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A comparative analysis of the compliance rates and service delivery rates in early intervention programs

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**A Comparative Analysis of the Compliance Rates
and Service Delivery Rates in Early
Intervention Programs.**

**by
Barbara McClintock**

A Thesis

**Submitted in partial fulfillment of the requirements of the
Master of Arts Degree in School Psychology
of Rowan College
May, 1996**

**Approved by _____
Professor**

Date Approved 5/7/96

ABSTRACT

Barbara McClintock. A comparative analysis of the compliance rate and service delivery rates in early intervention programs. May, 1996. Thesis Advisor: Dr. Roberta Dihoff. Master of Art Degree in School Psychology.

A comparative analysis was constructed to look at the compliance rates and service delivery rates of children which were enrolled in a center-based early intervention program in relation to children in a home-based early intervention program. The subjects were 29 children between the ages of six months and three years old. Data was collected from each subjects IFSP and attendance record. The subjects were divided into home-based or center-based groups as designated by their IFSP. A compliance rate and service delivery rate was calculated for each group. The results of an independent t-test using a .05 significance level suggest the following: 1) no significant difference was observed between the service delivery rates of the home-based and center-based early intervention groups, and 2) no significant difference was observed between the compliance rates of the home-based and center-based early intervention groups.

Mini- Abstract

Barbara McClintock. A comparative analysis of the compliance rates and service delivery rates in early intervention programs. May, 1996. Thesis Advisor: Dr. Roberta Dihoff. Master of Art Degree in School Psychology.

Early intervention research has looked at the effectiveness of home-based and center-based early intervention programs in terms of their developmental outcomes but have neglected to examine the compliance issues involved in the delivery of services. The results of this study suggested that no significant difference existed in the compliance rates or the service delivery rates between the home-based and center-based groups.

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Chapter 1

Introduction to the Study

Early intervention refers to a variety of educational, psychological, or therapeutic interventions provided for handicapped, at-risk, or disadvantaged preschoolers to prevent or ameliorate developmental delays or disabilities or to provide support in cases which these disabilities exist (White, Bush, Casto, 1985). With the passage of Public Law 99-457, early intervention programs have developed a family focus and orientation. This means the early intervention program will take into consideration the families diversity, the impact that early intervention services have on the families routines, and their preference for the location of the early intervention services. Early intervention can be implemented through center-based or home-based programs. Center-based programs are services that are provided to the child at the early intervention site, whereas , home-based programs are individual services that are provided to the child in his/her home.

Studies have looked at the effectiveness of home-based and center-based programs in terms of the developmental outcomes but not in terms of the compliance issues of each program(Burkett, 1982; Lazar & Darlington, 1982; Ramey, Yeates, & Short, 1984). Studies have neglected to examine the compliance issued involved in the delivery of services. There is a need in the research for evidence of which method of service delivery is more accessible and adheres to more family-centered principles. Research on the modality of services will help families to select a location of services which will allow for the child's maximum participation in the program. This research will also provide a foundation on which future research and decisions about service delivery can be built on.

Purpose

The purpose of this study is to construct a comparative analysis to look at the attendance records of children which are enrolled in a home-based early intervention program in relation to children enrolled in a center-based early intervention program to lend support as to which program is more effective at securing compliance and delivering services in compliance with the Individualized Family Service Plan (IFSP).

Hypothesis

The following hypotheses were developed to examine the compliance rates and service delivery rates of children enrolled in an early intervention program. The first hypothesis states that a significant difference in attendance will be observed between the

participants of this study regarding home-based early intervention services and center-based early intervention services. The second hypothesis states that a significant difference in the rate of service delivery will be observed between the participants of this study regarding home-based early intervention services and center-based early intervention services.

Theory

In 1986, the U.S. Congress enacted Public Law 99-457 which increased the emphasis on preschool programs. Part II of this law, mandates that early intervention programs provide family-centered services for preschool children with developmental disabilities from birth to three years old. The purpose of Public Law 99-457 is to : (1) enhance the development of handicapped infants and toddlers and minimize their risk for developmental delay; (2) reduce the educational costs to our society by minimizing the need for special education related services after handicapped students reach school age; (3) minimize the likelihood of institutionalization of handicapped individuals and maximum their potential for independent living in society; and (4) enhance the capabilities of families to meet the special needs of their infants and toddlers with disabilities (Office of Special Education and Rehabilitative Services).

The families involvement in their child's program is important since the child is part of a family unit and the needs of the family will effect the child's development. In order to

meet the needs of the family and the child, families can use their strengths and build on their abilities.

The family is part of a multidisciplinary team that develops an Individualized Family Service Plan (IFSP). In New Jersey, the multidisciplinary team consists of the Physical Therapist, Occupational Therapist, Speech Specialist, Social Worker, Special Education Teacher, child's family, and other related professionals. The multidisciplinary team develops and implements the Individualized Family Service Plan (IFSP). The IFSP is a written plan that outlines the developmental needs of each child along with a detailed assessment of the families needs, priorities, and goals regarding the child. Contained within the IFSP are the specific early intervention services that had been identified to meet the child's and families needs and the location where these services will be implemented whether it be home based or center based.

