

A COMPARATIVE STUDY OF EARLY CHILDHOOD INTERVENTION
HOME-BASED AND CENTER-BASED PROGRAMS
FOR THE HANDICAPPED IN TEXAS

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CHAPTER I

INTRODUCTION

Early childhood intervention for the handicapped was first launched by the 67th Texas Legislature with the passage of Senate Bill 630. The subject was further defined in 1982 by the Early Childhood Intervention (ECI) Council's definition of certain developmental delays for children aged 0-3. Texas has provided services to young handicapped children in the Early Childhood Education (ECE) program for several years. This program serves handicapped children three (3) through five (5) with any handicapping condition listed in the Administrative Policies and Operating Procedures for Special Education. Below age three, services have been limited to the visually impaired and hearing impaired.

The passage and implementation of Senate Bill 630 established a statewide system of early childhood intervention services for developmentally delayed children ages 0-3 years. Developmentally delayed children have a significant delay in one or more of the following areas:

- cognitive
- gross or fine motor
- language or speech
- social or emotional
- self-help skills

Administered through the Texas Department of Health, the system is cooperatively directed by four state agencies: the Texas Department of Health, the Texas Department of Mental Health/Mental Retardation, the Texas Department of Human Resources, and the Texas Education Agency. An ECI Council, composed of a representative from each of these agencies plus a public representative appointed by the Governor, directs the system's activities.

At the present time, there are 56 programs approved for ECI funding. Funding is provided through the Texas Education Agency. The first funding cycle was for March 1 through August 31, 1982; a second funding cycle began on September 1, 1982 through August 31, 1983. Applications are now being received by the Texas Education Agency for the third cycle of funding. A developmentally delayed child is eligible for ECI service if the child is under 3 years of age and is ineligible for entry into the comprehensive special education program for handicapped children under section 16.104 of the Texas Education Code.

An enormous discrepancy exists today between the types of early education which research has found to be effective for young handicapped children and the services which are actually being provided. Approximately one-third ($1/3$) of handicapped children who receive preschool training are able to function in the regular classroom without resource assistance when they enter elementary school (Stock, Newborg, Wnek, Schenck, Gabel, Spurgeon, & Ray, 1976; Hayden, Morris & Bailey, 1977).

Research has demonstrated the benefits of early intervention of handicapped children. One study reports that the family must be involved in the intervention for the program to have lasting effect (McKenna, 1978). Another study indicated that there was clear lasting school achievement and performance effects for children in the early intervention program. The longitudinal study concluded that the effect of 2 or 3 years in a preschool program for the handicapped lasted up to 6 years (Guinagh & Gordon, 1977).

Fourteen pediatricians serving Boston Health Centers and 14 pediatric neurologists in the greater Boston area were interviewed in order to determine their attitudes toward early intervention for infants with developmental disorders. The two groups differed significantly

over the potential of early intervention for promoting affective, motor, and cognitive development in the handicapped infant. Both groups viewed prevention of musculoskeletal deformities as appropriate for physically handicapped children and they supported early intervention for the parents when there was a delay in referral or referral was withheld. The primary reasons given were expressions of a maturationist viewpoint, a desire for a definitive diagnosis prior to initiating treatment (intervention), the assumption that an adequate family can function without professional involvement and misinterpretation of professional roles (Esposito, 1978).

Results of a survey involving 198 parents of handicapped children indicated their preference for program models. They preferred home-based, individual session/therapy, parent group, parent involvement in the classroom to the child centered classroom model (Fowble, 1980).

Research has shown that early intervention programs should address emotional, cognitive, and social aspects of the handicapped infant. A handicap is seen to be caused by a complex coalescence of factors which can be divided into three groups related to: 1) the impairment, 2) the physical and social world and 3) attitudes. It is argued

that for there to be a reduction in the degree of handicap experienced by the impaired child, consideration must be given to intervention in all aspects of the child and not just the treatment of the impairment itself (Frazer, 1980). In a review of four generations of infant intervention models Gordon (1976) as well as Bronfenbrenner (1974) concluded that the most impressive results were found from intervention models that gathered data on home factors and/or parent-child factors within the intervention population. "Although, the effectiveness of preschool programs on the child and his family is still questioned, evidence and recent data tend to weigh arguments in favor of preschool, especially if such programs have a strong parental involvement component" (Doggett, 1981).

