DIAGNOSTIC CLASSROOM
INTERVENTION FOR
PRESCHOOL CHILDREN

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CHAPTER I

INTRODUCTION

There is increasing evidence that early behavioral and
educational intervention in children under six years of age
may produce higher levels of learning and behavioral ad-
justment, as opposed to no early intervention (Kirk &
Gallagher, 1979; Reynolds, 1979; White, 1980). The effects
of early stimulation on a deprived environment are most
powerful in the early years of childhood when the most rapid
growth and development take place (Caldwell, 1977). The
early intervention may prevent problems for children as
they grow older. It appears that some children are not re-
ferred to as having problems until problems have existed for
some time, usually after that child enters school (Baker,
1973). Children with adjustment problems in nursery school
tend to have adjustment problems later in life. These ad-
justment problems are seen in the social histories of chil-
dren from pre-school years to high school or college which
suggest that most of them were poorly adjusted as young
children (Hurlock, 1972). Systematic guidance and interven-
tion are most needed in the early stages of life when

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foundations are being laid and adjustment problems may be-
gin (Hurlock, 1972; White, 1979).

The cardinal principal, according to the 1930 White House
Conference, in the education for a democratic society is that
each child should develop to his highest possible level of at-
tainment (Hayden, 1978). For the child under six years with
behavior difficulties this should involve intervention to
ensure the achievement of the highest level of development
(Caldwell, 1977; Hayden, 1978; White, 1979). The intervention
should be a systematic program to provide a significant con-
tribution to the child's social and intellectual development
(Caldwell, 1977). The program should be established with the
goal of optimizing the development of the child (White, 1979).
The development of the child's potential, as well as preven-
tion and treatment of deficiences, provides the optimizing of
the child's overall development. When dealing with children,
there is a greater need of observation than probing
(Montessori, 1966).

Early intervention is important with children exhibit-
ing mild behavioral difficulties. The earlier in a child's
life the intervention is begun, the greater the likelihood of
impact from the intervention (Swanson & Reinert,1979). Some

aberrant behavior and learning problems may be prevented

through early diagnosis and intervention (Klein, 1973).

The child with mild behavior disorders, as defined in this

project, exhibited one or more essential features as

diagnosed by a physician and/or psychologist. The source

of the essential features was from the diagnostic categories

in the Diagnostic and Statistical Manual of Mental Disorders

(DSM-III). The categories include: 1) attention deficit

disorder - inappropriate inattention, impulsivity and

hyperactivity; 2) conduct disorder - repetitive pattern of

conduct in which basic rights of others or rules were vio-

lated; 3) anxiety disorder - separation anxiety, excessive

worrying or fearful behavior, or excessive shrinking from

contact with others. The DSM-III manual is the official

manual of mental and behavioral disorders which contains a

glossary of descriptions of the diagnostic categories

(Spitzer, 1980).

Intervention may involve home visits by social workers

(Hirsch, 1976), parent training (Scovern, 1980), home

training programs (Donahue, 1973; Hayes, 1977) and diagnostic

and prescriptive educational classes (Balter, 1976; Kenney,

1969; Manni, 1980).   A diagnostic classroom is defined

differently by professions. These definitions include

"special instruction" (Hayes, 1977), "special preschool
experiences" (Kenney, 1969; Manni, 1980) and assessment of
individual children's strengths and weaknesses and determina-
tion of an effective learning environment. The diagnostic
classes vary in length from short-term to long-term services.
Some of the diagnostic programs of the past have been nine
to twelve weeks (Manni, 1980) to a longer period of four to
nine months (Hayes, 1977; Kenney, 1969).

The immediate goals of a diagnostic program were to
diagnose strengths and weaknesses of the children enrolled.
Other goals were to actively intervene in altering behavior
and work with the parents to provide support services in
order to improve the child's behavior. The diagnostic
program provided a means of early intervention which took a
preventive point of view requiring that one provide the
maximum stimulation and assistance for the preschool child
(Lee, 1970; White, 1979).

Statement of Problem

There are children who have difficulties which might
have been prevented if the necessary help and attention had
been provided early in the child's life (White, 1979).
There are few diagnostic educational opportunities for the

child under six years. The public schools provide classes
for preschool children who are severely involved and qualify
as "emotionally disturbed" (P.L. 94-142). However, ap-
propriate programs are not always available for the child
with mild behavior difficulties, unless a diagnosis of
emotionally disturbed has been made by a professional. There
is a need for further investigation to determine the most
appropriate intervention for the preschool child with be-
havior difficulties. The child diagnosed as having mild
behavior disorders is a high risk child for development of
more serious problems in later life. Treatment in later
life will not be as successful as early intervention to pre-
vent these problems (Cantwell, 1974). The continued success
of investigations using structured programs at the preschool
level depends upon a variety of diagnostic interventions
(Hayes, 1970).

Purpose

The purpose of this study was to determine the effects
of short term diagnostic intervention on altering mild be-
havioral disorders in preschool children. The diag-
nostic research project involved investigation of three
groups of subjects receiving either diagnostic classroom

intervention (T_1), parent counseling only (T_2), or no treatment (T_3). The specific instrument which was utilized to assess the effects of treatment through pre-test, post-test, and a delayed post-test was the Burks' Preschool Behavior Rating Scale. It was anticipated that these findings would contribute to the field of research by providing information for further diagnostic intervention with pre-school children. The growth and development of the young child into his adult capabilities are too important to be ignored and must be the subject of continued experimental investigation and effective evaluation (Denenberg, 1970; White, 1979).

The null hypotheses for this study included:

Ho_1: There will be no significant difference between T_1 and T_2 Burks' Rating Scales

Ho_2: There will be no significant difference between T_2 and T_3 Burks' Rating Scales

Ho_3: There will be no significant difference between T_1 and T_3 Burks' Rating Scales

Ho_4: There will be no significant difference between Behavior Rating Scales from T_1, T_2 and T_3.

CHAPTER II

REVIEW OF LITERATURE

Mild Behavior Disorders

There are certain children who arouse negative feelings
and induce negative behaviors in others, especially adults
(Kauffman, 1977). These children are categorized as having
mild behavior disorders. The behavior of these children
can be so irritating that the only reinforcement or response
they receive from adults is negative. This negative rein-
forcement, unfortunately, often only increases the undesirable
and irritating behaviors of the children (Swanson, 1979).

Young children with behavior difficulties have been
described in a variety of ways by different authors. The
concept of behavior disorders has been simultaneously used
with terms such as "maladjusted" (Warnock, 1978), "emotionally
disturbed" (Hewett, 1968, 1980), or "children in conflict"
(Swanson, 1979). Gallagher (1979) defined children with
behavior disorders as students exhibiting maladaptive be-
havior patterns and experiencing social and/or academic
failure. The type and degree of failure determines whether
the behavior disorder is mild or severe. The term "behavior

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disorders", therefore, involved varying degrees of intensity from mild involvement to more severe behavioral disorders.

One generic label that incorporates behavior difficulties of children is "children in conflict" coined by Swanson and Reinert (1979). This label encompasses a broad conceptual base of children with emotional and behavioral difficulties. The term "children in conflict" is inclusive of children with mild behavior disorders. These children manifest certain behaviors which have a deleterious effect on their personal or educational development and/or the personal or educational development of their peers (Swanson, 1979).

Children with mild behavioral disorders exhibit emotional reaction patterns to the environment which range from withdrawal from authority figures to omnipotent control of and acting out against other individuals (Kenney, 1969). Another characteristic of these children is their families frequently find it difficult to manage them. The families often exhibit the inability to respond to these children in ways that have been successful with other children in the family (Kenney, 1969). Adults may inadvertantly arrange conditions that support inappropriate or undesirable behaviors (Kauffman, 1977).

The families of children with mild behavior disorders
are usually in need of guidance and assistance in effectively
managing children's behavior. In situations where families
are disorganized and do not supply a supportive environ-
ment, an intensive external supportive environment may con-
tribute to the child's development (Caldwell, 1977). These
families require an organized external support system to
ensure maximum success in altering their children's in-
appropriate behavior. The children with mild behavioral
disorders require intensive intervention to function suc-
cessfully with a minimum amount of disruptions.

The Need for Early Intervention

The current literature on early intervention suggests
that early intervention will enhance young children's
ability to succeed in school and in life (Lewis, 1980;
White, 1979). The interaction between children, parents
and the educational environment is important in determining
how children will function later in life. Children with
adjustment problems in nursery school tend to have adjust-
ment problems in later life (Hurlock, 1972). The avail-
ability of effective early intervention should reduce or
eliminate these adjustment problems in children's preschool
years.

Young children require guidance in the early stages of life when the foundations for appropriate behaviors are being laid (Hurlock, 1972). This guidance can be provided through a variety of sources. These sources include parental intervention or community intervention such as school or church. Families are the most formative factors in young children's development (Brookline Public Schools, 1974; White, 1979). Providing support and assistance to young children through their parents is particularly desirable with preschoolers because their personalities are not yet totally developed and therefore they are responsive to their parents (Balter, 1976).

The community may provide early intervention for young children. This intervention may be available through public schools, private day care centers or church programs. The public schools provide educational services for children under six years only if the children are handicapped or culturally disadvantaged. Children with mild behavioral disorders do not usually fit into these special education categories. The programs which may provide early intervention are private day care centers and church programs. The appropriateness of these programs for children with behavioral disorders must be considered on an individual

basis as these children usually require small, structured classrooms (Hewett, 1968, 1980).

The optimal intervention is a combination of several of the above sources, such as educational intervention coupled with close parental involvement. Participation of the parents in the early intervention of children with behavior disorders greatly enhances the opportunity for decreasing children's behavior difficulties. The inter-action between home and classroom environment has a bearing on young children's school adjustment and attainment (Lewis, 1980). The positive and productive involvement of the children's families will influence the children's behavior and assist in the development of social and emotional maturity (Hare, 1977). In summary, the most effective intervention must be based on individual problems (Karnes, 1971).

Models of Intervention

The current literature on intervention techniques used with preschool children, specifically those with mild be-havioral disorders, revealed techniques previously utilized. The intervention programs mentioned in the literature ranged from parent education programs to educational interventions

such as the Montessori method. The literature indicates screening procedures have been developed to identify children in need of early intervention. There has been research on projects which attempted to provide early intervention by developing screening procedures to determine which children might be high risk for difficulty in school. The Marshalltown Behavioral Development Profile was developed in 1973 for handicapped and culturally deprived children up to six years of age. The Profile was developed to facilitate individualized prescriptive teaching of preschool children within the home setting and to identify children who might be at high risk for school failure (Donahue, 1973). This Behavioral Development Profile does not provide current research to determine the effectiveness of the Profile. This Profile provided only a screening tool which might reveal necessary information to identify children with potential learning difficulties.

Another screening procedure formulated to assess and ultimately teach children under six years is a text called School before Six: a Diagnostic Approach by Hodgden (1974). This text was written to provide educators with screening procedures to utilize when a child begins formal classroom training. The book introduces a specific procedure for

assessing and teaching young children's strengths and weaknesses. This text provides some screening information appropriate for children with behavioral disorders; however, it should be utilized as more of a curriculum source than as a screening tool.

For children aged four to six years The Behavioral Classification Project was developed as an assessment tool to rate children's behavior in several ages (Baker, 1973). This behavioral assessment was then used to identify specific behavioral difficulties to be remediated. This tool attempted to take into account the description of the children's behavior from those most familiar with the children - the parents themselves. This project, as well as the other screening profiles, offers only initial information about young children with mild behavioral disorders and does not offer actual intervention.

The research offers alternative intervention techniques. These included studies which used a variety of standardized tests to identify young children who may have behavioral and/or learning difficulties. One study in England utilized the English version of the Peabody Picture Vocabulary Test (EPVT) coupled with the Croydon Checklist of behaviors which might identify young children at high risk for learning

difficulties (Lewis, 1978). The probability of a positive diagnosis of at risk children being correct was low and the use of a standardized test did "not improve hits beyond chance" (Lewis, 1980). The use of the EPVT alone was seen as a poor predictor of which children were at risk for behavioral and/or learning problems.

Another study examined the effectiveness of educational intervention for the culturally disadvantaged preschoolers living in a rural area (Jorgenson, 1976). The subjects were four and five year olds to whom the PPVT and a kindergarten readiness test were administered. The data obtained was inconclusive as the kindergarten test was not standardized and the PPVT was a weak screening device. This study was dissimiliar to the current study as the subjects were culturally deprived rather than having behavioral difficulties.

An approach to providing early intervention as seen in the current research, was home training programs where only the parents were involved. The Home Start Program offered *Home start program* mothers of young children six scheduled parent meetings which included discussion of general problems in raising children (Klein, 1973). This home program introduced procedures to help parents become more objective in observing children's

behavior. The rationale behind this program was that some
aberrant behavior and some learning problems may be pre-
vented through early diagnosis and intervention (Klein, 1973).
There was no conclusive data collected about this project.
The purpose of the project seemed to be to provide guidelines
and techniques for early intervention rather than research
to determine its effectiveness.

The premise that families are the most formative factors
in their children's educational development was the basis for
the Brookline Public School project (1974). This project
provided a combination of home visits and teaching sessions
actually in the home. However, the parents were again the
primary recipients of services in the Brookline Project
rather than the children. The project focused on children
up to kindergarten age. The primary concern of this project
was to provide specific guidelines for program implementation
rather than to provide data for research purposes. The in-
formation revealed in this article was inconclusive in
determining the effectiveness of home training.

In 1976, a child welfare agency provided an experimental
program by helping parents in the home to cope with problems
involving their children's behavior (Kirsch, 1976). The
purpose of this program was to determine the need for

intervention and whether or not the intervention would be
beneficial. This determination was made by the assigned
caseworker directly involved with the parent. The effective-
ness of the project was based on individual caseworkers
opinions as to the parents progress. The data was incon-
clusive as no pre-test or post-test was offered.

