Killins, Elizabeth W., and Dickerson Barbara. "Social Class and Child Psychriatic Practice; The Clinicians Evaluation of the Outcome of Therapy." American Journal of Psychriatry, 1970, 126 (7), 951-956.

21. Mintz, J. Luborsky L. and Averbach, A. "Dimensions of Psychotherapy; a Factor-Analyic Study of Ratings of Psychotherapy Sessions." Journal of Consulting and Clinical Psychology, 1971, 36. 106-120.

22. Nash, John Morton. "Prediction of Academic Achievement in Women at a Private Junior College Through use of Certain Intellective and Family Relations." Dissertation Adstracts International. Vol 31 (5-A), 2113-2114.

23. Rosenbaum Milton Friedlander, Jane, and Kaplan, Stanley M. "Educational Results of Psychotherapy."Psychosomatic Medicine, 1956, 18, 113-132.

24. Sullivan Harry S. The Interpersonal Theory of Psychiatry, New York; Norton, 1953.

25. Tuintor, Zebulon. "Birth Order and Psychiatric Problems in Boot Camp." American Journal of Psychiatry. 1970. Vol 126 (11), 1604-1610.

26. Warren. W. "A Study of Adolescent Psychiatric Impatients and the Outcome six or More Years Later." Journal of Child Psychology and Psychiatry 1965 (6), 1-17,141-160.

27. Wolberg. Lewis R. The Technique of Psychotherapy, New York: Grune and Stratton, 1954.

28. Yates Aubrey J. Behavior Therapy. New York. John Wiley and Sons; 1970.

APPENDIX I

Hills and Bettinelli attempted to study race and
economic classification in this child guidance clinic in
an attempt to differentiate rate of success by economic
status of the clients and their families. They chose
fifty families to study, equalizing race and parental
income so that there were twenty-five white and twenty-
five non-white families. Coincidental to their research
concerning economic class as a determinant of success in
therapy they discovered the following break-down of
family status by race:

	White	Non-white
Intact families	20	4
Separated parents	1	2
Divorced or one		
Parent families	4	19

A check of the rest of the clinic population for the 1971-72
fiscal year indicated the same results. Thus, there was
a large discrepency between the races with regard to degree
of intactness of families.

APPENDIX II

Of possible interest to the reader is the percentage
on non-white clients seen in this clinic. In the county,
the percentage of non-white residents is 22.5%. In the
city, where all of the non-white clients who remained in
therapy resided, the percentage of non-white is 34.5%,
these figures being based on the 1970 census count.

The Clinic population for the 1971-72 fiscal year
included 18.81 % non-white clients, while the percentage
completing therapy was 10.2%. Thus, almost systematically,
non-white clients were excluded, or excluded themselves
from service by this clinic.

APPENDIX III

Study I - Delay Referral

Some studies surveyed by this author indicated that
the delay between initial contact at an agency and actual
onset of therapy made a difference in the prognosis of
a client. To check this variable, a 2x2 chi-square was
run differentiating between clients seen within forty-
five days after their initial contact and those seen
46 days or later. Results were non-significant (n=61,
df=1, chi-square =0.13), indicating there was no signi-
ficant relationship between delay of referral and out-
come of therapy.

APPENDIX IV

Study I - Referral Source

Under this variable, the author attempted to see if there was any difference in outcome of therapy as related to whether or not impetus for referring the client and his family came from within or without the family. Referral sources for this sample included: (1) family members, (2) friends, (3) physicians; being psychiatrists, general practitioners, or other specialists, (4) psychologists, (5) schools, (6) department of social services and (7) other public health agencies. A 2x4 chi-square was run and results were significant at the .05 level ($x^2((2x4))=8.28$, n=63, df=3, p.<.05). Results were that children referred either by parents or by school officials had a better prognosis than other referral sources.

APPENDIX V

Study I - Relationship between

Diagnosis and Therapy Outcome

The possible relationship of preliminary diagnosis to improvement in child therapy was subjected to X^2. Cases were divided among the diagnosis of (1) neuroses, (2) character disorders, (3) transient situational disorders, (4) specific learning problems, and (5) no diagnosis. Diagnoses were made by the child worker involved in each case and according to the standards established by the North Carolina Department of Mental Health as described in DMH-602 Staff Conference Diagnostic Report (Rev. 7-1-69).

This study was predictive in nature, and the preliminary diagnosis was the only one used in the investigation. It was noted that some diagnostic impressions had changed or further qualifying diagnoses made at the termination of therapy. It was felt this represented hindsight rather than initial definitions of the various problems and did not lend legitimately to the intent of this study.

Results were significant ($x^2((2x5))=13.26$, n=64, df=4, p.<.01). Children receiving no initial diagnosis had a much higher probability of improvement at the end of therapy than did those receiving a formal diagnsois.

Excluding "no diagnosis" children, there was no significant

difference among the categories with respect to rate of

improvement.

APPENDIX VI

Study II - Delay Referral

For this study, subjects were again divided into those
seen within 45 days of their initial contact and those seen
after that time. With 66 families reporting, a 2x2 chi-
square was run (df=1, chi-square = 3.67). Results were
non-significant although they approached significance.
This study too, failed to show any significant relationship
between the time elapsed first contact and therapy (on a
short-term basis) and prognosis.

APPENDIX VII

Study II - Referral Source

As in study I, the referring agencies were family, friends, physicians, psychologists, schools, and public health agencies. A 2x4 chi-square was run (n=66. df=3, chi-square =8.45) and results were significant at the .05 level. These results showed that school referrals had the best success rate in therapy over all other referring sources. When chi-square was collapsed to 2x2 design to differentiate between family and non-family referrals, results were non-significant.

APPENDIX VIII

Study II - Relationship Between

Diagnosis and Therapy Outcome

The relationship between diagnosis and outcome was
investigated in the same manner as done for study I.
Frequency distributions for the categories were somewhat
different from those of Study I and the following diagnostic
groupings were used: (1) neuroses and specific learning
problems, (2) character disorders, (3) transient situational
disorders and (4) no diagnosis.

Results were significant $(x^2((2x4)) = 12.08, n=67,$
$df=3, p$ less than .01), but this time in the opposite
direction. Children with no preliminary diagnosis had a
much lower probability of improvement after therapy than did
any of the diagnosed categories. When the "no diagnosis"
cases were removed, there was no significant difference
among the various categories as to rate of success in
therapy. However there was a tendency for children
labeled as neurotic or as having a specific learning
problem to enjoy a better prognosis in therapy.