Part H mandated that the location of the services should be in the least restrictive and most natural environment for the child which will allow for the child's maximum participation in the mainstream. Home based services were developed as a way to meet the needs of the family. The services are provided in the child's home to accommodate such needs as parents employment schedule or an inability to access center-based services.

Definition of Terms

Home-based Early Intervention Services are defined as the services which are provided in the child's home or other approved setting outside the program site for the purpose of furthering the child's developmental progress (Harrison, 1984).

Center-based Early Intervention Services are defined as the services which are provided to the child at the early intervention site for the purpose of furthering the child's developmental progress (Warfield, 1995).

Individualized Family Service Plan (IFSP) is a written plan that outlines the developmental needs of the child along with a detailed assessment of the families needs, priorities, and goals regarding the child.

Family -centered is a respect for the families needs, concerns, and roles.

Natural Environment are the settings which allow for the maximum participation of the child in the mainstream. The children can be serviced in their homes or at the early intervention center where children without disabilities participate.

Assumptions

1. This study assumes that the data collection is accurate and consistent .
2. This study assumes that the services are recorded by the early intervention agency accurately.

3. It is assumed that other agencies listed as providing services are involved and serving the participants.

Limitations of the Study

1. This study recognizes that the participants do not represent a random sample.
2. This study will not attempt to evaluate the overall effectiveness of the early intervention agency.
3. The results are limited to the early intervention center that is participating in the study and can not be generalized to other early intervention centers.

Overview

In Chapter 2, relevant literature will be examined for its strengths and weaknesses and relationship to the present study's hypothesis. The present study's hypothesis and the method for testing the hypothesis will be described in Chapter 3. A presentation and analysis of results will be discussed in Chapter 4.

Chapter 2

Review of the Literature

Early Intervention programs have been of interest and concern to special educators, researchers, and parents of children with developmental delays. Many aspects of early intervention have been evaluated and researched from cost-effectiveness to developmental outcomes. Research has produced evidence that early intervention can:

1) lessen the severity and in some cases, prevent developmental problems; 2) result in a reduction of future grade retainment; 3) reduce special and/or related education costs; and 4) improve the quality of parent, child, and family relationships.

White, Bush, and Casto conducted a lengthy literature review in 1985.

White and his colleagues reviewed 52 articles published in a variety of journals

from 1966 to 1984. The researchers found that 94% of the previous studies found that early intervention results in "substantial immediate benefits for handicapped, at risk, disadvantaged children". The reviews found that specific benefits were imparted to the child and family including social, academic, and cognitive for the child and improved functioning for the parents and siblings.

Most studies reviewed have examined evidence of treatment effects utilizing a treatment-control research design. The researchers have attempted to demonstrate statistically significant, positive treatment effects on children and parents in several different outcome domains. Evaluative studies have focused on the utilization of the standard intellectual quotient (IQ) or developmental skill achievement as the specific outcome to be measured. More recent areas of interest have expanded beyond the IQ/achievement emphasis. These have included infant health status, adaptive behavior, infant temperament, and other child descriptive categorical outcome variables. With the advent of Public Law 99-457, the focus have shifted from the individual child to the family. Following this family oriented shift, several new outcome determinants have emerged. Mother-child interaction, parental attitudes, maternal satisfaction, quality of home environment, parent coping and stress, parent problem solving skills, depression inventories, and maternal confidence have been added to the research to determine effectiveness of early intervention programs. These outcomes have been included in program

assessment to meet the mandate of Public Law 99-457. This law has directed that all early intervention service providers move from an individual child focus to a family focus. The incentive for this focal shift has been studies that suggest that parental involvement, parental education, and increased positive engagement with the child is critical in providing meaningful early intervention (Joanning, Demmitt, Brotherson, & Whiddon, 1994). Joanning, Demmitt, Brotherson, & Whiddon (1994) further elaborated that "since the infant or toddler is dependent on their family for care and survival, a family centered approach is best".

Bernstein and Morrison in a 1991 paper surveyed 134 early intervention programs and found that the degree of parental involvement was influenced by the type of program employed. They found that 79.8% of the parents were active in participation in a center-based program. Home-based program participation data found that mothers were involved to a high degree however, the researchers discussed a very low (20%) father participation rate.

Usher in a 1991 analysis of early intervention family rating also found that fathers level of participation was lower than the mothers. Fathers rated the overall helpfulness of early intervention services lower than the mothers. A variable might be that fathers have less contact with the program or the program didn't meet the needs of the fathers. Fathers reported that the services were beneficial to them because it provided them with information on how to be an advocate for their child

and meeting the needs of the other family members. Whereas mothers reported that they benefited from receiving emotional support. Both mothers and fathers reported that the most helpful service was home visits.