A recent study of the effectiveness of parent counseling
on the family system was examined in another parent counsel-
ing program in 1980. Twenty families were studied as they
received parent counseling and the findings suggested that
for educated, middle-income families the critical component
of the counseling seemed to be mere presentation of infor-
mation and didactic instruction (Scovern, 1980). The author
of this study felt his study was an important first step
in the determination of the most effective ingredients in
parent counseling. Scovern (1980) also suggested further
research would be necessary to isolate the therapeutic in-
gredients in parent counseling and to determine whether the
subject's self-reported gains correlate in every day family
interactions.

The literature on diagnostic classroom intervention
reveals only three programs with two of these dealing with
preschool children. One diagnostic program for preschoolers

was implemented to improve school readiness for disadvantag-
ed children (Hayes, 1970) and not necessarily for children
with behavioral disorders. The Illinois Test of Psycholin-
guistic Abilities was used to diagnose the language develop-
ment patterns of children. Teachers were trained to use this
information to provide a program based on a curriculum de-
veloped around its subjects. The subjects were thirty-two
children from three to five years of age selected from a
state-funded preschool. The subjects were pre-tested and
post-tested with the PPVT and the Caldwell Preschool Inventory.
The results indicated that the diagnostic-prescriptive
program improved the school readiness scores of the ex-
perimental subjects. The author suggested the results could
be explained "via teacher expectancy" (Hayes, 1970). The
conclusion of this research suggested the continued success
of "investigations using highly structured programs at the
preschool level suggests that curricula should be developed
from many diagnostic instruments in both the cognitive and
social areas" (Hayes, 1970).

The second source of diagnostic programs revealed a
team concept approach to psychoeducational diagnosis and
remediation (Manni, 1980). This particular diagnostic class
was part of the Centennial School of Lehigh University

and involved children from first grade through high school.
The duration of intervention for each child was approximately
nine to twelve weeks. Children, who were eligible for this
diagnostic intervention, were referred after they had failed
in regular classrooms (Manni, 1980). This article gave
specific information of the remedial plans and some examples
of actual goals and objectives. There was no research in-
volved in this article - only a presentation of descriptive
information about the classroom.

The third source of a model of diagnostic intervention
was the Diagnostic Preschool of the Mirian School in St.
Louis (Kenney, 1969). Children with mild behavior disorders
were included in this group, but the subjects selected were
primarily learning disabled children. The placement was
long term as it involved one school year for each child.
The thirty-four subjects utilized were between the ages of
four and six years. The interventions involved educational
assessment coupled with behavior management techniques based
on positive reinforcement and a token economy. The authors
reported concern that their sample size was too small. A
concern with this project was the lack of a control group
for comparison of diagnostic information. The effectiveness
of the Mirian School program was determined by a parental

questionnaire. This was unavailable. It was not standar-
dized and was therefore difficult to determine its reli-
ability or validity in measuring diagnostic program
effectiveness.

The most complete diagnostic intervention model includes
assessment and observation of current performance and be-
havior as well as specific interventions involving parents
and the home environment (Mercer, 1976). A comprehensive
program for diagnostic intervention involves an educational
program for children and a wide range of skills that parents
can use in changing their own behaviors as well as their
children's (Kozloff, 1979).

In summarizing the current research, it is apparent
that there was a need for further investigation of effective
interventions since there was no research available on short
term diagnostic intervention for preschool children with
behavior disorders. The insufficient research in this
particular area suggested a need for further studies.
Further study and investigation in the area of preschool
diagnostic intervention will stimulate continued research
that may reveal information about the kinds of learning
experiences needed by children with atypical growth and de-
velopment patterns in order to insure optimal social ad-
justment and realization of full potential (Kenney, 1969).

CHAPTER III

METHODS EMPLOYED

Diagnostic Classroom Intervention

The short term diagnostic classroom intervention for
preschool children with mild behavioral disorders was pro-
vided by the Child Study Center in Fort Worth, Texas. The
class provided a structured teaching-learning environment
for these children. The concept of "structured teaching"
is an overall approach based upon applied behavior analysis
or behavior modification (Sloane, 1979). The diagnostic
classroom was organized to provide structured teaching and
individualization of instructions. The environment used
the basic principles of behavior modification, such as
"operant conditions" and "reinforcement" which have been
described by Skinner (1963).

The basic goal of the diagnostic class was to identify
maladaptive behaviors which interfere with learning and to
assist the child in the development of more adaptive behaviors
(Hewett, 1968, 1980). Other goals of this intervention
program were to actively involve the parents of these
children with mild behavior disorders and to diagnose

developmental patterns of these children. Finally, the
global purpose of the program was to have each child attain
maximum potential both behaviorally and intellectually
through early intervention.