Statement of the Problem

The inception and implementation of the ECI program in March, 1982 has created controversy regarding certain areas of responsibility since, at the present time, local school districts assume no legal responsibility for children under 3 years of age except in cases involving visual and hearing impairments. Questions exist concerning who should deliver the service and whether the provision of the service should be home-based, center-based, or a combination of home and center-based.

Purposes

The overall purpose of the study was to ascertain whether services are better furnished by state/private-center-based agencies, by state/private-home-based programs, or by a combination program.

The specific purposes of this study were:

1. To determine whether there is a difference among parents, agency implementors or the E.C.I. Council in their desirability for a home-based, center-based, or combination approach to early childhood intervention for handicapped children.
2. To determine whether there is a difference among parents, agency implementors, or the E.C.I. Council in their desirability of the agency to assume the responsibility for the delivery of intervention services to the handicapped children under 3 years of age.
3. To determine whether, since a similar survey was conducted by Doggett in 1981, the perceptions have changed as to the most appropriate model for the delivery of services and the agency best suited to deliver the service.

Hypotheses

1. There will be no significant differences among parents, agency implementors, or the E.C.I. Council in their rankings of the appropriateness of the home-based, center-based, or combination approach to early childhood intervention.
2. There will be no significant differences among parents, agency implementors, or the E.C.I. Council in their rankings of the appropriateness of the Department of Health, Mental-Health/Mental Retardation, Human Resources, Texas Education Agency, and Private Agencies to assume the responsibility for delivering intervention services to handicapped children under 3 years of age.

Definition of Terms

The following words or abbreviations used in the study are defined as follows:

1. ECE--Early Childhood Education.
2. ECI--Early Childhood Intervention.

3. Center-Based--The provision of services to children and their families in a facility such as a school, rehabilitation center, clinic, or day-care center.

4. Home-Based--The provision of services in the home of the client. Both parent training and infant instruction are provided.

5. Combination Program--In a combination program, children and families receive services both in their homes and in a service facility.

6. Developmentally delayed--A developmentally delayed child is defined as a child with a significant delay, that is, one who is beyond acceptable variations in normal development in one or more of the following areas:

- cognitive
- gross or fine motor
- language or speech
- social or emotional
- self-help skills

7. E.S.C.--Education Service Center

8. Intervention--The service provided to handicapped infants (aged 0-3 years) who are developmentally delayed. The service includes identification, referral, assessment, curriculum design, provision of various instructional settings, infant instruction, and parent training.

9. IDP--Individual Development Plan. The plan includes a list of all service needs of the child.

10. T.E.A.--Texas Education Agency

11. T.D.H.--Texas Department of Health

12. TDMHMR--Texas Department of Mental Health and Mental Retardation

13. TDHR--Texas Department of Human Resources

Significance of the Study

Senate Bill 630 authorized the creation of programs for children aged 0-3 who exhibit developmental delays. Fifty-six (56) ECI programs have now been implemented. At this time little is known about the impact they will have on the programs for handicapped 3,4 and 5 year olds in the public schools. It is recognized, however, that intervention programs will probably be more successful when the agency and the parents of the children have a similar understanding of both the children's problems and the extent to which intervention should be initiated for problem remediation.

How are the aims of Senate Bill 630 best accomplished? Does intervention in a home environment improve the coordination between agency-based and home-based programs? Such questions as these are significant for educa-

tional practice if the developmentally delayed child is to gain maximum benefit from an intervention program. This study will provide decision makers with valuable information as they determine the direction of intervention services for handicapped children aged 0-3 years.