Efficacy of Programs for Disadvantaged Children

Early intervention programs for disadvantaged children began in the 1960's in a program known as Head Start. This program targeted children from lower income families in an effort to offset the effects of poverty, prevent special education placement, and minimize the achievement differential between low income and high income children. Many studies have been conducted on the effectiveness of early intervention programs for disabled children due to the long history of Project Head Start. The following overview highlights some of the more significant research.

The Milwaukee Early Intervention Project (1972) was a study of the use of early intervention to reduce the effects of mental retardation. the project was designed to explore the higher incidence of mental retardation among low socio-economic groups. A goal of the project was to prove that high rates of mental retardation could be reduced by early intervention with an intensive, comprehensive intervention program. Forty mothers with IQ's below 75 who lived in the high risk area of Milwaukee and with a child between the ages of three and

six months were chosen to participate in this study. Mothers with an IQ below 75 were chosen to participate in the study because low IQ was seen as a key risk determinant in identifying at risk infants and families. The children had no abnormalities at birth. The forty mother-child groups were randomly assigned to either an experimental group or a control group. The mothers assigned to the experimental group received job training and remedial education for a six year period and the children in the experimental group received early intervention services. The control group received no services.

The results showed that significant differences between the children in the experimental and control groups existed throughout the project. Although the two groups were similar at the beginning of the study, at age two, the experimental group had a mean IQ of 120, while the control group had an IQ of 95. At the end of the project, this differential increased to a mean IQ score of 124 for the experimental group and a decrease in the mean IQ score of the control group to 94.

Ramey, Yeates, and Short (1984) also studied the effects of early intervention programs for an at risk population for developing mental retardation. The subjects were assigned at birth to either an experimental group or a control group and followed for four years. The experimental group, which consisted of 41 children received systematic, educational daycare while the control group,

consisting of 44 children received no intervention services. The researchers found that early intervention can reduce some effects of mental retardation for low-income children.

Burkett(1982) examined the effects of home visits on preschool children's level of achievement. The sample consisted of 166 children from disadvantaged families between the ages of four and five years old. The subjects were divided into three groups. One group represented an experimental group who received home-based early intervention services weekly. The second experimental group received home-based early intervention services every two weeks. The third group, a control group, received no early intervention services. A pretest was administered to all subjects at the beginning of the study and a post-test was administered two years later as a follow-up. The results demonstrated that the preschoolers in the experimental groups who received home-based early intervention services achieved significantly greater achievement scores than the children in the control group.

One of the most comprehensive long term study of early intervention programs and disadvantaged children was conducted by David P. Wekart in 1984. Wekart investigated the long term effects on 123 African American children who received early childhood services and compared this group to a control group who received no services. The program was named the Perry Preschool Project which

is located in a low income community in Michigan. The researcher designed a matched pairs study in which two groups of children were assigned to either an experimental group or a control group. The children in the experimental group received high quality educational intervention with emphasis on cognitive and social development. The researcher utilized data which included elementary and secondary school records, court records, social service histories, and an interview when each youth reached 19 years of age to be compared between the two groups. Three specific areas were assessed including scholastic success, socioeconomic success, and social responsibility. The results of the study indicated that 67 percent of the experimental group graduated from high school compared to 49 percent of the control group. In the area of post secondary education 38 percent of the experimental group enrolled in a program while only 21 percent of the control group enrolled in such programs. The researchers assessed social responsibility via arrest records for the two groups. The experimental group showed a 31 percent arrest rate while the control group demonstrated a 51 percent arrest rate. Finally the researchers evaluated socioeconomic success with (at the age of 19) 50 percent of the experimental group employed while 32 percent of the control group was employed. This study clearly demonstrated the positive long term effects of early intervention.

Efficacy for Disabled Children

Studies involving early intervention for disabled children are not as abundant in the research. The following represents some of the studies of early intervention efforts on disabled children.

Hanson & Schwarz (1978) conducted a longitudinal study of 12 infants with Down Syndrome. The researcher compared the development of the Down Syndrome children who all received early intervention with normally developing children. The early intervention services consisted of weekly home-based parent training and began at one to six weeks of age with a duration of 15 to 30 months. The data indicated that although the infants in the experimental group attained developmental milestones later than the normal infants, they demonstrated earlier achievement than children with Down Syndrome who received no services.

Casto & Mastropieri (1986) analyzed results of previous research utilizing a meta-analysis technique. The researchers analyzed 174 studies conducted from 1937 to 1984. The children who participated in this study were diagnosed as mentally retarded (44%), multiply handicapped (29%), orthopedically handicapped (10%), speech and language impaired (8%), emotionally disturbed (4%), general developmental delay (3%), and hearing impaired (2%). The study assessed the IQ changes along with changes in self help, motor skills, language abilities, and social-

emotional functioning. The researchers found that the early intervention programs may result in "moderately large immediate benefits for handicapped populations".