The classroom size was limited to five children with
a special education teacher certified as an educational diag-
nostician and a teacher assistant. The class was conducted
five mornings a week for two and one-half hours. The dur-
ation of the class was approximately four weeks or 17 to 20
days/sessions based on individual needs. The class was
organized into five work sessions consisting of twenty minute
periods:

```
 8:30  -   8:50   Work Session I
 8:50  -   8:55   Earned Free Time
 8:55  -   9:15   Work Session II
 9:15  -   9:20   Earned Free Time
 9:20  -   9:40   Work Session III
 9:40  -   9:45   Earned Free Time
 9:45  -  10:05   Work Session IV
10:05  -  10:25   Bathroom and Earned Recess
10:25  -  10:40   Snack/Story
10:40  -  11:00   Work Session V
11:00             Dismissal
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The individual work sessions were utilized to assess
educational learning profiles and for observation and docu-
mentation of appropriate classroom behavior such as attention
span, response to authority and task completion. Earned free
times were utilized to observe the children's ability

to play appropriately with peers. Also observed were the children's abilities to select one toy and play purposefully with it for the entire period (5 minutes) without disruptive behaviors such as wandering about the room.

The diagnostic intervention class identified maladaptive behavior through observation and use of the Behavioral Characteristic Progression social emotional inventory. The BCP social emotional skills include attention span, task completion, honesty, self-confidence, interpersonal-relationships, listening, and adaptive behavior. The children were observed over a period of four weeks by the teacher and aide to determine which behaviors were appropriate or inappropriate. The diagnostic classroom was structured to provide the optimal environment in which negative or inappropriate behaviors were systematically reduced and appropriate behaviors increased through a token economy coupled with praise. The Child Study Center descriptive policy and procedures for Behavior Management are included in Appendix D.

The diagnostic class provided an analysis of the children's educational strengths and weaknesses. This assessment was done both formally and informally to insure opportunity for accurate testing information. The formal educational battery included the McCarthy Scale of Children's

Ability, Test of Auditory Comprehension of Language, Beery
Visual Motor Integration, Peabody Picture Vocabulary Test
and other appropriate assessment tools as necessary and
appropriate for individual children. The informal educational
assessment of the children enrolled was the Brigance Early
Inventory.

The diagnostic intervention program actually involved
parents of the children enrolled. The parents were involved
in various ways: 1) weekly parent group meetings in which
a pediatrician, child psychologist and the diagnostic
teacher reviewed methods of effectively dealing with the
child's behavior; 2) frequent observation of their child in
the diagnostic classroom through an observation window;
3) daily discussion between parent and teacher about the
child's behavior and suggestions were offered for maintain-
ing appropriate behavior in the home; 4) other individual
activities, as needed.

Selection of Subjects

The subjects were preschool children aged two through
six years of age. The children were referred for diag-
nostic classroom intervention by the Child Study Center

pediatrician or staff psychologist. The subjects were identified using the Diagnostic and Statistical Manual of Mental Disorders (DSM-III). Subjects diagnosed as attention deficit disorder, conduct disorder or anxiety disorder of childhood were used in this study.

Treatment Groups

This study proposed to determine the effectiveness of the diagnostic intervention class by comparing the subjects enrolled in the class to subjects not enrolled. Group one was composed of fifteen preschool children who received the diagnostic intervention program for four consecutive weeks. The comparison groups were formulated with children referred for diagnostic class intervention, however, for some reason were unable to attend the class (i.e., transporation, parent unable to participate due to occupational work hours). Group two included fifteen preschoolers who received no treatment, but whose parents received individual parent counseling with a psychologist or social worker for one to three sessions involving a four week period. The third group of subjects included fifteen preschool children whose parents, for various reasons, chose not to receive treatment.

Instrumentation

The proposed means of evaluating these groups was to have each parent complete the Burks' Behavior Rating Scales Preschool and Kindergarten Edition on the first day they enrolled their child (Group one), began parent counseling (Group two), or the initial day they sought assistance for their child (Group three). At a four week interval the Behavior Rating Scale was again completed by the parent. The teacher completed a rating scale on group one as a control for instrument validity. The final observation was delayed by having the parent complete the Behavior Rating Scale again three months after their initial contact with the project. Therefore, the whole process proposed encompassed a three month period for each subject.

The Burks' Behavior Rating Scale utilized was the preschool and kindergarten edition by Burks (1979). This scale was designed to identify behavior problems and patterns of problems shown by children. The Burks scale assesses the severity of negative symptoms as seen by outside persons such as parents. The 105 items used as criteria for the instruments ratings describe behaviors that are infrequently observed among normal children (Burks, 1979). The Burks

scale can be used to identify patterns of disturbed behaviors, show changes in behavior patterns over a period of time and be of practical value when used by parents as well as teachers (Burks, 1979).

A study which utilized the Burks' Behavior Rating Scale (elementary level) was one that compared three different behavior rating scales (Harris, 1978). The Burks scale was compared to the Pupil Rating Scale and the Early School Personality Questionnaire. The results suggested that the use of multiple checklists can be inefficient use of teacher time and effort that potentially produces much redundant information (Harris, 1978). The study suggests the use of one behavior rating scale as adequate and efficient.

The reliability of the Burks' Behavior Rating Scale (preschool and kindergarten level) was established by having 84 kindergarten children rated and rerated at a later date by their teachers. The correlation coefficients were found to be very high for the items (Burks, 1979). The high correlation coefficients are to be expected since the majority of the subjects were first rated as being normally behaved. A meaningful difference is considered a shift in judgment and scoring from a number one rating to a number three rating (Burks, 1979).

Analysis of Data

The analysis of data contrasted the effectiveness of diagnostic classroom treatment (T_1) to the effectiveness of parent counseling (T_2) or no treatment (T_3). A repeated measure design was utilized to determine the effects of the treatments, if any, following the baseline observations. To observe changes in behavior, it was necessary to establish baseline data against which to make meaningful comparisons. Such data established what the subjects were like before the treatment and/or observations were begun. Common procedures for gathering baseline data are the pretest and the control group (Isaac, 1980). The control group was important since there was an expected treatment effect and the absence of treatment was part of the baseline.

In the repeated measure design, each of the three groups (two experimental groups and one control) received the same pretest, posttest and delayed posttest at the same intervals. The repeated measure design was dictated in experiments in which one treatment dimension was actually the passage of time. This type of experiment involved measuring the same group of subjects repeatedly over a period of time in order to assess effects which develop with the passage of time

(Dayton, 1970). The diagrammed model of this proposed study follows below:

Group 1: 0_1 T_1 0_2 0_3

Group 2: 0_1 T_2 0_2 0_3

Group 3: 0_1 T_3 0_2 0_3

	pretest	posttest (4 weeks)	delayed posttest (3 months)
experimental group one			
experimental group two			
control group three			

An analysis of variance (ANOVA) was used in this experimental setting where the independent variables were manipulated while the dependent variables were measured at intervals. The ANOVA was used to determine whether the differences among the three means were greater than would be expected by chance alone. SPSS program "Breakdown" was used to achieve ANOVA data needed to determine differences be-

tween the experimental conditions or groups (Nie, Hull, Jenkins, Steinbrenner, and Bent, 1975).

To establish response accuracy, teacher-completed <u>Burks'</u> <u>Behavior</u> <u>Rating</u> <u>Scale</u> were compared to the parent-completed Burks' posttest items. SPSS program "T-Test" was used to determine the differences between parents' and teacher responses using the Burks' Scale (Nie, et al, 1975).

CHAPTER IV

RESULTS

Early behavioral and educational intervention with young children has been an interest to educators over many years. However, little research has been conducted to investigate the variety of interventions available to the preschool child. This study proposed to determine the effectiveness of short term diagnostic intervention on altering behavior in children six years of age and younger. The study investigated three groups of subject receiving either diagnostic classroom intervention, parent counseling only or no treatment. The instrument utilized to assess the effects of treatment through pretest, post-test and a delayed post-test was the Burks' Preschool Behavior Rating Scale. The teacher of the diagnostic group rated each child in that intervention group simultaneously with the parents' first posttest. This procedure was designed to determine the accuracy of the Burks' scale.

The child with mild behavioral disorders was defined in the Diagnostic and Statistical Manual of Mental Disorders (DSM-III). These categories included: 1) attention deficit disorder; 2) conduct disorder; and 3) anxiety disorder.

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The DSM-III manual is utilized to define mental and behavioral disorders and contains a glossary of descriptions of the diagnostic categories. The children used in this study exhibited one or more essential features as diagnosed by a physician and/or psychologist.

Children with behavioral disorders have been described as "maladjusted" (Warnock, 1978), "emotionally disturbed" (Hewett, 1968, 1980) or "children in conflict" (Swanson, 1978). These children often exhibit maladaptive behavior patterns which may lead to social and/or academic failure (Gallagher, 1979). The maladaptive behavior patterns may range from withdrawal from authority figures to acting out against others (Kenney, 1969). Other characteristics may involve poor management by the family (Kenney, 1969), and the child may be high risk for development of more serious problems in later life (Cantwell, 1974).

The demographic information about the subjects in this study is presented in Appendix A. There were seven subjects under the age of three and ten subjects who were three years of age. There were ten subjects who were four years old and two children were six years old. The largest number of subjects, sixteen, were five years old. About 67% of the subjects in group two, parent counseling, and group three,

no intervention were males, while 33% were females. In
group one, diagnostic class, 75% of the subjects were males
and 25% females. The annual family income of seven of the
forty-five subjects was less than $6,231.00. The annual
family income for seven subjects was $6,231.00 to $10,000.00.
There were five subjects with income between $10,001.00
to $15,000.00. The largest number of subjects, twenty-six,
had annual family incomes of over $15,001.00.

The differences between the three types of early in-
tervention can be determined by reviewing the measures of
central tendency for each pretest, posttest and delayed
posttest for each group. The measures of central tendency
for the pretest data for each group is presented in Table 1.
The Burks' Behavior Rating Scales assigned scores to each
variable according to degree of significance. A variable was
determined to be not significant, significant, or very
significant by the score received on that variable. The
parents in all three groups perceived poor attention, poor
impulse control, poor anger control and excessive resistance
in the significant range. The parents in group two, parent
counseling, perceived poor social conformity in the significant
range while parents in group one, diagnostic class, and
three, no intervention, rated their children in the not

Table 1

Measures of Central Tendency for

Experimental Groups -- Pretest Data

Variable	Group 1		Group 2		Group 3	
	X̄	S	X̄	S	X̄	S
Chronological Age	49.67	15.03	49.53	13.56	57.27	15.65
Burks' Tests:						
1. Excessive Self Blame	8.93	2.94	10.73	4.42	9.47	4.00
2. Excessive Anxiety	8.20	3.21	9.20	3.67	9.60	5.15
3. Excessive Withdrawal	9.07	2.63	9.67	3.68	11.60	6.16
4. Excessive Dependency	11.60	4.15	12.07	4.27	12.60	3.83
5. Poor Ego Strength	11.67	3.42	12.40	3.83	16.00	6.62
6. Poor Physical Strength	6.87	2.10	6.73	2.31	7.20	3.57
7. Poor Co-ordination	8.53	3.00	8.67	2.61	10.00	3.34
8. Poor Intellectuality	12.07	3.24	12.67	4.88	13.53	5.82
9. Poor Attention	14.47	5.17	12.47	5.45	14.93	6.75
10. Poor Impulse Control	15.47	6.10	13.27	5.69	16.40	6.34
11. Poor Reality Contact	11.93	2.55	12.87	4.81	13.00	3.21
12. Poor Sense of Identity	7.47	3.04	6.87	2.20	8.53	3.58
13. Excessive Suffering	12.27	3.31	13.60	4.61	15.40	7.19
14. Poor Anger Control	13.20	5.60	12.87	4.93	13.80	5.13
15. Excessive Sense of Persecution	8.87	3.98	8.33	2.69	9.13	3.66
16. Excessive Aggressiveness	11.80	4.65	12.00	5.78	13.20	5.31
17. Excessive Resistance	13.40	4.90	13.87	5.10	13.87	5.73
18. Poor Social Conformity	15.73	5.82	17.33	8.22	16.60	6.66

significant range. In group three, no intervention, the parents rated excessive suffering and excessive aggressiveness in the significant range while parents in the other two groups rated these items not significant in their children.

The measure of central tendency in the posttest data determined some differences between the groups as contained in Table 2. The parents in all three groups perceived poor attention and poor impulse control in the significant range. The parents in group two, parent counseling, and group three, no intervention, rated their children in the significant range in poor anger control and excessive resistance, while group one parents, diagnostic class, rated these items in the not significant range. The parents in group three, no intervention, perceived excessive dependency, excessive suffering and excessive aggressiveness in the significant range, while parents in groups one and two rated their children in the not significant range on these items.

The differences in the measures of central tendency of the groups in the delayed posttest data are contained in Table 3. The parents of groups one, two and three perceived poor attention and poor impulse control in the significant range. The parents of group two, parent counseling and group

Table 2

Measures of Central Tendency for

Experimental Groups -- Posttest Data

Variable	Group 1		Group 2		Group 3	
	$\overline{X}$	S	$\overline{X}$	S	$\overline{X}$	S
Burks' Tests:						
1. Excessive Self Blame	8.87	2.70	9.60	3.33	10.00	3.63
2. Excessive Anxiety	7.33	2.94	9.00	3.76	10.07	5.13
3. Excessive Withdrawal	8.67	2.64	9.67	3.70	10.93	5.15
4. Excessive Dependency	11 47	3.23	11.73	4.62	13.40	4.94
5. Poor Ego Strength	11.13	3.07	11.93	4.40	14.47	6.47
6. Poor Physical Strength	6.40	1.64	6.80	2.57	7.07	3.01
7. Poor Co-ordination	8.40	2.72	8.47	2.67	9.80	4.78
8. Poor Intel-lectuality	11.20	3.05	12.53	5.08	12.93	5.55
9. Poor Attention	11.60	3.36	12.33	5.96	12.87	6.27
10. Poor Impulse Control	14.13	5.66	13.00	6.23	14.80	5.17
11. Poor Reality Contact	10.93	2.25	12.53	4.94	13.73	3.75
12. Poor Sense of Identity	6.67	1.76	6.73	2.09	7.53	2.90
13. Excessive Suffering	10.87	2.80	13.00	4.86	15.87	6.77
14. Poor Anger Control	10.67	3.87	11.67	5.58	13.20	5.49
15. Excessive Sense of Persecution	7.93	3.33	8.13	2.88	10.53	4.26
16. Excessive Ag-gressiveness	10.07	2.99	11.53	5.91	13.13	4.12
17. Excessive Resistance	10.53	2.53	12.60	4.58	13.33	4.91
18. Poor Social Conformity	13.27	4.61	16.93	7.92	15.40	5.37

Table 3

Measures of Central Tendency for

Experimental Groups -- Delayed Posttest Data

Variable	Group 1		Group 2		Group 3	
	$\overline{X}$	S	$\overline{X}$	S	$\overline{X}$	S
Burks' Tests:						
1. Excessive Self Blame	8.33	2.38	10.60	3.62	10.40	4.47
2. Excessive Anxiety	7.73	3.65	10.00	4.83	10.40	5.14
3. Excessive Withdrawal	7.67	2.23	9.67	3.44	11.73	5.34
4. Excessive Dependency	10.27	2.28	12.60	4.32	14.00	5.31
5. Poor Ego Strength	10.13	2.20	13.27	4.67	14.33	5.49
6. Poor Physical Strength	6.67	2.53	6.40	1.59	6.67	2.55
7. Poor Co-ordination	8.07	3.15	9.53	2.62	10.40	4.44
8. Poor Intellectuality	10.93	3.41	12.20	5.12	12.33	4.56
9. Poor Attention	11.93	4.61	12.60	5.15	13.87	5.53
10. Poor Impulse Control	13.27	5.42	14.07	5.68	15.00	5.62
11. Poor Reality Contact	9.87	2.00	12.20	4.49	14.07	4.17
12. Poor Sense of Identify	6.00	1.41	7.47	2.56	8.33	3.50
13. Excessive Suffering	10.40	2.50	14.20	5.32	15.93	7.96
14. Poor Anger Control	10.20	4.06	13.53	5.88	13.53	5.91
15. Excessive Sense of Persecution	7.27	3.13	9.60	3.44	10.13	3.89
16. Excessive Aggressiveness	9.27	3.06	12.53	5.45	15.00	5.39
17. Excessive Resistance	9.33	2.55	14.87	5.19	14.00	5.14
18. Poor Social Conformity	11.87	3.34	18.73	8.06	16.93	6.65

three, no intervention, rated their children in the significant range in poor social conformity, while group one was rated in the not significant range. Group two, parent counseling, and three, no intervention, were perceived by their parents in the significant range in poor anger control and excessive resistance, while group one, diagnostic class, was rated not significant. The parents in group three, no intervention, perceived their children in the significant range for excessive dependency, excessive suffering and excessive aggressiveness, while groups one and two were in the not significant range.

The pretest analysis of variance between the experimental groups is contained in Table 4. Across the eighteen variables assessed by the Burks' scale, only one variable, poor ego strength, was determined to be significant different among the three experimental groups. For this particular variable, parents whose children were in group three, no intervention, rated their children as having poorer ego strength than the parents of group one, diagnostic class, and group two, parent counseling.

The experimental groups analysis of variance between the groups is presented in Table 5 for the posttest. One variable of the eighteen variables assessed on the Burks' scale, was determined to be significantly different among

Table 4

One Way ANOVA for Experimental

Groups -- Pretest Data

Variable	F	Sig.
Chronological Age	1.347	.2710
Burks' Tests:		
1. Excessive Self Blame	0.872	.4256
2. Excessive Anxiety	0.465	.6313
3. Excessive Withdrawal	1.350	.2703
4. Excessive Dependency	0.225	.7998
5. Poor Ego Strength	3.448	.0411 *
6. Poor Physical Strength	0.116	.8912
7. Poor Coordination	1.099	.3426
8. Poor Intellectuality	0.359	.7005
9. Poor Attention	0.758	.4747
10. Poor Impulse Control	1.060	.3555
11. Poor Reality Contact	0.381	.6856
12. Poor Sense of Identity	1.190	.3142
13. Excessive Suffering	1.327	.2762
14. Poor Anger Control	0.123	.8847
15. Excessive Sense of Persecution	0.205	.8157
16. Excessive Aggressiveness	0.310	.7350
17. Excessive Resistance	0.039	.9613
18. Poor Social Conformity	0.198	.8212

* $p \leq .05$.

Table 5

One Way ANOVA for Experimental

Groups -- Posttest Data

Variable	F	Sig.	
Burks' Tests:			
1. Excessive Self Blame	0.472	.6273	
2. Excessive Anxiety	1.737	.1884	
3. Excessive Withdrawal	1.232	.3019	
4. Excessive Dependency	0.880	.4225	
5. Poor Ego Strength	1.930	.1578	
6. Poor Physical Strength	0.276	.7601	
7. Poor Coordination	0.750	.4785	
8. Poor Intellectuality	0.562	.5742	
9. Poor Attention	0.212	.8102	
10. Poor Impulse Control	0.382	.6849	
11. Poor Reality Contact	2.039	.1428	
12. Poor Sense of Identity	0.660	.5221	
13. Excessive Suffering	3.667	.0341	*
14. Poor Anger Control	0.961	.3907	
15. Excessive Sense of Persecution	2.515	.0930	
16. Excessive Aggressiveness	1.739	.1881	
17. Excessive Resistance	1.843	.1709	
18. Poor Social Conformity	1.353	.2696	

* $p \leq .05$.

the experimental groups. For this particular variable, excessive suffering, parents whose children were in group three, no intervention, rated their children as exhibiting excessive suffering more frequently than the parents of children in group one, diagnostic class, and group two, parent counseling.