Summary

The expansion and extension of services to handicapped children from birth to 3 years of age, as provided for in Senate Bill 630, have perhaps raised more questions than answers. Inputs from parent groups and ECI implementors point to two fundamental questions. First, who can best deliver the services, and second, which model of delivery is most feasible (home-based, center-based or a combination of home and center-based).

CHAPTER II

RELATED LITERATURE

The review of literature will focus on seven areas:

(1) early childhood intervention, (2) federal and state legislation, (3) the Texas ECI Project, (4) the role of the Inter-agency Council, (5) parental involvement, (6) home-based vs. center-based programs, and (7) public attitudes.

Early Childhood Intervention

Today, more than ever before, the public is aware of the importance of early education. The evidence of such awareness is all around us--television programs for the very young, private schools for the education of young children, government and education-agency research and experimental projects in early childhood education, the emphasis placed by the medical profession both on the detection of young children's problems and on preventive health planning, and the efforts of a vast number of professionals of other disciplines who advocate the provision of a variety of opportunities to young children. Included among this group of professionals are special educators who are interested in the early detection of developmental problems and, consequently, in the provision of corrective and

remediation services to aid the individual to develop to his or her fullest capabilities.

Usually, the time-lapse between the detection of a problem and the child's failure to perform adequately because of the problem results in a complication of his or her problems through the addition of secondary factors produced by the failure syndrome (Bereiter & Engelman, 1966). It would seem that, the earlier the identification of the problem and its remedial intervention, the more effective such intervention would be.

The status of early intervention programs for young handicapped children in New Jersey was studied through a parent questionnaire, program administrator survey, functional assessment forms on children, group interviews with staff and parents and phone interviews with program administrators. The results indicated that the program serves a cross section of the population; socioeconomic status does not appear to be very influential in a parent's selection or a child's referral to a particular program type; it appears that a number of children needing services were not enrolled in early intervention; it was found that parents and staff share similar views on the child's function, particularly in gross motor skills (Goldberg, 1980).

A study was done in the early 70's to evaluate intervention programs for neurologically impaired children and their families. Research was done in three areas, 1) effects of group therapy on parents and infants, 2) effects of the program on the emotional adjustment of the parents and their attitude toward having children, 3) the effects of the program on the physical social-emotional and intellectual development of 23 children ages 9-44 months. Evidence suggested that in general the parents became less apprehensive and more self-assured in their reactions. The results showed significant growth in the areas of physical, social and emotional and intellectual growth (Weider & Hicks, 1970).

Research has demonstrated the benefits of early intervention of handicapped children. One study reports that the family must be involved in the intervention for the program to have lasting effect (McKenna, 1978). Another study indicated that there was clear lasting school achievement and performance effects for children in the early intervention program. The longitudinal study concluded that the effect of 2 or 3 years in a preschool program lasted up to 6 years (Guinagh & Gordon, 1977).

Early intervention with the handicapped from low socioeconomic black families was studied in 1981. It was

decided that problems in providing services for this populations could be divided into three major areas--1) identification and diagnosis of potentially handicapping conditions is often overlooked in black infants because their systems do not manifest themselves in the same manner as caucasians, 2) there are very few free programs for children ages 0-3 years, and 3) many parents of these infants have little education and therefore have limited understanding of the value or need for early intervention (Johnson & Griffiths, 1981).

To assess the combined risks of being born preterm and to a teenager mother, and to evaluate the effects of an early intervention, 30 preterm infants born to lower class, black, teenage mothers were provided a home based, parent training intervention, and their development was then compared with that of 30 non-intervention controls, of 30 term infants of teenage mothers, and of 30 term and 30 preterm infants of adult mothers. Despite equivalence on prenatal care, factors which placed the preterm infant of the teenage mother at greater risk at birth were the small for date size of the infant and the less realistic developmental milestones and child rearing attitudes expressed by the mother. The preterm infants of teenage mothers who received intervention showed more optimal growth, Denver scores, and face to face interactions at 4 months. Their mothers rated their infants' temperaments more optimally, expressed more realistic developmental milestones and child rearing attitudes, and received higher ratings on face to face interactions. At 8 months, the intervention group received superior Bayley Mental, Caldwell, and Infant Temperament Scores (Field, p. 486, 1980).