A report in the Journal of the American Medical Association (1990) cited the largest study to date on low birth weight, premature infants and early intervention. This study investigated the effects of early intervention on 985 infants. The infants were divided into two groups according to weight and then randomly assigned to an experimental or control comparison group. The infants were involved in a comprehensive program that included home visits the first year. During the second year (ages one to three), the infants attended a center-based program with home visits and ongoing parent training. The control infants received only pediatric monitoring and referral to community agencies.

The researchers examined IQ scores at the age of three between the groups and found that the heavier infants in the experimental group attained IQ scores on the average 13.2 points higher than the control group. The lighter infants in the experimental group scored 6.6 IQ points higher than the control group. The researchers also concluded that the control group was more likely (2.7 times more likely) to possess an IQ in the mentally retarded range than the experimental group who received early intervention services.

Two Types of Service Delivery

There is a great deal of data on the developmental outcomes of early intervention services however, there appears to be little or no research comparing the two modalities of service delivery. Two types of service delivery are offered to families in order to meet the needs of the families by providing different service sites.

Home-based services provide an alternative to families who cannot attend the early intervention center on a regular basis. These services are beneficial to children with developmental risks who are in families under extreme stress. Parents under extreme stress may not bring their children to a center or may bring them on an irregular basis. Home-based services are also useful for families who are unable to provide regular transportation to the early intervention center.

Center-based services provide families with a flexible program selection that combines structure and limits negative factors that may affect the child (such as sibling interaction, environmental factors). Center-based service providers do not have to factor travel time in their schedules so more children may be served at a reduced cost which would make center-based services more cost-effective.

Families are provided with an option of service delivery but if they do not attend the services then the early intervention is not effective. The present study will look at the compliance rates of home-based and center-based programs to lead

support as to which program is more effective at securing compliance and delivering services in compliance with the IFSP.

Summary

This overview of the literature on the effectiveness of early intervention programs demonstrates that disabled and disadvantaged children exhibit positive gains through early intervention efforts. Early intervention has been shown to reduce the need for special education classes, result in fewer grade retention, and increase social adaptive skills.

Bush & Casto, in a 1985 review of the literature, found that 94% of the 52 reviewed articles found appreciable, significant gains derived from early intervention programs for disadvantaged and disabled children.

The history of early intervention programs in this country is rooted in the Project Head Start initiative which began in the 1960's. Most research on early intervention is with the disadvantaged population which was spun off Head Start.

The Milwaukee Early Intervention Project (1972) showed that though parent education and support significant IQ gains were observed for children born to low income, low IQ mothers. In a similar study, Ramey, Yeates, and Short

(1984) found that by providing educational daycare to an at risk population some effects of mental retardation may be reduced.

Achievement among disadvantaged children may also be enhanced via early intervention . Burkett (1982) discovered that through the delivery of weekly home-based early intervention services preschool children achieved significant greater achievement scores than children who received no services.

Wekart (1984) investigated the long-term effects of early intervention on a group of low income children. The researcher found that the children exposed to the early intervention services demonstrated a higher High School graduation rate, enrolled to a higher degree in post secondary programs, engaged in more socially responsible behavior, and held a higher rate of employment.

Studies on the effectiveness of early intervention with the disabled population have been less numerous than the disadvantaged however, several landmark studies have been documented.

Hanson & Schwarz (1978) in conducting a longitudinal study on Down Syndrome children found that through the efforts of an intensive early intervention program, developmental milestones were achieved more quickly than a control group who did not receive services.

Castro & Mastropieri conducted a meta-analysis technique on early intervention literature in 1986. The researchers demonstrated that moderately

large immediate benefits are gained by disabled children due to early intervention programs.

The literature reviewed clearly documents that early intervention is a valuable asset in reducing the effects of a disability and preventing disabilities in at risk children. Through the mandate of Public Law 99-457, the family has become the focus of the intervention effort. These family based programs have been found to be highly successful in meeting objectives through center-based and home-based service delivery modalities. There seems to be no previous available research that compares the effectiveness of center-based versus home-based early intervention programs.

CHAPTER 3

Design of the Study

This study was designed to collect data on the compliance rates and service delivery rates of two types of early intervention programs: home-based and center-based services. A between - subjects design will be used, in which the differences between the compliance rates and service delivery rates of these two groups will be examined.

Subjects

The participants were 29 children enrolled in an early intervention program located in Cumberland County New Jersey. Cumberland County is a large rural area in the Southwestern part of New Jersey with a below average socioeconomic status rating for the state. The subjects were between the ages of six months and three years old and had been in the program for at least six months. They were divided into either home-based or center-based groups as designated by their IFSP. When the IFSP was developed, the

multidisciplinary team decided which setting, home-based or center-based was the most “natural environment” for the child.