The delayed posttest analysis of variance between the experimental groups is contained in Table 6. Across the eighteen variables assessed by Burks' scale, there were seven variables determined to be significantly different among the three experimental groups. For two of these variables, excessive withdrawal and excessive aggressiveness, parents whose children were in group three, no intervention, rated their children as being more aggressive and withdrawing more frequently than the parents of children in group two, parent counseling, and group one, diagnostic class. For the other five variables, parents whose children were in group two and group three rated their children as having poorer ego strength, poorer reality conformity and poor social conformity than the parents of children in group one. The parents of children in group two and three also rated their children as being more excessively resistant

Table 6

One Way ANOVA for Experimental

Groups -- Delayed Posttest Data

Variable	F	Sig.	
Burks' Tests:			
1. Excessive Self Blame	1.829	.1732	
2. Excessive Anxiety	1.476	.2401	
3. Excessive Withdrawal	4.111	.0234	*
4. Excessive Dependency	3.076	.0567	
5. Poor Ego Strength	3.782	.0309	*
6. Poor Physical Strength	0.069	.9334	
7. Poor Coordination	1.718	.1919	
8. Poor Intellectuality	0.458	.6355	
9. Poor Attention	0.554	.5787	
10. Poor Impulse Control	0.364	.6973	
11. Poor Reality Contact	4.801	.0133	*
12. Poor Sense of Identity	3.011	.0600	
13. Excessive Suffering	3.681	.0336	*
14. Poor Anger Control	1.938	.1566	
15. Excessive Sense of Persecution	2.848	.0692	
16. Excessive Aggressiveness	5.470	.0077	*
17. Excessive Resistance	6.651	.0031	*
18. Poor Social Conformity	4.744	.0139	*

* $\underline{p} \leq .05$.

and displaying more excessive suffering than children rated by their parents in group one.

A teacher rating on the Burks' scale was completed on subjects in group one, diagnostic class, to determine the accuracy of the Burks' scale completed by the parents. This teacher rating was completed at the posttest interval and compared to the posttests completed by parents of children in group one. Two of the eighteen variables were determined significantly different. The parents of children in group one rated their children as being excessively more dependent than the diagnostic class teacher rated their children. The parents of children in group one also rated their children as having poorer attention than the ratings by the diagnostic teacher (see Table 7).

This study, utilizing measures of central tendency and analyses of variance, indicated there were no significant global differences between interventions. There was no overall significant difference between diagnostic class intervention (T_1), parent counseling (T_2) or no intervention (T_3). The Burks' Behavior Rating Scales indicated no significant difference between T_1, T_2 or T_3.

Table 7

T-test for Diagnostic Class Intervention

Group 1 -- Posttest Scores Comparing Parent

and Teacher Ratings

Variables	Mean		
	Parent	Teacher	T Value
Burks' Tests:			
1. Excessive Self Blame	8.87	8.33	0.56
2. Excessive Anxiety	7.33	8.13	-0.84
3. Excessive Withdrawal	8.67	8.80	-0.16
4. Excessive Dependency	11.47	8.13	4.28 *
5. Poor Ego Strength	11.13	10.40	0.83
6. Poor Physical Strength	6.40	6.07	0.54
7. Poor Coordination	8.40	7.20	1.30
8. Poor Intellectuality	11.20	11.60	-0.42
9. Poor Attention	11.60	13.53	-2.19 **
10. Poor Impulse Control	14.13	12.47	1.48
11. Poor Reality Contact	10.93	10.07	0.99
12. Poor Sense of Identity	6.67	5.67	1.81
13. Excessive Suffering	10.87	10.27	0.64
14. Poor Anger Control	10.67	9.47	0.90
15. Excessive Sense of Persecution	7.93	7.00	1.07
16. Excessive Aggressiveness	10.07	9.20	2.04
17. Excessive Resistance	10.533	10.07	0.54
18. Poor Social Conformity	13.27	12.20	1.47

* $p \leq .01$

** $p \leq .05$

CHAPTER V

CONCLUSIONS AND RECOMMENDATIONS

The purpose of this study was to investigate the effectiveness of short term diagnostic intervention on altering behavior in preschool children. Three types of early intervention were compared to determine the most effective type of intervention. According to the statistical results of this study there were no global significant differences between group one, diagnostic classroom intervention, group two, parent counseling, and group three, no intervention.

However, there were differences between groups based on the measures of central tendency and analyses of variance. In all three groups, there were two Burks' test means that were in the significant range on the Burks' profile sheet. These two items were poor attention and poor impulse control. Parents of children in all three groups rated their children as having significant problems with finishing a task, self-control, impulsivity, overexcitement, overactivity and restlessness. These behaviors were maintained as significant by the parents throughout the duration of the study.

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In group one, diagnostic classroom intervention, excessive resistance and poor anger control, were rated as significant by the parents in the pretest. However, after diagnostic intervention, these items were rated in the not significant range.

In group two, parent counseling, excessive resistance, poor anger control and poor social conformity were rated by the parents as significant difficulties in their children. Poor social conformity was not rated as significant on the posttest, however, it emerged as significant in the delayed posttest.

In group three, no intervention, there were three items identified by the parents as significant in the pretest. These were excessive resistance, poor anger control, excessive suffering and excessive aggressiveness. These behaviors were maintained as significant problems in the posttest and delayed posttest. In addition to maintaining these, one more behavior, excessive dependency, was identified by the parents as significant in the posttest, while poor social conformity was identified in the delayed posttest.

These comparisons might suggest that parents of the children referred to diagnostic classroom group one, felt their children had fewer behavior difficulties than children

in the other groups. The findings might also suggest children in group one were the only children whose behavior ratings by their parents improved in time and treatment. Group two maintained the same behaviors and group three increased the number of significant behavior difficulties according to their parents.

The analyses of variance indicated subtle differences among the groups. In group one, diagnostic class, there were no significant variables in the pretest, posttest or delayed posttest. In group two, parent counseling, there were five significant variables only in the delayed posttest. These items were poor ego strength, poor reality contact, excessive suffering, excessive resistance and poor social conformity. Similiar significant variables became apparent in group three. Poor ego strength and excessive suffering surfaced as significant variables in the pretest and posttest. These two items were maintained and five more items, poor reality contact, excessive resistance, withdrawal and aggressiveness and poor social conformity, were added as significant variables for group three at the dealyed posttest level. These factors might suggest that parents of children in parent counseling, group two, and group three, no intervention, felt their children had more behavior difficulties than group one

at the delayed posttest interval. This, again, might suggest that the diagnostic class intervention was the most effective in maintaining or decreasing behavior difficulties.

In comparing the demographic information about the subjects in all three groups, there are several factors to consider. There were more males than females in all three groups. In particular, there were more males than females in group one (75% males). The annual income of the subjects' families suggested the majority earned more than $15,000.00 a year. The next largest number of subjects were in the lowest income level under $6,230.00. The other subjects had average annual incomes between $6,231.00 to $13,000.00. The majority of the subjects were 60 to 71 months, while the next largest number of subjects were 36 to 59 months. These figures seem to suggest that primarily males between three to six years of age were served in the study and that the income of the parents of these subjects were usually over $15,000.00 or under $6,231.00.

The teacher ratings compared well to the parent posttest ratings in group one. It appeared that the Burks' Scale was an appropriate instrument to measure changes in behavior. Several of the parents stated it was lengthy and time consuming to complete, however, they felt it was relatively

simple to understand and an easy method of rating their children.

The findings in this study suggested a need for continued research to investigate the effectiveness of early intervention with preschool children. The study suggested diagnostic classroom intervention and parent counseling were appropriate methods of early intervention. However, to ensure quality interventions research must continue to investigate questions such as what is the most effective length of a diagnostic classroom and/or parent counseling sessions; what factors influence behavioral ratings by parents of their children; and what type of child is best served in diagnostic classroom intervention.

APPENDICES

Appendix A

Demographic Information on Subjects

in Experimental Groups

Variable	Group 1 (Diagnostic Class)	Group 2 (Parent Counseling)	Group 3 (No Inter- vention)
CA:			
24 to 35 months	4	2	1
36 to 47 months	2	5	3
48 to 59 months	3	4	3
60 to 71 months	5	4	7
72 to 84 months	1	0	1
Sex:			
Male	12	10	10
Female	3	5	5
Annual Income and Percentage:			
Up to -$6,230 (0%)	3	1	3
$6,231 - 8,000 (1-25%)	1	0	0
$8,001 - 10,000 (26-50%)	2	3	1
$10,001 - 13,000 (51-75%)	1	2	1
$13,001 - 15,000 (76-95%)	0	1	0
$15,001 - up (100%)	8	8	10

APPENDIX B

Burks' Behavior Rating Scales --

Profile Sheet and Administration Booklet

BURKS' BEHAVIOR RATING SCALES
PRESCHOOL AND KINDERGARTEN EDITION
PROFILE SHEET

by Harold F. Burks, Ph.D.

Published by

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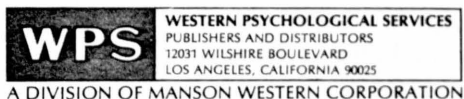
Name _____ Date _____

School _____ Age _____ Grade _____

Rated by _____ Relationship to Child _____

INSTRUCTIONS: Category scores should be calculated according to directions in manual. Place an X at point along each category continuum where score and number coincide. Connect X's to make profile.

	TOTAL SCORES	NOT SIGNIFICANT	SIGNIFICANT	VERY SIGNIFICANT
EXCESSIVE SELF BLAME	1	5 6 7 8 9 10	11 12 13 14 15 16 17	18 19 20 21 22 23 24 25
EXCESSIVE ANXIETY	2	5 6 7 8 9 10	11 12 13 14 15 16 17	18 19 20 21 22 23 24 25
EXCESSIVE WITHDRAWAL	3	6 7 8 9 10 11 12	13 14 15 16 17 18 19 20 21	22 23 24 25 26 27 28 29
EXCESSIVE DEPENDENCY	4	6 7 8 9 10 11 12	13 14 15 16 17 18 19 20 21	22 23 24 25 26 27 28 29
POOR EGO STRENGTH	5	7 8 9 10 11 12 13 14	15 16 17 18 19 20 21 22 23 24	25 26 27 28 29 30 31 32 33 34
POOR PHYSICAL STRENGTH	6	5 6 7 8 9 10	11 12 13 14 15 16 17	18 19 20 21 22 23 24 25
POOR COORDINATION	7	5 6 7 8 9 10	11 12 13 14 15 16 17	18 19 20 21 22 23 24 25
POOR INTELLECTUALITY	8	7 8 9 10 11 12 13 14	15 16 17 18 19 20 21 22 23 24	25 26 27 28 29 30 31 32 34 35
POOR ATTENTION	9	5 6 7 8 9 10	11 12 13 14 15 16 17	18 19 20 21 22 23 24 25
POOR IMPULSE CONTROL	10	5 6 7 8 9 10	11 12 13 14 15 16 17	18 19 20 21 22 23 24 25
POOR REALITY CONTACT	11	8 9 10 11 12 13 14 15 16	17 18 19 20 21 22 23 24 25 26 27 28	29 30 31 32 33 34 35 36 37 38 39
POOR SENSE OF IDENTITY	12	5 6 7 8 9 10	11 12 13 14 15 16 17	18 19 20 21 22 23 24 25
EXCESSIVE SUFFERING	13	7 8 9 10 11 12 13 14	15 16 17 18 19 20 21 22 23 24	25 26 27 28 29 30 31 32 33 34
POOR ANGER CONTROL	14	5 6 7 8 9 10	11 12 13 14 15 16 17	18 19 20 21 22 23 24 25
EXCESSIVE SENSE OF PERSECUTION	15	5 6 7 8 9 10	11 12 13 14 15 16 17	18 19 20 21 22 23 24 25
EXCESSIVE AGGRESSIVENESS	16	6 7 8 9 10 11 12	13 14 15 16 17 18 19 20 21	22 23 24 25 26 27 28 29
EXCESSIVE RESISTANCE	17	5 6 7 8 9 10	11 12 13 14 15 16 17	18 19 20 21 22 23 24 25
POOR SOCIAL CONFORMITY	18	8 9 10 11 12 13 14 15 16	17 18 19 20 21 22 23 24 25 26 27 28	29 30 31 32 33 34 35 36 37 38

3 4 5 6 7 8 9   Printed in U.S.A.

W-155A(2)

BURKS' BEHAVIOR RATING SCALE -
PRESCHOOL AND KINDERGARTEN EDITION
ADMINISTRATION BOOKLET

by Harold F. Burks, Ph.D.

Available from:

Western Psychological Services
Publishers and Distributors
12031 Wilshire Boulevard
Los Angeles, California 90025

APPENDIX C

General Permission Forms

TEXAS WOMAN'S UNIVERSITY
Box 23717 TWU Station
Denton, Texas 76204

HUMAN SUBJECTS REVIEW COMMITTEE

Name of Investigator: ___Jill F. Claridge_____ Center:Denton____

Address: _817 Forest Glen_____Date:December 8, 1980

_____Bedford, TX 76021_____

_____

Dear_ Jill F. Claridge_____

Your study entitled_Diagnostic classroom intervention with_

_Pre-school children_____

has been reviewed by a committee of the Human Subjects Review
Committee and it appears to meet our requirements in regard
to protection of the individual's rights.

Please be reminded that both the University and the Depart-
ment of Health, Education, and Welfare regulations typically
require that signatures indicating informed consent be obtained
from all human subjects in your studies. These are to be filed
with the Human Subjects Review Committee. Any exception to this
requirement is noted below. Furthermore, according to DHEW re-
gulations, another review by the Committee is required if your
project changes.

Any special provisions pertaining to your study are noted
below:

__X_ Add to informed consent form: No medical service or com-
pensation is provided to subjects by the University as a
result of injury from participation in research.

_____ Add to informed consent form: I UNDERSTAND THAT THE RETURN
OF MY QUESTIONNAIRE CONSTITUTES MY INFORMED CONSENT TO ACT
AS A SUBJECT IN THIS RESEARCH.

_____ The filing of signatures of subjects with the Human Subjects
Review Committee is not required.

__X__ Other: Change "authorization" to consent on informed consent form.

_____ No special provisions apply.

cc: Graduate School   Sincerely,
    Project Director
    Director of School or   Marilyn Henson
      Chairman of Department
                                       Chairman, Human Subjects
                                         Review Committee

                                       at   Denton_____

Child Study Center

Stephen G. Maddox, M.D.
Clinical Director

Larry D. Eason, M.Ed.
Executive Director

CONSENT TO PARTICIPATE IN
PRE-SCHOOL RESEARCH PROJECT

The Child Study Center is conducting a study of the effectiveness of the diag-
nostic class program. The purpose of this study is to determine if there is
any difference in the behavior of a child who attended diagnostic class to a
child whose parent received parent counseling only. Each parent participating
will be asked to complete the Burks Behavior Rating Scale on their child during
their initial visit to the Child Study Center. This rating scale will again be
completed by the parent at a one month and three month interval.

We are asking that parents of children in this pre-school project permit us
to use the statistics obtained from this behavior rating scale and from other
evaluations completed at the Center. This study is being conducted as part of
a dissertation paper at Texas Woman's University. No medical service or com-
pensation is provided to subjects by the University as a result of injury from
participation in this research. No identifying information will be used in
writing the research. It is the hope of the Child Study Center staff that new
and perhaps more effective ways of working with pre-school children will be
obtained through this project. You may withdraw your permission at any time.

If you would like additional information please contact Jill Claridge, 336-8611.
Please complete the form below and return to the Child Study Center as soon as
possible.

I give my permission for my child: _____
                                                    Name

_____ to participate in the Pre-School research project
       Date of Birth

at the Child Study Center. I understand that information obtained through the
behavior rating scales which I complete on my child will be used in the study,
but all identifying information will remain confidential.

_____   _____
Signature   Relationship

_____   _____
Date   Witness

Child Study Center

Stephen G. Michlos, M.D.
Clinical Director

Larry D. Eason, M.Ed.
Executive Director

October 16, 1980

Jill Claridge
Director of Education
Child Study Center

Dear Jill:

It is my pleasure to inform you that your proposed research project
involving the diagnostic classroom at the Child Study Center was
presented, reviewed, and approved by the Human Rights Committee.
The meeting took place on 8/28/80 and I was chairing the committee.
The members of the committee felt that the proposed research project
may bring valuable information for the future educational programs
at Child Study Center and other similar agencies.

I certainly will be looking forward to hearing the results of your
research project.

Best wishes,

Eva Syrovy, M.D.
Staff Pediatrician

ES:sb

APPENDIX D

POLICIES OF CHILD STUDY CENTER, INC.

Child Study Center

Stephen G. Maddox, M.D.
Clinical Director

Larry D. Eason, M.Ed.
Executive Director

DEMOGRAPHIC INFORMATION

CHILD STUDY CENTER

The Child Study Center offers comprehensive pediatric, dental, psychiatric, psychological, and educational services to handicapped children. Some are served on an in-patient basis, while others receive out-patient care. These services are offered to children between the ages of birth and 14 years, as well as to their families.

The main objective of the Pediatric Clinic is to diagnose and provide a treatment plan for the training, education, and rehabilitation of children under 14 years who are developmentally delayed. Specialists in genetics, neurology, orthopedics, and opthalmology are just a few of the supportive services provided to the children. The Psychiatric Clinic deals with children who are experiencing emotional and/or behavioral disorders. Both the Pediatric and Psychiatric Clinics provide consultation services to physicians and other community agencies.

The Psychology and Social Work Departments provide services to clients in all of the CSC programs. These services may include psychological testing, individual and/or group counseling, and parent counseling. The CSC Department of Educational Services is a Texas Education Agency approved non-public school for exceptional children. While the main emphasis of the school is on infant education, classes are also provided for young children who are autistic, emotionally disturbed, behavioral disordered, and developmentally delayed. A diagnostic classroom is also available for children who are in need of a thorough educational evaluation.

Through these services, the Child Study Center serves approximately 2,000 children a year.

Child Study Center

CHILD STUDY CENTER

STATEMENT OF PHILOSOPHY

The Child Study Center was est.blished on the philosophy of providing out-patient care for the developmentally disabled and emotionally disturbed child with services available to all children regardless of race or financial status. To fulfill its philosophy of providing out-patient care for these children, a team of medical and allied health professionals using an interdisciplinary approach provide coordinated and comprehensive diagnostic and treatment services. This philosophy, combined with a genuine concern for the children and their families, is the foundation upon which the operations of the Child Study Center are performed.

The Child Study Center seeks to implement its philosophy through five major activities:

(1) Provision of comprehensive medical and paramedical services to developmentally disabled and emotionally disturbed children and their parents, taking into account the total needs of the child and the family.

(2) Consultation to physicians and community agencies on problems relating to developmentally disabled and emotionally disturbed children.

(3) Provision of professional training opportunities at the under-graduate, graduate, and post-graduate levels for those persons engaged in or preparing for a career of service to developmentally disabled and emotionally disturbed children.

(4) Public education concerning developmentally disabled and emo-tionally disturbed children.

(5) Conduct research and studies on topics pertaining to develop-mentally disabled and emotionally disturbed children.

The corresponding goals for these activities are as follows:

(1) Through early detection, comprehensive diagnosis and early intervention, assist the child in obtaining his maximum inherent capacity for growth and development.

(2) The goal of providing consultation to physicians and other com-munity agencies is to increase their awareness of, concern for, and ability to deal with problems relating to developmentally disabled and emotionally disturbed children and their families. Such consultation may enable them to become the provider of service to such children and their families and to be a part of the total service delivery system.

Fort Worth, Texas

Child Study Center

(3)   Through conferences, seminars, lectures, practicums, and field placements increase the knowledge of and improve the practice of students, physicians and allied health professionals in regard to prevention, diagnosis, evaluation, treatment and education of developmentally disabled and emotionally disturbed children and their families.

(4)   Through tours, programs, literature and public media provide information to the public concerning developmentally disabled and emotionally disturbed children, so that they may develop a better understanding of such children and become knowledgeable of the help which is available to them in the community and become aware of the services which still need to be provided.