An early intervention program emphasizing high-quality nutrition and social stimulation was used with nine

infants (mean age 9.4 months) who evidenced failure to thrive syndrome due to maternal deprivation. The program lasted four and 1/2 months. The Bayley Scale was used to evaluate physical and psychological status, an operant conditioning technique was used to increase the rate of non-crying vocal behavior, and careful records were maintained concerning each child's daily food consumption during a one month nutritional intervention program. Five of the infants were assigned to an experimental group receiving nutrition plus home tutoring. Results indicated that the quality of nutrition and the social stimulation contributed significantly to remediation of developmental retardation (Ramey, 1975).

Until now professionals have speculated as to the reasons for the inadequate use of state and federal resources to assist handicapped infants and their families. In an analysis of why Public Law 94-142 excludes the 0-3 population, Hayden (1979) suggested three reasons: (1) after meeting the needs of children aged 3-21, the money was exhausted; (2) many persons still resist the idea of an early educational-intervention service; (3) those "framing the legislation understood the difficulties to be overcome in developing a coordinated school-based program to serve young children" (p. 510).

Now, however, the tide appears to be turning, with much research and attention directed toward infants and their families. Research in the fifties and sixties demonstrated that the child's earliest years are the times of his or her most rapid physical and mental growth (Bloom, 1964). Consequently, most educators, psychologists and parents have come to believe that development during the first few years of life provides a foundation for cognitive, social, and biological development in later years.

An intervention program should address the effect of emotional, cognitive and social aspects on the child and the "significant adults" (family, teachers) in the child's life. The intervention should also recognize the elements of living with any handicap. A handicap is seen to be caused by complex factors which can be divided into three groups related to: 1) the impairment, 2) the organization of the physical and social world and 3) attitudes toward the disability. It is argued that for there to be a reduction in the level of handicap experienced by the impaired child, consideration must be given to all aspects of the contributing factors and not just to the impairment itself (Frazer, 1980).

Federal and State Legislation

In 1968, Congress enacted the Handicapped Children's Early Education Program (P.L. 90-538, referred to as the HCEEP Act), which authorized the development of experimental preschool projects for handicapped children (La Vor, 1976). Since that date, a number of excellent model programs have been developed to meet the needs of handicapped preschoolers and their families. The benefits of these programs have been documented through the research of Stock, Newborg, Wnek, Schenck, Gabel, Spurgeon, & Ray (1976) & Hayden, Morris & Bailey (1977).

The First Chance Network, with 150 projects, established programs to develop and demonstrate effective intervention approaches for handicapped children during their early years. In addition to intervention services, the First Chance projects emphasize parent and family involvement, coordination with other agencies, and planning and evaluation activities (U.S. Department of Health, Education & Welfare, 1976).

Previously mentioned in Chapter I, the third breakthrough is the ECI program, which came into being in 1981 with the passage of Texas Senate Bill 630.

The Texas ECI Project

Senate Bill 630 established a statewide system of early childhood intervention services for developmentally delayed children. The 67th Texas Legislature enacted the bill with an effective date of September 1, 1981. Funds are available to public or private service organizations who may be current or potential providers of service for developmentally delayed children. In granting ECI funds, priority is given for new services or for the expansion of existing services. The means by which maintenance of effort of present programming will be assured shall be stated in the application for funds.

The Early Childhood Intervention Council shall use the following criteria when considering the funding of grant requests:

1. the extent to which the program will meet identified needs;
2. the cost of initiating a program;
3. the availability of other funding sources including parent payment; and
4. the assurance of quality services

Each application shall be judged on a competitive basis.

A written individualized developmental plan (IDP) is to be developed for each child based on a comprehensive

evaluation performed by an inter-disciplinary team with parent or guardian participation and periodic review and reevaluation.