In the home-based group, there were 16 total children with 9 male children and 7 female children. Data was collected on demographic characteristics which included family structure and financial status. The family structure analysis of the home-based group revealed that 44% of the sample resides with the mother only, 31% lived with both parents, 19% were in a foster care situation, and 6% resided with other family members. Financial status indicated that 88% of the home-based group received Medicaid.

In the center-based group, there were 13 total children with 8 male children and 5 female children. Family structure analysis revealed that 46% of the center-based children resided with both parents, 31% lived with mother only, 15% were in a foster care arrangement, and 8% resided with other family member. 69% of the center-based group received Medicaid.

Dependent Variable

The compliance rates and service delivery rates are assessed by using the subjects IFSP and attendance sheet. Service delivery includes such special services as physical therapy, occupational therapy, speech/language therapy, group therapy, individual therapy, social work services and medical services. The IFSP is a written plan that outlines the developmental needs of the child along with a detailed assessment of the families needs, priorities, and goals regarding the child. The IFSP is developed and implemented by the

multidisciplinary team. The multidisciplinary team is responsible for collecting and recording the attendance data on each individual subject. The outcomes are recorded on the attendance sheet as one of the following: in attendance, no show, cancel, or sick. The compliance rate is calculated by dividing the amount of times the subject attended the program by the amount of appointments scheduled. The service delivery rate is calculated by dividing the amount of services received by the amount of services required on the IFSP.

Independent Variable

The independent variables are the groups to which the subjects are assigned. The groups consisted of home-based or center-based early intervention. The home-based group received individual services in the subject's home for the purpose of furthering developmental outcomes. The center-based group received services at the early intervention site also for the purpose of furthering developmental outcomes.

Procedure

The researcher collected data from each subjects IFSP located in the child's records and attendance charts. Data includes type of delivery service, services to be received, and when services were offered to the subject. The researcher also collected data

from attendance records on each subject. The data was recorded for the subjects attendance and lack of attendance. If the subject attended the session, the date and amount of service received was recorded. If the subject didn't attend the session, the date was also recorded with the reason for not attending.

A compliance rate for each subject was calculated by dividing the amount of times the subject attended the program by the amount of appointments scheduled. The compliance rates for the children in the home-based group were averaged for a home-based compliance rate. The compliance rates for the center-based subjects were also averaged for a center-based compliance rate.

The service delivery rate for each subject was calculated by dividing the number of services received by the number of services required on the IFSP. The service delivery rate for the children in the home-based group were averaged for a home-based service delivery rate. The service delivery rate for the children in the center-based group were also averaged for a center-based service delivery rate.

The following hypotheses were developed to examine the compliance rates and service delivery rates of children enrolled in an early intervention program. The first hypothesis stated that a difference in attendance will be observed between the home-based early intervention group and center-based early intervention group.

The second hypothesis states that a difference in the rate of service delivery will be observed between the home-based early intervention group and the center-based early intervention group.

Summary

This research evaluated the compliance rates and service delivery rates of two types of early intervention programs. Home-based and center-based groups were utilized employing a between - subjects experimental design. Differences between the compliance rates and service delive rates were examined.

Twenty-nine children enrolled in a early intervention program located in Cumberland County New Jersey served as subjects for this study. The subjects ranged in age from six months to three years old with a minimum of six months enrollment in the program. The home-based group was comprised of 16 children and the center-based group was comprised of 13 children.

The research design employed two dependent and two independent variable. The dependent variables were the compliance rate and the service delivery rates. The independent variables included the groups in which the subjects were assigned: home-based or center-based.

Data was collected from each subject's attendance chart and IFSP located in the child's records. Based on this data, the mean compliance rates for each group was calculated. Similarly, the mean service delivery rates were calculated for each group.

CHAPTER 4

Analysis of Results

Data was collected from the attendance records and IFSP's of 29 children enrolled in an early intervention program. The purpose of the study was to obtain research to test the following hypotheses: (1) The first hypothesis states that a difference in attendance will be observed between the home-based group and the center-based group (2) the second hypothesis states that a difference in service rates will be observed between the home-based group and the center-based group.

Table 4.1 shows the individual compliance rates for each subject enrolled in the home-based group. The scores of each subject range from a low of 14% to a high of 94% with a mean compliance rate for the group of 52%. The home-based median score was 44%. Within the home-based group, nine scores fell at or below the 50% compliance rate with seven scores falling above the 50% rate.

The individual compliance rates for each subject enrolled in the center-based group are presented in Table 4.2. The center-based scores ranged from a low of 4% to a high of 86% with a mean compliance rate of 56% for the center-based group. The center-based median score was 61%. Within the center-based group, three scores fell below the 50%

compliance rate and ten scores were above the 50% rate. The three lowest scores of 4%, 17%, and 32% were so much lower than the other scores that the low scores may have skewed the results.