(5)   Through research and studies, contribute to the knowledge of causes, prevention, diagnosis, and improvements of techniques of management, therapy, and education of developmentally disabled and emotionally disturbed children.

The Center's ultimate aim is to foster those behaviors, both of the child and his parents, that will maximize his human qualities, aid in his development, and enhance his ability to cope with his environment.

As the Center carries out its mission and seeks to fulfill its purpose, in working with clients, it will make use of means which are as typical of our culture as possible, in order to elicit and maintain behaviors and characteristics which are as normal as possible and appropriate within the cultural range of our society.

The Center's philosophy requires that it make use of the least restrictive alternatives that are consistent with the developmental needs and objectives of its clients.

Adopted by the Board of Directors
Child Study Center
May 19, 1976

Child Study Center

BEHAVIOR MANAGEMENT

A. Policy on Corporal Punishment and Restraint

It is not the policy of the Child Study Center School to use physical force, verbal abuse or other dehumanizing strategies in the education of exceptional children. It is believed that the competent special educator has within his or her repertoire of techniques the necessary means of classroom management which prevent situations requiring forceful interventions.

Only if a student is engaged in behavior which may be harmful to his own or another student's health or safety or which may result in destruction of the property of others should he be physically restrained. Such restraint should be a means of helping the student gain self-control and should never be of a punitive nature.

Spanking or paddling is not to be allowed. Spanking or paddling is interpreted to include use of the hand, ruler, or switch as well as various types of paddles. Punitive physical intervention such as pinching, thumping and hair pulling is considered to be completely unnecessary as well as unprofessional. Respect for the dignity of the child must be demonstrated by the use of positive means of behavior modification.

Restraining straps are used on those children who might otherwise fall from wheelchairs or chairs. For the hyperactive child, the straps may be used for ten to fifteen minute intervals while a specific learning task is required. Longer periods of restraint on such children are interpreted to be punitive. Use of restraint for teacher convenience is not permitted.

Standing tables and cribs are not to be used as restraining devices for students. As with restraining straps, standing tables may be used for the hyperactive child for ten to fifteen minute intervals while a specific learning task is required. The standing table is not to be used as a "time-out" device.

In the event that a student's behavior is out of control, isolation may be used.

B. Policy on Isolation

A time-out period of isolation in a quiet, non-stimulating area or room may be effective in helping some children who are upset to settle down. It also serves to remove them from the class so that the effect of disruptive behavior on other children is limited.

Child Study Center

Time-out periods may be utilized as one of a series of interventions designed to deal systematically with problems of disruptive behaviors. It is not employed, however, until after consideration of a series of alternatives available to the teacher for maintaining the child as a learner in the classroom. When it is apparent that the student's behavior is out of control and no amount of task manipulation will successfully engage the student in learning, time-out intervention may be employed for a five, ten, or fifteen minute period. The door to the time-out area must not be locked even if the teacher assistant must remain outside the door for the period of isolation.

1. A time-out period should occur only after the child's behavior has exceeded the limits that have been clearly stated to him previously, and after consideration or trial has been made of one or more kinds of interventions.
2. It should occur matter-of-factly rather than as a result of a teacher exasperation.
3. It should be presented to the child as a constructive aid to learning rather than arbitrary punishment.
4. It should involve a specific period of time rather than an open-ended exclusion.
5. Once the time-out period has passed, the child should immediately return to the class without any lecturing or attempt to get him "to promise to be a good boy from now on".

When the child is unable to tolerate a given time-out period or has to be placed in a time-out intervention three times in one day, he may be excluded from school, if appropriate, and the Director will call the parents to come get him. He will be permitted to return the next day.

For the student for whom school and everything associated with it is so negative that the greatest reward of all is to escape and retreat home, the educational program must be reviewed and altered so that the student receives more satisfaction from being in school than at home. When the student is unable to pursue an assigned task, it is evident that something is wrong. The focus should be on "What is wrong with the classroom environment?" rather than "What is wrong with the student?". Changes may be needed in the task assigned to the student, the conditions under which it is presented, or the consequences of doing the task.

C. Behavior Modification Programs

Contingency management and the token economy system are among the strategies used by the Educational Services staff in changing behavior and promoting learning. Additionally, modeling is used as an effective teaching strategy. Such techniques shall be authorized by the physician in charge, psychologist, or Educational Director.

Child Study Center

Behavior modification programs that involve the use of noxious or aversive stimuli are not to be employed at the Child Study Center. Should the occasion arise when the situation is so extreme that such measures are believed indicated, the matter will be presented to the Education Committee of the Child Study Center Board of Directors for reconsideration of policy.

Records are maintained of significant maladaptive behavior and of actions taken by staff as a consequence of such behavior. These records are included in the Individual Program Plan, special documentation attached to IPP, progress notes in chart and in medical records.

When food is provided or withheld as part of a behavior management program, its effect on nutrition and dental status are considered. Behavioral management programs will not include denial of a nutritionally adequate diet.

D. Medication Policy for Educational Services

The Child Study Center recognizes the right of the exceptional child to be free from unnecessary and excessive medication. Medication shall not be used as a punishment, for the convenience of the staff, as a substitute for a habilitation or education program, or in quantities that interfere with the child's habilitation or educational program. Medication for each child shall be authorized only by the prescription of a physician and shall be closely supervised by a physician.

Medication will be administered to a student in the Child Study Center Department of Educational Services only if a written order for such medication is in the student's folder, signed by the attending physician or Child Study Center Clinical Director, and dated within the past twelve months.

Any medication to be given at school must be listed on an authorization form signed by the parents and the attending physician or the Child Study Center Clinical Director. Standing orders may be left by the attending physician or the Clinical Director. The Director and the teacher will be notified when prescriptions are changed or discontinued by the attending physician. Any medication to be given at school must be in the original prescription bottle with the name of the medication on the prescription label. The pharmacist should be requested to put the medication in two labeled bottles-- one for home and one for school--if medication must be given during school hours. Prescription refills should be supplied for at least a week at a time (preferably by the month).

A cardex will be maintained by the Department of Educational Services summarizing treatment plans. Administration of medication will be recorded daily and initialed by the classroom teacher giving the medication. The Director of Educational Services will assume ultimate responsibility for the correct administration of medications during school hours. Any deviations from the prescribed administration of medication must be reported to the Educational Director immediately.

Child Study Center

The teacher is required to notify the Director of Educational Services if the child's medication has not been supplied by the parent or if the parent has not given medication as prescribed before bringing the child to school, including weekends or holidays. The Director will contact the parent and will require the parent to pick up the child immediately or make transportation arrangements immediately to have the child taken home. He may return to school when he is accompanied by the required medication. Parents are requested to notify the teacher if a laxative has been given the child by the parents.

First aid will be provided by the Child Study Center nurse. More serious injuries will be taken to W. I. Cook Memorial Hospital. No medication will be kept in the Department of Educational Services except those prescribed by the attending physician and for which there is a current written order. Aspirin, cough medications, eye drops, ear drops, etc., are not to be administered without a physician's written order. Parents are requested not to send such medications to school unless accompanied by a written order from the physician. If the child is acutely ill, he will not be allowed to attend school.

E. Behavior Management Committee

The Behavior Management Committee will meet bi-monthly to identify and discuss problems related to maladaptive behavior of children in the Department of Educational Services. Consensus for appropriate action to be taken in regard to problems will be sought and action implemented. Records are maintained in individual program plans of significant behavior and of actions taken by staff as a consequence of such behavior. These meetings will be attended by the teaching staff, the Director of Educational Services and the psychologist.

F. Parent Counseling

Parent groups will be provided for parents of all students enrolled in the school program on a regular basis by the social worker or psychologist. Individual counseling will be provided in those cases where such therapy is appropriate.

APPENDIX E

ANALYSIS OF VARIANCE FOR ALL VARIABLES

Criterion variable CA - Chronological Age

. . . . A N A L Y S I S   O F   V A R I A N C E

		Sum	Mean	Std dev	Sum of sq		N
GROUP 1.	DIAG	745,0000	49,6667	15,0270	3161,3333	(	15)
GROUP 2.	PARENT	743,0000	49,5333	13,5587	2573,7333	(	15)
GROUP 3.	CONTROL	859,0000	57,2667	15,6500	3428,9333	(	15)
Within groups total		2347,0000	52,1556	14,7713	9164,0000	(	45)

A N A L Y S I S   O F   V A R I A N C E

Source	Sum of squares	D.F.	Mean square	F	Sig.
Between groups	587,911	2	293,956	1,347	,2710
Within groups	9164,000	42	218,190		

Eta = 0,2455   Eta squared = 0,0603

Pretest 1

Criterion variable PRET1

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. . . . . . . . . . . . . . . . . . . . . . . A N A L Y S I S   O F   V A R I A N C E
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		Sum	Mean	Std dev	Sum of sq		N
GROUP 1.	DIAG	134.0000	8.9333	2.9391	120.9333	(	15)
GROUP 2.	PARENT	161.0000	10.7333	4.4153	272.9333	(	15)
GROUP 3.	CONTROL	142.0000	9.4667	3.9976	223.7333	(	15)
Within groups total		437.0000	9.7111	3.8347	617.6000	(	45)

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A N A L Y S I S   O F   V A R I A N C E
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Source	Sum of squares	D.F.	Mean square	F	Sig.
Between groups	25.644	2	12.822	0.872	.4256
Within groups	617.600	42	14.705		

Eta = 0.1997   Eta squared = 0.0399

Pretest 2

Criterion variable PRET2

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. . . . . . . . . . . . . . . A N A L Y S I S   O F   V A R I A N C E
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		Sum	Mean	Std dev	Sum of sq		N
GROUP 1.	DIAG	123.0000	8.2000	3.2116	144.4000	(	15)
GROUP 2.	PARENT	138.0000	9.2000	3.6664	188.4000	(	15)
GROUP 3.	CONTROL	144.0000	9.6000	5.1520	371.6000	(	15)
Within groups total		405.0000	9.0000	4.0953	704.4000	(	45)

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A N A L Y S I S   O F   V A R I A N C E
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Source	Sum of squares	D.F.	Mean square	F	Sig.
Between groups	15.600	2	7.800	0.465	.6313
Within groups	704.400	42	16.771		

Eta = 0.1472   Eta squared = 0.0217

Pretest 3

Criterion variable PRET3

- A N A L Y S I S O F V A R I A N C E

		Sum	Mean	Std dev	Sum of sq	N
GROUP 1.	DIAG	136.0000	9.0667	2.6313	96.9333	(15)
GROUP 2.	PARENT	145.0000	9.6667	3.6775	189.9333	(15)
GROUP 3.	CONTROL	174.0000	11.6000	6.1621	531.6000	(15)
Within groups total		455.0000	10.1111	4.4128	817.8667	(45)

. . . .

A N A L Y S I S O F V A R I A N C E

Source	Sum of squares	D.F.	Mean square	F	Sig.
Between groups	52.578	2	26.289	1.350	.2703
Within groups	817.867	42	19.473		

Eta = 0.2458   Eta squared = 0.0604

Pretest 4

Criterion variable PRET4

- A N A L Y S I S O F V A R I A N C E

		Sum	Mean	Std dev	Sum of sq	N
GROUP 1.	DIAG	174.0000	11.6000	4.1542	241.6000	(15)
GROUP 2.	PARENT	181.0000	12.0667	4.2673	254.9333	(15)
GROUP 3.	CONTROL	189.0000	12.6000	3.8322	205.6000	(15)
Within groups total		544.0000	12.0889	4.0887	702.1333	(45)

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A N A L Y S I S O F V A R I A N C E

Source	Sum of squares	D.F.	Mean square	F	Sig.
Between groups	7.511	2	3.756	0.225	.7998
Within groups	702.133	42	16.717		

Eta = 0.1029   Eta squared = 0.0106

Pretest 5

Criterion variable PRET5

- A N A L Y S I S   O F   V A R I A N C E

		Sum	Mean	Std dev	Sum of sq	N
GROUP 1.	DIAG	175.0000	11.6667	3.4157	163.3333	(15)
GROUP 2.	PARENT	186.0000	12.4000	3.8322	205.6000	(15)
GROUP 3.	CONTROL	240.0000	16.0000	6.6225	614.0000	(15)
Within groups total	601.0000		13.3556	4.8377	982.9333	(45)

A N A L Y S I S   O F   V A R I A N C E

Source	Sum of squares	D.F.	Mean square	F	Sig.
Between groups	161.378	2	80.689	3.448	.0411
Within groups	982.933	42	23.403		

Eta = 0.3755   Eta squared = 0.1410

Pretest 6

Criterion variable PRET6

- - - - - - - - - - - - - - - - - - - A N A L Y S I S   O F   V A R I A N C E

		Sum	Mean	Std dev	Sum of sq	N
GROUP 1.	DIAG	103.0000	6.8667	2.0999	61.7333	(15)
GROUP 2.	PARENT	101.0000	6.7333	2.3135	74.9333	(15)
GROUP 3.	CONTROL	108.0000	7.2000	3.5697	178.4000	(15)
Within groups total	312.0000		6.9333	2.7389	315.0667	(45)

A N A L Y S I S   O F   V A R I A N C E

Source	Sum of squares	D.F.	Mean square	F	Sig.
Between groups	1.733	2	0.867	0.116	.8912
Within groups	315.067	42	7.502		

Eta = 0.0740   Eta squared = 0.0055

Pretest 7

Criterion variable PRET7

- - - - - - - - - - - - - - - - - - A N A L Y S I S   O F   V A R I A N C E

		Sum	Mean	Std dev	Sum of sq	N
GROUP 1.	DIAG	128.0000	8.5333	2.9968	125.7333	(15)
GROUP 2.	PARENT	130.0000	8.6667	2.6095	95.3333	(15)
GROUP 3.	CONTROL	150.0000	10.0000	3.3381	156.0000	(15)
Within groups total		408.0000	9.0667	2.9963	377.0667	(45)

A N A L Y S I S   O F   V A R I A N C E

Source	Sum of squares	D.F.	Mean square	F	Sig.
Between groups	19.733	2	9.867	1.099	.3426
Within groups	377.067	42	8.978		

Eta = 0.2230   Eta squared = 0.0497

Pretest 8

Criterion variable PRET8

- - - - - - - - - - - - - - - - - A N A L Y S I S   O F   V A R I A N C E

		Sum	Mean	Std dev	Sum of sq	N
GROUP 1.	DIAG	181.0000	12.0667	3.2396	146.9333	(15)
GROUP 2.	PARENT	190.0000	12.6667	4.8795	333.3333	(15)
GROUP 3.	CONTROL	203.0000	13.5333	5.8171	473.7333	(15)
Within groups total		574.0000	12.7556	4.7660	954.0000	(45)

A N A L Y S I S   O F   V A R I A N C E

Source	Sum of squares	D.F.	Mean square	F	Sig.
Between groups	16.311	2	8.156	0.359	.7005
Within groups	954.000	42	22.714		

Eta = 0.1297   Eta squared = 0.0168

Pretest 9

Criterion variable PRET9

A N A L Y S I S   O F   V A R I A N C E

		Sum	Mean	Std dev	Sum of sq		N
GROUP 1.	DIAG	217.0000	14.4667	5.1667	373.7333	(	15)
GROUP 2.	PARENT	187.0000	12.4667	5.4493	415.7333	(	15)
GROUP 3.	CONTROL	224.0000	14.9333	6.7450	636.9333	(	15)
Within groups total		628.0000	13.9556	5.8277	1426.4000	(	45)

A N A L Y S I S   O F   V A R I A N C E

Source	Sum of squares	D.F.	Mean square	F	Sig.
Between groups	51.511	2	25.756	0.758	.4747
Within groups	1426.400	42	33.962		

Eta = 0.1867   Eta squared = 0.0349

Pretest 10

Criterion variable PRET10

A N A L Y S I S   O F   V A R I A N C E

		Sum	Mean	Std dev	Sum of sq		N
GROUP 1.	DIAG	232.0000	15.4667	6.1046	521.7333	(	15)
GROUP 2.	PARENT	199.0000	13.2667	5.6879	452.9333	(	15)
GROUP 3.	CONTROL	246.0000	16.4000	6.3449	563.6000	(	15)
Within groups total		677.0000	15.0444	6.0519	1538.2667	(	45)

A N A L Y S I S   O F   V A R I A N C E

Source	Sum of squares	D.F.	Mean square	F	Sig.
Between groups	77.644	2	38.822	1.060	.3555
Within groups	1538.267	42	36.625		

Eta = 0.2192   Eta squared = 0.0480

Pretest 11

Criterion variable PRET11

- A N A L Y S I S   O F   V A R I A N C E

		Sum	Mean	Std dev	Sum of sq	N
GROUP1.	DIAG	179.0000	11.9333	2.5486	90.9333	(15)
GROUP2.	PARENT	193.0000	12.8667	4.8087	323.7333	(15)
GROUP3.	CONTROL	195.0000	13.0000	3.2071	144.0000	(15)
Within groups total		567.0000	12.6000	3.6471	558.6667	(45)

A N A L Y S I S   O F   V A R I A N C E

Source	Sum of squares	D.F.	Mean square	F	Sig.
Between groups	10.133	2	5.067	0.381	.6856
Within groups	558.667	42	13.302		

Eta = 0.1335   Eta squared = 0.0178

Pretest 12

Criterion variable PRET12

- A N A L Y S I S   O F   V A R I A N C E

		Sum	Mean	Std dev	Sum of sq	N
GROUP 1.	DIAG	.12.0000	7.4667	3.0441	129.7333	(15)
GROUP 2.	PARENT	03.0000	6.8667	2.1996	67.7333	(15)
GROUP 3.	CONTROL	28.0000	8.5333	3.5830	179.7333	(15)
Within groups total		43.0000	7.6222	2.9968	377.2000	(45)

A N A L Y S I S   O F   V A R I A N C E

Source	Sum of squares	D.F.	Mean square	F	Sig.
Between groups	21.378	2	10.689	1.190	.3142
Within groups	377.200	42	8.981		

Eta = 0.2316   Eta squared = 0.0536

Pretest 13

Criterion variable PRET13

. . . . A N A L Y S I S   O F   V A R I A N C E

		Sum	Mean	Std dev	Sum of sq		N
GROUP1.	DIAG	184.0000	12.2667	3.3051	152.9333	(	15)
GROUP2.	PARENT	204.0000	13.6000	4.6105	297.6000	(	15)
GROUP3.	CONTROL	231.0000	15.4000	7.1893	723.6000	(	15)
Within groups total		619.0000	13.7556	5.2873	1174.1333	(	45)

A N A L Y S I S   O F   V A R I A N C E

Source	Sum of squares	D.F.	Mean square	F	Sig.
Between groups	74.178	2	37.089	1.327	.2762
Within groups	1174.133	42	27.956		

Eta = 0.2438   Eta squared = 0.0594

Pretest 14

Criterion variable PRET14

. . . . A N A L Y S I S   O F   V A R I A N C E

		Sum	Mean	Std dev	Sum of sq		N
GROUP1.	DIAG	198.0000	13.2000	5.5959	438.4000	(	15)
GROUP2.	PARENT	193.0000	12.8667	4.9261	339.7333	(	15)
GROUP3.	CONTROL	207.0000	13.8000	5.1297	368.4000	(	15)
Within groups total		598.0000	13.2889	5.2248	1146.5333	(	45)

A N A L Y S I S   O F   V A R I A N C E

Source	Sum of squares	D.F.	Mean square	F	Sig.
Between groups	6.711	2	3.356	0.123	.8847
Within groups	1146.533	42	27.298		

Eta = 0.0763   Eta squared = 0.0058

Pretest 15

Criterion variable PRET15

. . . . A N A L Y S I S   O F   V A R I A N C E

		Sum	Mean	Std dev	Sum of sq		N
GROUP 1.	DIAG	133.0000	8.8667	3.9797	221.7333	(	15)
GROUP 2.	PARENT	125.0000	8.3333	2.6904	101.3333	(	15)
GROUP 3.	CONTROL	137.0000	9.1333	3.6619	187.7333	(	15)
Within groups total		395.0000	8.7778	3.4874	510.8000	(	45)

A N A L Y S I S   O F   V A R I A N C E

Source	Sum of squares	D.F.	Mean square	F	Sig.
Between groups	4.978	2	2.489	0.205	.8157
Within groups	510.800	42	12.162		

Eta = 0.0982   Eta squared = 0.0097

Pretest 16

Criterion variable PRET16

. . . . A N A L Y S I S   O F   V A R I A N C E

		Sum	Mean	Std dev	Sum of sq		N
GROUP 1.	DIAG	177.0000	11.8000	4.6476	302.4000	(	15)
GROUP 2.	PARENT	180.0000	12.0000	5.7817	468.0000	(	15)
GROUP 3.	CONTROL	198.0000	13.2000	5.3077	394.4000	(	15)
Within groups total		555.0000	12.3333	5.2662	1164.8000	(	45)

A N A L Y S I S   O F   V A R I A N C E

Source	Sum of squares	D.F.	Mean square	F	Sig.
Between groups	17.200	2	8.600	0.310	.7350
Within groups	1164.800	42	27.733		

Eta = 0.1206   Eta squared = 0.0146

Pretest 17

Criterion variable PRET17

· A N A L Y S I S   O F   V A R I A N C E

		Sum	Mean	Std dev	Sum of sq	N
GROUP1.	DIAG	201.0000	13.4000	4.8961	335.6000	15)
GROUP2.	PARENT	208.0000	13.8667	5.0972	363.7333	15)
GROUP3.	CONTROL	208.0000	13.8667	5.7305	459.7333	15)
Within groups total		617.0000	13.7111	5.2533	1159.0667	45)

A N A L Y S I S   O F   V A R I A N C E

Source	Sum of squares	D.F.	Mean square	F	Sig.
Between groups	2.178	2	1.089	0.039	.9613
Within groups	1159.067	42	27.597		

Eta = 0.0433   Eta squared = 0.0019

Pretest 18

Criterion variable PRET18

· A N A L Y S I S   O F   V A R I A N C E

		Sum	Mean	Std dev	Sum of sq	N
GROUP1.	DIAG	236.0000	15.7333	5.8244	474.9333	15)
GROUP2.	PARENT	260.0000	17.3333	8.2173	945.3333	15)
GROUP3.	CONTROL	249.0000	16.6000	6.6633	621.6000	15)
Within groups total		745.0000	16.5556	6.9725	2041.8667	45)

A N A L Y S I S   O F   V A R I A N C E

Source	Sum of squares	D.F.	Mean square	F	Sig.
Between groups	19.244	2	9.622	0.198	.8212
Within groups	2041.867	42	48.616		

Eta = 0.0966   Eta squared = 0.0093

Posttest 1

Criterion variable POST1