To determine if a significant difference existed between the mean compliance rates of the center-based and home-based group, an independent t-test was calculated using a .05 level of significance. Table 4.3 shows the results of the t-test. The data indicated that no significant difference was observed between the compliance rates of the home-based and center-based groups. The t-test indicated that $p = .536$ and $f = .392$ for these scores. Therefore, the data failed to reject the first null hypothesis.

The service delivery rates were also subjected to a t-test to determine if a significant difference existed between the home-based and center-based groups. These results are shown in Table 4.4. The mean service delivery rate for the home-based group was 91.5%. Similarly, the mean service delivery rate for the center-based group was 92%. The results of the t-test indicated that $p = .817$ and $f = .054$ for the service delivery rate scores. No significant difference was observed between the service delivery rates of the home-based and center-based groups using the .05 significance level. Therefore, the data failed to reject the second null hypothesis.

Summary

Data was collected from the attendance records and IFSP's on twenty-nine children enrolled in an early intervention program. The data was statistically analyzed in order to examine the two stated hypotheses which theorized statistical significance in

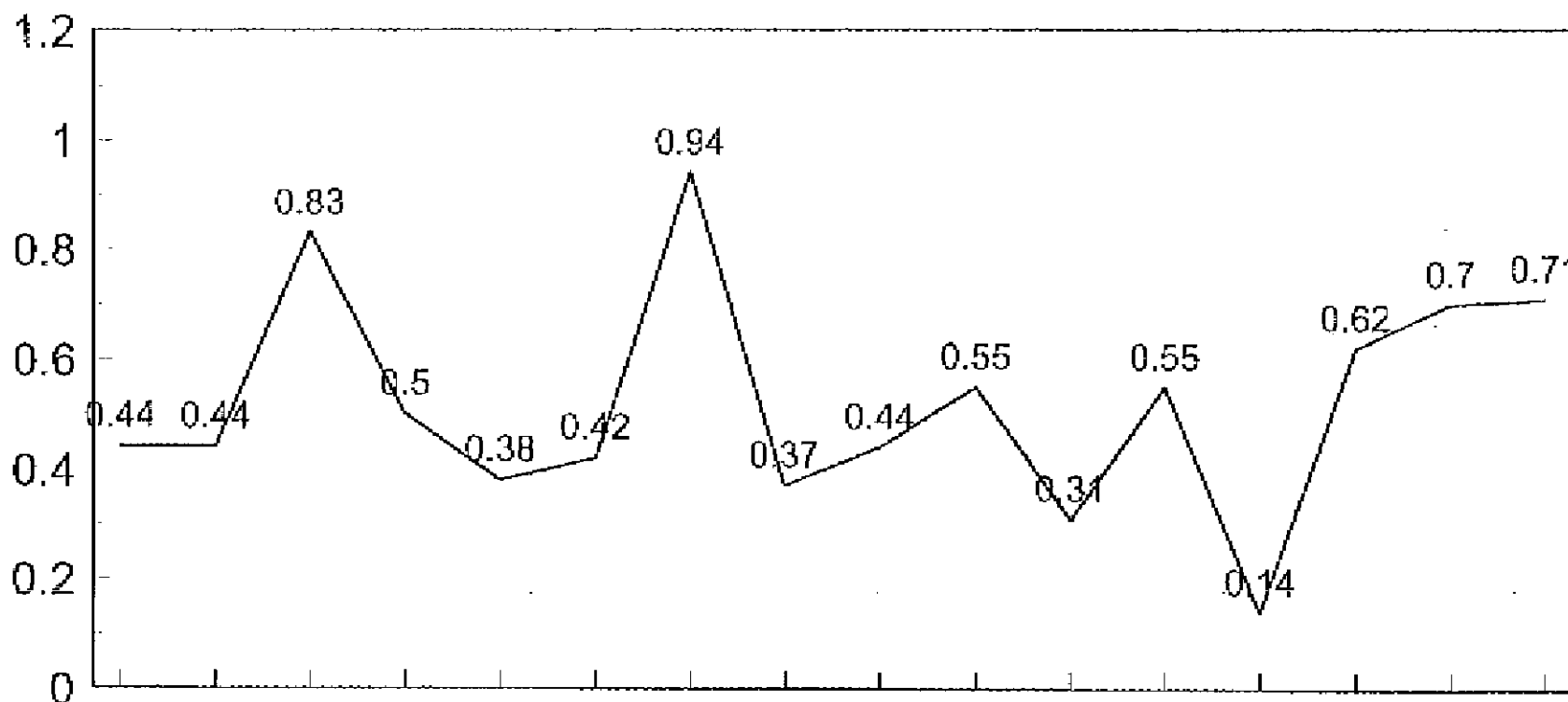
compliance rates and service delivery rates between a home-based and center-based group.

The results of the data analysis revealed that no significant difference occurred between the home-based and center-based groups in terms of program compliance. The home-based and center-based groups mean compliance rate was 52% and 56% respectively with no significant difference observed between the two compliance rates.

The study also examined the service delivery rates between the home-based and center-based groups. The data indicated that no significant difference was observed in the rate of service delivery between the home-based and center-based groups. Both groups were effective in securing the mandated levels of services to children and families.

Home-Based Compliance Rates

Table 4.1



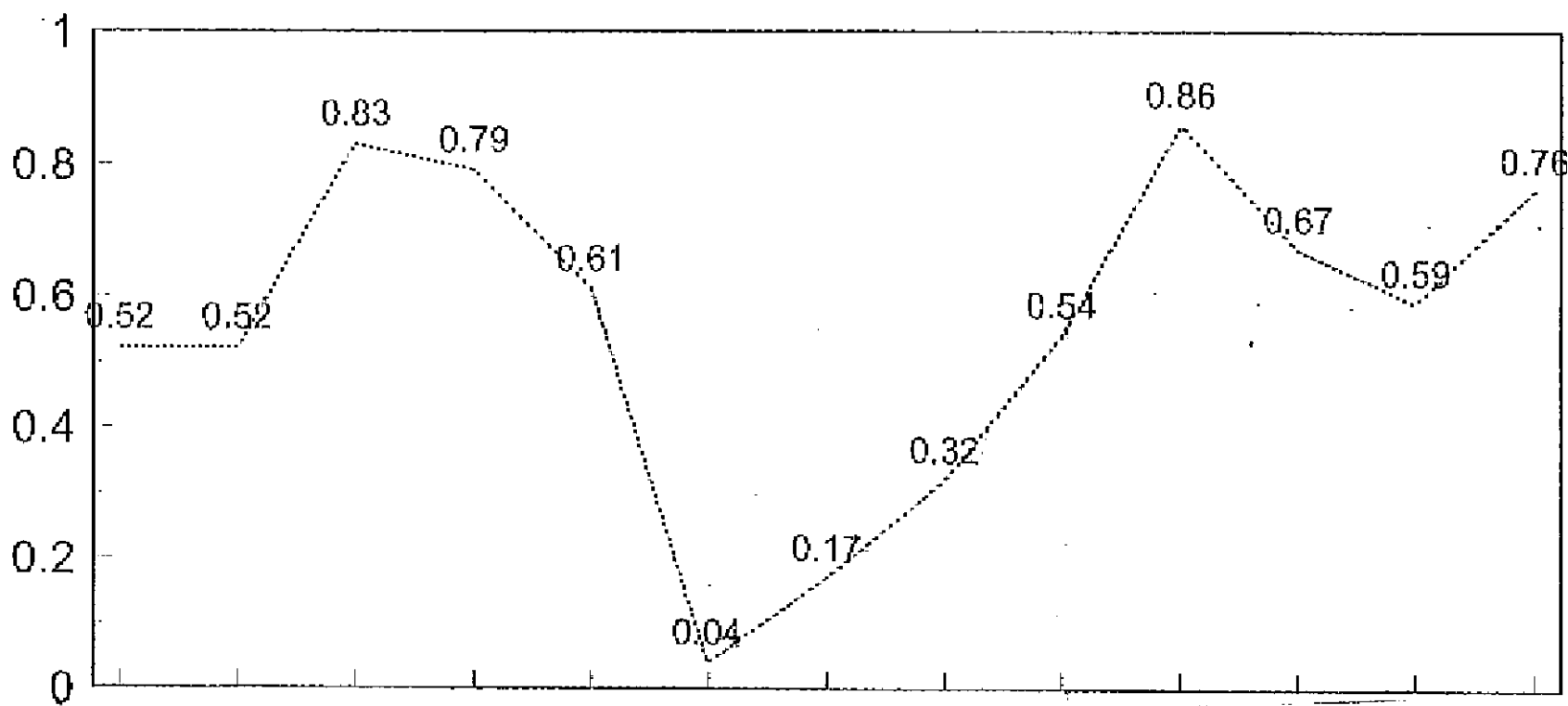
* numbers plotted represent individual subject's compliance scores

Home-Based

individual compliance score x 100 equals compliance percentage (14% - 94% range)

Center-Based Compliance Rates

Table 4.2



* numbers plotted represent individual subject's compliance scores

Center-Based

individual compliance score x 100 equals compliance percentage (4% - 86% range)

Table 4.3

**T-Test Results for the Compliance Rates
of the Home-based and Center-based groups.**

Group	Number of Subjects	Mean	SD	SE of Mean
Homebased	16	0.5206	0.202	0.050
Centerbased	13	0.5554	0.251	0.070
F=.392		P=.536	DF=28	

Table 4.4

**T-Test Results for the Service Delivery Rates
of the Home-based and Center-based groups.**

Group	Number of Subjects	Mean	SD	SE of Mean
Homebased	16	0.9150	0.152	0.038
Centerbased	13	0.9215	0.149	0.041
F=.054		P=.817	DF=28	

Chapter 5

Summary

This study was conducted to examine which early intervention group, home-based or center-based, is more effective at securing compliance and delivering services in compliance with the IFSP. The subjects were 29 children who were enrolled in an early intervention program.