```
. . . . . . . . . . . . . . . . . . . . . . . . . . . A N A L Y S I S   O F   V A R I A N C E
                        Sum              Mean            Std dev          Sum of sq              N
GROUP1:   DIAG    133.0000        8.8667          2.6957          101.7333    (      15)
GROUP2:   PARENT  144.0000        9.6000          3.3338          155.6000    (      15)
GROUP3:   CONTROL 150.0000       10.0000          3.6253          184.0000    (      15)
Within groups total 427.0000      9.4889          3.2416          441.3333    (      45)
```

```
. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
.            A N A L Y S I S   O F   V A R I A N C E                                  .
. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
.  Source              Sum of squares    D.F.    Mean square          F       Sig.     .
.  Between groups           9.911          2         4.956         0.472     .6273     .
.  Within groups          441.333         42        10.508                            .
.                                                                                      .
.                 Eta = 0.1482    Eta squared = 0.0220                                 .
. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
```

Posttest 2

Criterion variable POST2

```
. . . . . . . . . . . . . . . . . . . . . . . . . . . A N A L Y S I S   O F   V A R I A N C E
                        Sum              Mean            Std dev          Sum of sq              N
                                                        2.9439          121.3333    (      15)
GROUP1:   DIAG    110.0000        7.3333          3.7607          198.0000    (      15)
GROUP2:   PARENT  135.0000        9.0000          5.1335          368.9333    (      15)
GROUP3:   CONTROL 151.0000       10.0667          4.0481          688.2667    (      45)
Within groups total 396.0000      8.8000
```

```
. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
.            A N A L Y S I S   O F   V A R I A N C E                                  .
. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
.  Source              Sum of squares    D.F.    Mean square          F       Sig.     .
.  Between groups          56.933          2        28.467         1.737     .1884     .
.  Within groups          688.267         42        16.387                            .
.                                                                                      .
.                 Eta = 0.2764    Eta squared = 0.0764                                 .
. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
```

Posttest 3

Criterion variable POST3

. . . . ANALYSIS OF VARIANCE

		Sum	Mean	Std dev	Sum of sq		N
GROUP1.	DIAG	130.0000	8.6667	2.6367	97.3333	(	15)
GROUP2.	PARENT	145.0000	9.6667	3.6968	191.3333	(	15)
GROUP3.	CONTROL	164.0000	10.9333	5.1474	370.9333	(	15)
Within groups total		439.0000	9.7556	3.9629	659.6000	(	45)

. . . .

ANALYSIS OF VARIANCE

Source	Sum of squares	D.F.	Mean square	F	Sig.
Between groups	38.711	2	19.356	1.232	.3019
Within groups	659.600	42	15.705		

Eta = 0.2354   Eta squared = 0.0554

Posttest 4

Criterion variable POST4

. . . . ANALYSIS OF VARIANCE

		Sum	Mean	Std dev	Sum of sq		N
GROUP1.	DIAG	172.0000	11.4667	3.2264	145.7333	(	15)
GROUP2.	PARENT	176.0000	11.7333	4.6209	298.9333	(	15)
GROUP3.	CONTROL	201.0000	13.4000	4.9396	341.6000	(	15)
Within groups total		549.0000	12.2000	4.3267	786.2667	(	45)

. . . .

ANALYSIS OF VARIANCE

Source	Sum of squares	D.F.	Mean square	F	Sig.
Between groups	32.933	2	16.467	0.880	.4225
Within groups	786.267	42	18.721		

Eta = 0.2005   Eta squared = 0.0402

Posttest 5

Criterion variable POST5

		Sum	Mean	Std dev	Sum of sq		N
GROUP 1.	DIAG	167.0000	11.1333	3.0675	131.7333	(	15)
GROUP 2.	PARENT	179.0000	11.9333	4.3991	270.9333	(	15)
GROUP 3.	CONTROL	217.0000	14.4667	6.4682	585.7333	(	15)
Within groups total		563.0000	12.5111	4.8511	988.4000	(	45)

A N A L Y S I S   O F   V A R I A N C E

Source	Sum of squares	D.F.	Mean square	F	Sig.
Between groups	90.844	2	45.422	1.930	.1578
Within groups	988.400	42	23.533		

Eta = 0.2901   Eta squared = 0.0842

Posttest 6

Criterion variable POST6

		Sum	Mean	Std dev	Sum of sq		N
GROUP 1.	DIAG	96.0000	6.4000	1.6384	37.6000	(	15)
GROUP 2.	PARENT	102.0000	6.8000	1.5690	52.4000	(	15)
GROUP 3.	CONTROL	106.0000	7.0667	3.0111	126.9333	(	15)
Within groups total		304.0000	6.7556	2.4734	256.9333	(	45)

A N A L Y S I S   O F   V A R I A N C E

Source	Sum of squares	D.F.	Mean square	F	Sig.
Between groups	3.378	2	1.689	0.276	.7601
Within groups	256.933	42	6.117		

Eta = 0.1139   Eta squared = 0.0130

Posttest 7

Criterion variable POST7

```
. . . . . . . . . . . . . . . . . . . . . . A N A L Y S I S   O F   V A R I A N C E
```

		Sum	Mean	Std dev	Sum of sq		N
GROUP1.	DIAG	126.0000	8.4000	2.7203	103.6000	(	15)
GROUP2.	PARENT	127.0000	8.4667	2.6690	99.7333	(	15)
GROUP3.	CONTROL	147.0000	9.8000	4.7839	320.4000	(	15)
Within groups total		400.0000	8.8889	3.5313	523.7333	(	45)

```
A N A L Y S I S   O F   V A R I A N C E
```

Source	Sum of squares	D.F.	Mean square	F	Sig.
Between groups	18.711	2	9.356	0.750	.4785
Within groups	523.733	42	12.470		

Eta = 0.1857   Eta squared = 0.0345

Posttest 8

Criterion variable POST8

```
. . . . . . . . . . . . . . . . . . . . A N A L Y S I S   O F   V A R I A N C E
```

		Sum	Mean	Std dev	Sum of sq		N
GROUP 1.	DIAG	168.0000	11.2000	3.0519	130.4000	(	15)
GROUP 2.	PARENT	188.0000	12.5333	5.0831	361.7333	(	15)
GROUP 3.	CONTROL	194.0000	12.9333	5.5481	430.9333	(	15)
Within groups total		550.0000	12.2222	4.6880	923.0667	(	45)

```
A N A L Y S I S   O F   V A R I A N C E
```

Source	Sum of squares	D.F.	Mean square	F	Sig.
Between groups	24.711	2	12.356	0.562	.5742
Within groups	923.067	42	21.978		

Eta = 0.1615   Eta squared = 0.0261

Posttest 9

Criterion variable POST9

. . . . A N A L Y S I S   O F   V A R I A N C E

		Sum	Mean	Std dev	Sum of sq		N
GROUP 1.	DIAG	174.0000	11.6000	3.3552	157.6000	(	15)
GROUP 2.	PARENT	185.0000	12.3333	5.9602	497.3333	(	15)
GROUP 3.	CONTROL	193.0000	12.8667	6.2663	549.7333	(	15)
Within groups total		552.0000	12.2667	5.3556	1204.6667	(	45)

A N A L Y S I S   O F   V A R I A N C E

Source	Sum of squares	D.F.	Mean square	F	Sig.
Between groups	12.133	2	6.067	0.212	.8102
Within groups	1204.667	42	28.683		

Eta = 0.0999   Eta squared = 0.0100

Posttest 10

Criterion variable POST10

. . . . A N A L Y S I S   O F   V A R I A N C E

		Sum	Mean	Std dev	Sum of sq		N
GROUP1.	DIAG	212.0000	14.1333	5.6552	447.7333	(	15)
GROUP2.	PARENT	195.0000	13.0000	6.2335	544.0000	(	15)
GROUP3.	CONTROL	222.0000	14.8000	5.1713	374.4000	(	15)
Within groups total		629.0000	13.9778	5.7032	1366.1333	(	45)

A N A L Y S I S   O F   V A R I A N C E

Source	Sum of squares	D.F.	Mean square	F	Sig.
Between groups	24.844	2	12.422	0.382	.6649
Within groups	1366.133	42	32.527		

Eta = 0.1336   Eta squared = 0.0179

Posttest 11

Criterion variable POST11

A N A L Y S I S   O F   V A R I A N C E

		Sum	Mean	Std dev	Sum of sq	N
GROUP 1.	DIAG	164.0000	10.9333	2.2509	70.9333	(15)
GROUP 2.	PARENT	188.0000	12.5333	4.9406	341.7333	(15)
GROUP 3.	CONTROL	206.0000	13.7333	3.7506	196.9333	(15)
Within groups total		558.0000	12.4000	3.8098	609.6000	(45)

A N A L Y S I S   O F   V A R I A N C E

Source	Sum of squares	D.F.	Mean square	F	Sig.
Between groups	59.200	2	29.600	2.039	.1428
Within groups	609.600	42	14.514		

Eta = 0.2975   Eta squared = 0.0885

Posttest 12

Criterion variable POST12

A N A L Y S I S   O F   V A R I A N C E

		Sum	Mean	Std dev	Sum of sq	N
GROUP 1.	DIAG	100.0000	6.6667	1.7593	43.3333	(15)
GROUP 2.	PARENT	101.0000	6.7333	2.0862	60.9333	(15)
GROUP 3.	CONTROL	113.0000	7.5333	2.8999	117.7333	(15)
Within groups total		314.0000	6.9778	2.2991	222.0000	(45)

A N A L Y S I S   O F   V A R I A N C E

Source	Sum of squares	D.F.	Mean square	F	Sig.
Between groups	6.978	2	3.489	0.660	.5221
Within groups	222.000	42	5.286		

Eta = 0.1746   Eta squared = 0.0305

Posttest 13

Criterion variable POST13

		Sum	Mean	Std dev	Sum of sq	N
GROUP1.	DIAG	163.0000	10.8667	2.7997	109.7333	(15)
GROUP2.	PARENT	195.0000	13.0000	4.8550	330.0000	(15)
GROUP3.	CONTROL	238.0000	15.8667	6.7704	641.7333	(15)
Within groups total		596.0000	13.2444	5.0744	1081.4667	(45)

ANALYSIS OF VARIANCE

Source	Sum of squares	D.F.	Mean square	F	Sig.
Between groups	188.844	2	94.422	3.667	.0341
Within groups	1081.467	42	25.749		

Eta = 0.3856   Eta squared = 0.1487

Posttest 14

Criterion variable POST14

		Sum	Mean	Std dev	Sum of sq	N
GROUP1.	DIAG	160.0000	10.6667	3.8668	209.3333	(15)
GROUP2.	PARENT	175.0000	11.6667	5.5763	435.3333	(15)
GROUP3.	CONTROL	198.0000	13.2000	5.4929	422.4000	(15)
Within groups total		533.0000	11.8444	5.0405	1067.0667	(45)

ANALYSIS OF VARIANCE

Source	Sum of squares	D.F.	Mean square	F	Sig.
Between groups	48.844	2	24.422	0.961	.3907
Within groups	1067.067	42	25.406		

Eta = 0.2092   Eta squared = 0.0438

Posttest 15

Criterion variable POST15

- A N A L Y S I S   O F   V A R I A N C E

		Sum	Mean	Std dev	Sum of sq		N
GROUP 1.	DIAG	119.0000	7.9333	3.3267	154.9333	(	15)
GROUP 2.	PARENT	122.0000	8.5333	2.8752	115.7333	(	15)
GROUP 3.	CONTROL	158.0000	10.5333	4.2572	253.7333	(	15)
Within groups total		399.0000	8.8667	3.5335	524.4000	(	45)

A N A L Y S I S   O F   V A R I A N C E

Source	Sum of squares	D.F.	Mean square	F	Sig.
Between groups	62.800	2	31.400	2.515	.0930
Within groups	524.400	42	12.486		

Eta = 0.3270   Eta squared = 0.1069

Posttest 16

Criterion variable POST16

- - - - - - - - - - - - - - - - - - - A N A L Y S I S   O F   V A R I A N C E

		Sum	Mean	Std dev	Sum of sq		N
GROUP 1.	DIAG	151.0000	10.0667	2.9873	124.9333	(	15)
GROUP 2.	PARENT	173.0000	11.5333	5.9145	489.7333	(	15)
GROUP 3.	CONTROL	197.0000	13.1333	4.1208	237.7333	(	15)
Within groups total		521.0000	11.5778	4.5050	852.4000	(	45)

A N A L Y S I S   O F   V A R I A N C E

Source	Sum of squares	D.F.	Mean square	F	Sig.
Between groups	70.578	2	35.289	1.739	.1881
Within groups	852.400	42	20.295		

Eta = 0.2765   Eta squared = 0.0765

Posttest 17

Criterion variable POST17

. . . . A N A L Y S I S   O F   V A R I A N C E

		Sum	Mean	Std dev	Sum of sq		N
GROUP1:	DIAG	158.0000	10.5333	2.5317	89.7333	(	15)
GROUP2:	PARENT	189.0000	12.6000	4.5795	293.6000	(	15)
GROUP3:	CONTROL	200.0000	13.3333	4.9087	337.3333	(	15)
Within groups total		547.0000	12.1556	4.1423	720.6667	(	45)

. . . .

A N A L Y S I S   O F   V A R I A N C E

. . . .

Source	Sum of squares	D.F.	Mean square	F	Sig.
Between groups	63.244	2	31.622	1.843	.1709
Within groups	720.667	42	17.159		

Eta = 0.2840   Eta squared = 0.0807

Posttest 18

Criterion variable POST18

. . . . A N A L Y S I S   O F   V A R I A N C E

		Sum	Mean	Std dev	Sum of sq		N
GROUP1:	DIAG	199.0000	13.2667	4.6054	296.9333	(	15)
GROUP2:	PARENT	254.0000	16.9333	7.9234	878.9333	(	15)
GROUP3:	CONTROL	231.0000	15.4000	5.3692	403.6000	(	15)
Within groups total		684.0000	15.2000	6.1324	1579.4667	(	45)

. . . .

A N A L Y S I S   O F   V A R I A N C E

. . . .

Source	Sum of squares	D.F.	Mean square	F	Sig.
Between groups	101.733	2	50.867	1.353	.2696
Within groups	1579.467	42	37.606		

Eta = 0.2460   Eta squared = 0.0605

Delayed Posttest 1

Criterion variable DELAY1

. . . . A N A L Y S I S   O F   V A R I A N C E

		Sum	Mean	Std dev	Sum of sq	N
GROUP 1.	DIAG	25.0000	8.3333	2.3805	79.3333	(15)
GROUP 2.	PARENT	59.0000	10.6000	3.5214	183.6000	(15)
GROUP 3.	CONTROL	56.0000	10.4000	4.4689	279.6000	(15)
Within groups total		40.0000	9.7778	3.5941	542.5333	(45)

A N A L Y S I S   O F   V A R I A N C E

Source	Sum of squares	D.F.	Mean square	F	Sig.
Between groups	47.244	2	23.622	1.829	.1732
Within groups	542.533	42	12.917		

Eta = 0.2830   Eta squared = 0.0801

Delayed Posttest 2

Criterion variable DELAY2

. . . . A N A L Y S I S   O F   V A R I A N C E

		Sum	Mean	Std dev	Sum of sq	N
GROUP 1.	DIAG	116.0000	7.7333	3.6541	186.9333	(15)
GROUP 2.	PARENT	150.0000	10.0000	4.8255	326.0000	(15)
GROUP 3.	CONTROL	156.0000	10.4000	5.1381	369.6000	(15)
Within groups total		422.0000	9.3778	4.5840	882.5333	(45)

A N A L Y S I S   O F   V A R I A N C E

Source	Sum of squares	D.F.	Mean square	F	Sig.
Between groups	62.044	2	31.022	1.476	.2401
Within groups	882.533	42	21.013		

Eta = 0.2563   Eta squared = 0.0657

Delayed Posttest 3

Criterion variable DELAY3