Numerous studies have evaluated the effectiveness of early intervention programs in terms of their developmental outcomes but have failed to look at the compliance issues of each type of program. Burkett in a 1982 study evaluated the efficacy of early intervention services on achievement in an disadvantaged population. The researcher discovered that through the delivery of weekly home-based early intervention services preschool children achieved significant greater achievement scores than children who received no services. Wekart (1984) investigated the long - term effects of early intervention on a group of low income children . The researcher found that children exposed to early intervention services demonstrated a higher high school graduation rate,

enrolled to a higher degree in post secondary programs, engaged in more socially responsible behavior, and held a higher rate of employment. Research has show the effectiveness of early intervention but has neglected to compare home-based and center-based programs.

This study was designed to collect data on the compliance rates and service delivery rates of home-based and center-based early intervention programs and examine the differences between these two groups. Data was obtained from each subjects IFSP and attendance charts.

Conclusions

This research on early intervention focused on two hypotheses. First it was hypothesized that a significant difference would be observed in the compliance rates of a center-based and home-based group. Secondly, it was hypothesized that a significant difference would be observed in the service delivery rates between the center-based and home-based groups.

The first hypothesis was not supported by the data. The data analysis revealed a mean compliance rate of 52% for the home-based group versus 56% for the center-based group. Therefore, the data seems to indicate that regardless of the type of early intervention there is no significant difference in the attendance rates among children and their families who receive services in the home versus those who travel a center to receive

services. Overall, the data would seem to suggest that one program type is no more effective in securing the compliance with program requirements than the other.

The second research hypothesis was also not supported by the data. This hypothesis examined the service delivery rates of the home-based and center-based groups. The data found that no significant difference existed between the two groups in terms of actual services received by the child. As a result, the data suggests that regardless of the program type and location of service delivery both programs were effective in ensuring service delivery. Home-based mean service delivery rate was 91.5% with the center-based mean service delivery rate at 92%. Therefore, it can be concluded that both program options are equally effective in securing the services to families and children as designated in each child's IFSP.

Discussion

The review of the literature on the efficacy of early intervention programs establishes the effectiveness of early intervention programs for disabled children and disadvantaged children. This study evaluated the compliance rates and service delivery rates of two types of early intervention programs: home-based and center-based services.

Data from this study is inconclusive in regard to whether participation in a home-based or center-based program is more effective at securing the compliance of the participants. This researcher suggests that perhaps some of the following variables may have effected these research findings.

The primary focus of the research may have been an area of concern. In this study, compliance rates and service delivery rates were compared between center-based and home-based children. It is possible that this comparison was too broad in scope. It was too broad of a comparison because individual factors such as financial status were not controlled for nor anticipated.

Results may have been effected by a small sample size. This study examined the compliance rates and service delivery rates of 29 children enrolled in an early intervention program. These children were selected to participate in this study due to their six month consecutive enrollment period. During the six month period, these 29 children represented the maximum number of children who were eligible to participate in this study. The limited availability of participants may have effected the results.

The sample also has some methodological problems with the degree to which it is representative. The sample may not have been representative of the general population. The small sample size limited the possibilities of a wide range of individual differences and may have been too homogeneous.

A significant negative factor in this study was the weather during the research interval. The inclement weather, with record setting snowfall, may have interfered with transportation of the early intervention staff to the home-based participants. In addition, this may also have affected the families ability to transport the center-based participants to the early intervention site. These limitations on program accessibility may have decreased the compliance rates of the programs.

Implications for Future Research

The advances in neonatal medicine are responsible for the survival of many extremely high risk infants. These infants are often premature, demonstrate cognitive, sensory and neurological problems that require specialized services. Early intervention programs were mandated to address these children's needs. The philosophy of early intervention programs is to provide intensified services at an early age in order to prevent or minimize more serious disabilities. Future research in the area is critical to assess the relationship between the type of disability and the type of program which will meet the needs of the child.

Future research may examine the compliance rates of different subgroups by disability type. These compliance rates may be compared within the center-based group, within the home-based group, and between the two groups by disability.

Additional research might explore the compliance rates of different family structures (e.g. living with both parents, foster care). This comparison may determine if one type of family structure reveals a higher or lower compliance rate than others.

The financial status of a family may prove to be an interesting point of comparison when examining compliance. Medicaid recipients versus non Medicaid recipients might be compared to determine if a compliance rate difference exists between these two groups.

Compliance rates may be examined by comparing type of disability, developmental level, and attendance records. This comparison may determine which disability type and/or developmental level is most compliant with program requirements.

Parental perception of their child's disability and the relationship to the early intervention program compliance may be another area of future research. Parental perceptions may be a key determinant in the issue of program compliance as a parent who may minimize their child's disability may be less likely to access early intervention services.

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