```
- - - - - - - - - - - - - - - - - - - - - - A N A L Y S I S   O F   V A R I A N C E
                    Sum              Mean           Std dev          Sum of sq                 N
GROUP1.   DIAG    115.0000          7.6667          2.2254           89.3333        (       15)
GROUP2.   PARENT  145.0000          9.6667          3.4365          165.3333        (       15)
GROUP3.   CONTROL 176.0000         11.7333          5.3381          398.9333        (       15)
Within groups total 436.0000        9.6889          3.8840          633.6000        (       45)
```

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· · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · ·
                    A N A L Y S I S   O F   V A R I A N C E
· · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · ·
   Source              Sum of squares    D.F.    Mean square            F        Sig.
   Between groups           124.044        2         62.022           4.111     .0234
   Within groups            633.600       42         15.086
                    Eta = 0.4046    Eta squared = 0.1637
· · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · ·
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Delayed Posttest 4

Criterion variable DELAY4

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- - - - - - - - - - - - - - - - - - - - - - A N A L Y S I S   O F   V A R I A N C E
                    Sum              Mean           Std dev          Sum of sq                 N
GROUP1.   DIAG    154.0000         10.2667          2.2824           72.9333        (       15)
GROUP2.   PARENT  189.0000         12.6000          4.3227          261.6000        (       15)
GROUP3.   CONTROL 210.0000         14.0000          5.3050          394.0000        (       15)
Within groups total 553.0000       12.2889          4.1649          728.5333        (       45)
```

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· · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · ·
                    A N A L Y S I S   O F   V A R I A N C E
· · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · ·
   Source              Sum of squares    D.F.    Mean square            F        Sig.
   Between groups           106.711        2         53.356           3.076     .0567
   Within groups            728.533       42         17.346
                    Eta = 0.3574    Eta squared = 0.1278
· · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · ·
```

Delayed Posttest 5

Criterion variable DELAY5

A N A L Y S I S   O F   V A R I A N C E

		Sum	Mean	Std dev	Sum of sq		N
GROUP 1.	DIAG	152.0000	10.1333	2.1996	67.7333	(	15)
GROUP 2.	PARENT	199.0000	13.2667	4.6670	304.9333	(	15)
GROUP 3.	CONTROL	215.0000	14.3333	5.4859	421.3333	(	15)
Within groups total		566.0000	12.5778	4.3480	794.0000	(	45)

A N A L Y S I S   O F   V A R I A N C E

Source	Sum of squares	D.F.	Mean square	F	Sig.
Between groups	142.978	2	71.489	3.782	.0309
Within groups	794.000	42	18.905		

Eta = 0.3906   Eta squared = 0.1526

Delayed Posttest 6

Criterion variable DELAY6

A N A L Y S I S   O F   V A R I A N C E

		Sum	Mean	Std dev	Sum of sq		N
GROUP 1.	DIAG	100.0000	6.6667	2.5261	89.3333	(	15)
GROUP 2.	PARENT	96.0000	6.4000	1.5946	35.6000	(	15)
GROUP 3.	CONTROL	100.0000	6.6667	2.5542	91.3333	(	15)
Within groups total		296.0000	6.5778	2.2692	216.2667	(	45)

A N A L Y S I S   O F   V A R I A N C E

Source	Sum of squares	D.F.	Mean square	F	Sig.
Between groups	0.711	2	0.356	0.069	.9334
Within groups	216.267	42	5.149		

Eta = 0.0572   Eta squared = 0.0033

Delayed Posttest 7

Criterion variable DELAY7

A N A L Y S I S   O F   V A R I A N C E

		Sum	Mean	Std dev	Sum of sq		N
GROUP 1.	DIAG	121.0000	8.0667	3.1502	138.9333	(	15)
GROUP 2.	PARENT	143.0000	9.5333	2.6150	95.7333	(	15)
GROUP 3.	CONTROL	156.0000	10.4000	4.4369	275.6000	(	15)
Within groups total		420.0000	9.3333	3.4956	510.2667	(	45)

A N A L Y S I S   O F   V A R I A N C E

Source	Sum of squares	D.F.	Mean square	F	Sig.
Between groups	41.733	2	20.867	1.718	.1919
Within groups	510.267	42	12.149		

Eta = 0.2750   Eta squared = 0.0756

Delayed Posttest 8

Criterion variable DELAY8

A N A L Y S I S   O F   V A R I A N C E

		Sum	Mean	Std dev	Sum of sq		N
GROUP 1.	DIAG	164.0000	10.9333	3.4115	162.9333	(	15)
GROUP 2.	PARENT	183.0000	12.2000	5.1158	366.4000	(	15)
GROUP 3.	CONTROL	185.0000	12.3333	4.5617	291.3333	(	15)
Within groups total		532.0000	11.8222	4.4204	820.6667	(	45)

A N A L Y S I S   O F   V A R I A N C E

Source	Sum of squares	D.F.	Mean square	F	Sig.
Between groups	17.911	2	8.956	0.458	.6355
Within groups	820.667	42	19.540		

Eta = 0.1461   Eta squared = 0.0214

Delayed Posttest 9

Criterion variable DELAY9

- A N A L Y S I S O F V A R I A N C E

		Sum	Mean	Std dev	Sum of sq	N
GROUP 1.	DIAG	179.0000	11.9333	4.6054	296.9333 (	15)
GROUP 2.	PARENT	189.0000	12.6000	5.1520	371.6000 (	15)
GROUP 3.	CONTROL	208.0000	13.8667	5.5274	427.7333 (	15)
Within groups total		576.0000	12.8000	5.1090	1096.2667 (	45)

A N A L Y S I S O F V A R I A N C E

Source	Sum of squares	D.F.	Mean square	F	Sig.
Between groups	28.933	2	14.467	0.554	.5787
Within groups	1096.267	42	26.102		

Eta = 0.1604   Eta squared = 0.0257

Delayed Posttest 10

Criterion variable DELAY10

- A N A L Y S I S O F V A R I A N C E

		Sum	Mean	Std dev	Sum of sq	N
GROUP 1.	DIAG	199.0000	13.2667	5.4178	410.9333 (	15)
GROUP 2.	PARENT	211.0000	14.0667	5.6753	450.9333 (	15)
GROUP 3.	CONTROL	225.0000	15.0000	5.6188	442.0000 (	15)
Within groups total		635.0000	14.1111	5.5718	1303.8667 (	45)

A N A L Y S I S O F V A R I A N C E

Source	Sum of squares	D.F.	Mean square	F	Sig.
Between groups	22.578	2	11.289	0.364	.6973
Within groups	1303.867	42	31.044		

Eta = 0.1305   Eta squared = 0.0170

Delayed Posttest 11

Criterion variable DELAY11

- - - - - - - - - - - - - - - - - - A N A L Y S I S   O F   V A R I A N C E

		Sum	Mean	Std dev	Sum of sq		N
GROUP1.	DIAG	148.0000	9.8667	1.9952	55.7333	(	15)
GROUP2.	PARENT	183.0000	12.2000	4.4913	282.4000	(	15)
GROUP3.	CONTROL	211.0000	14.0667	4.1656	242.9333	(	15)
Within groups total		542.0000	12.0444	3.7195	581.0667	(	45)

A N A L Y S I S   O F   V A R I A N C E

Source	Sum of squares	D.F.	Mean square	F	Sig.
Between groups	132.844	2	66.422	4.801	.0133
Within groups	581.067	42	13.835		

Eta = 0.4314   Eta squared = 0.1861

Delayed Posttest 12

Criterion variable DELAY12

- - - - - - - - - - - - - - - - - - A N A L Y S I S   O F   V A R I A N C E

		Sum	Mean	Std dev	Sum of sq		N
GROUP1.	DIAG	90.0000	6.0000	1.4144	28.0000	(	15)
GROUP2.	PARENT	112.0000	7.4667	2.5598	91.7333	(	15)
GROUP3.	CONTROL	125.0000	8.3333	3.4983	171.3333	(	15)
Within groups total		327.0000	7.2667	2.6325	291.0667	(	45)

A N A L Y S I S   O F   V A R I A N C E

Source	Sum of squares	D.F.	Mean square	F	Sig.
Between groups	41.733	2	20.867	3.011	.0600
Within groups	291.067	42	6.930		

Eta = 0.3541   Eta squared = 0.1254

Delayed Posttest 13

Criterion variable DELAY13

· A N A L Y S I S   O F   V A R I A N C E

		Sum	Mean	Std dev	Sum of sq	N
GROUP 1.	DIAG	156.0000	10.4000	2.5014	87.6000	15)
GROUP 2.	PARENT	213.0000	14.2000	5.3211	396.4000	15)
GROUP 3.	CONTROL	239.0000	15.9333	7.9594	886.9333	15)
Within groups total		608.0000	13.5111	5.7133	1370.9333	45)

A N A L Y S I S   O F   V A R I A N C E

Source	Sum of squares	D.F.	Mean square	F	Sig.
Between groups	240.311	2	120.156	3.681	.0336
Within groups	1370.933	42	32.641		

Eta = 0.3862   Eta squared = 0.1491

Delayed Posttest 14

Criterion variable DELAY14

· A N A L Y S I S   O F   V A R I A N C E

		Sum	Mean	Std dev	Sum of sq	N
GROUP 1.	DIAG	153.0000	10.2000	4.0567	230.4000	15)
GROUP 2.	PARENT	203.0000	13.5333	5.8781	483.7333	15)
GROUP 3.	CONTROL	203.0000	13.5333	5.9145	489.7333	15)
Within groups total		559.0000	12.4222	5.3538	1203.8667	45)

A N A L Y S I S   O F   V A R I A N C E

Source	Sum of squares	D.F.	Mean square	F	Sig.
Between groups	111.111	2	55.556	1.938	.1566
Within groups	1203.867	42	28.663		

Eta = 0.2907   Eta squared = 0.0845

Delayed Posttest 15

Criterion variable DELAY15

. . . . A N A L Y S I S   O F   V A R I A N C E

		Sum	Mean	Std dev	Sum of sq	N
GROUP1.	DIAG	109.0000	7.2667	3.1275	136.9333	(15)
GROUP2.	PARENT	144.0000	9.6000	3.4393	165.6000	(15)
GROUP3.	CONTROL	152.0000	10.1333	3.8889	211.7333	(15)
Within groups total		405.0000	9.0000	3.4992	514.2667	(45)

A N A L Y S I S   O F   V A R I A N C E

Source	Sum of squares	D.F.	Mean square	F	Sig.
Between groups	69.733	2	34.867	2.848	.0692
Within groups	514.267	42	12.244		

Eta = 0.3456   Eta squared = 0.1194

Delayed Posttest 16

Criterion variable DELAY16

. . . . A N A L Y S I S   O F   V A R I A N C E

		Sum	Mean	Std dev	Sum of sq	N
GROUP1.	DIAG	139.0000	9.2667	3.0582	130.9333	(15)
GROUP2.	PARENT	188.0000	12.5333	5.4493	415.7333	(15)
GROUP3.	CONTROL	225.0000	15.0000	5.3852	406.0000	(15)
Within groups total		552.0000	12.2667	4.7626	952.6667	(45)

A N A L Y S I S   O F   V A R I A N C E

Source	Sum of squares	D.F.	Mean square	F	Sig.
Between groups	248.133	2	124.067	5.470	.0077
Within groups	952.667	42	22.683		

Eta = 0.4546   Eta squared = 0.2066

Delayed Posttest 17

Criterion variable DELAY17

- A N A L Y S I S O F V A R I A N C E

		Sum	Mean	Std dev	Sum of sq.		N
GROUP1.	DIAG	140.0000	9.3333	2.5542	91.3333	(	15)
GROUP2.	PARENT	223.0000	14.8667	5.1943	377.7333	(	15)
GROUP3.	CONTROL	210.0000	14.0000	5.1409	370.0000	(	15)
Within groups total		573.0000	12.7333	4.4697	839.0667	(	45)

A N A L Y S I S O F V A R I A N C E

Source	Sum of squares	D.F.	Mean square	F	Sig.
Between groups	265.733	2	132.867	6.651	.0031
Within groups	839.067	42	19.978		

Eta = 0.4904   Eta squared = 0.2405

Delayed Posttest 18

Criterion variable DELAY18

- A N A L Y S I S O F V A R I A N C E

		Sum	Mean	Std dev	Sum of sq		N
GROUP1.	DIAG	178.0000	11.8667	3.3352	155.7333	(	15)
GROUP2.	PARENT	281.0000	18.7333	8.0575	908.9333	(	15)
GROUP3.	CONTROL	254.0000	16.9333	6.6490	618.9333	(	15)
Within groups total		713.0000	15.8444	6.3313	1683.6000	(	45)

A N A L Y S I S O F V A R I A N C E

Source	Sum of squares	D.F.	Mean square	F	Sig.
Between groups	380.311	2	190.156	4.744	.0139
Within groups	1683.600	42	40.086		

Eta = 0.4293   Eta squared = 0.1843

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