The IDP is a document jointly formulated by the agency and parent(s) or guardian(s) of the developmentally delayed child. It includes specific short and long-term goals, objectives, and services needed for the development of the child. No IDP is to be implemented without the prior written consent of the parents and/or guardians of the child.

The IDP is to be used as a method for evaluating the quality and performance of the program provider in regard to the child's progress and services provided.

Programs which receive ECI funds must have an IDP for each child, which shall be completed within 30 days of admission and which meets the following criteria:

1. shall be in writing;
2. shall be developed jointly by program staff and with the written consent of the child's parents or guardians;
3. shall be based on a comprehensive evaluation performed by an interdisciplinary team;
4. shall identify each service to be delivered and the person who will provide the service; and

5. shall be periodically reviewed, at least quarterly, based on the needs of the child. Programs must provide services to meet the unique needs of each child as indicated by the child's individualized development plan.

Each program shall demonstrate a capability to obtain or provide an array of services that must include:

1. training;
2. counseling;
3. case management services; and
4. home visits for the parents (guardians) of each child.

Individualized instruction or treatment in the following areas of development:

1. cognitive;
2. gross and fine motor;
3. language or speech;
4. social or emotional; and
5. self-help skills.

Related services as prescribed:

1. occupational therapy;
2. physical therapy;
3. speech and language therapy;
4. adaptive equipment;

5. transportation; and
6. other therapies.

In addition to the IDP's for each child, the programs are required to assess needs and develop and implement a plan for the in-service training of personnel. Instructional options for each child must take into consideration the medical, social, educational and developmental needs as stated in the IDP. The frequency and duration of service for each child is to be based on need as indicated in the IDP.

Staff child ratios shall take into consideration the degree of each child's developmental level or handicapping condition, the setting in which the child will be served, and the nature of the service provided. These aspects of service shall be specifically addressed in the IDP. Each program shall have staff who have qualifications in terms of education and experience commensurate with the duties that they will be assigned in the program.

Other program aspects designed to ensure the provision of quality services are:

1. Screening, Assessment and Referral.

Each provider shall have written procedures which describe screening, assessment, and

referral procedures. Screening and assessment instruments shall be specified.

2. Parental Involvement.

Each provider shall have a written plan which provides for parental participation in various aspects of the program.

3. Public Awareness.

Each provider shall have written information regarding their public awareness activities.

Fees may be charged for intervention services based on the parent's or guardian's ability to pay. If a fee is charged, a separate charge must be made for each type of service provided. Guidelines for determining the parent's ability to pay shall be developed by the program provider and included in the application for funding.

Currently, the ECI program is completing its first full year of funding (September 1, 1982 - August 31, 1983). Continued funding is contingent upon the program's accomplishments and progress toward stated goals and objectives and the availability of ECI funds. The program provider must submit an application for continued funding.

The Role of the Interagency Council

Senate Bill 630 also created a five-member inter-agency council composed of one lay member appointed by the

Governor and one representative each from the Department of Health, the Department of Mental Health and Mental Retardation, the Department of Human Resources, and the Central Education Agency, each individual to be appointed by the commissioner of his or her respective agency.

The Council is required to develop and implement a state plan for early childhood intervention. They are responsible for directing the program's activities.

Parental Involvement

Research has shown that parental involvement is necessary for proper development of the handicapped child (Klauser & Kennell, 1976; Fraiberg, 1974). Parents of handicapped infants readily admit their need for help in caring for and interacting with their infants. Parents can be taught alternative child-care strategies that bring satisfaction to the parents and meet the developmental needs of the child (Shearer & Shearer, 1976; Hayden & Haring, 1976).

A research study at Michigan State University, Ann Arbor Institute for the Study of Mental Retardation evaluated the effectiveness of early intervention for handicapped infants in assisting parents to improve interactions with their handicapped child and to help the parents

develop realistic attitudes about the effects of the child's handicap on the total family system. A parental attitude survey was administered at six month intervals. Results showed there was a significant change in the parent's attitude about the importance of their role in actively helping their handicapped child at home (Lynch, 1976).

Findings of a study conducted at Temple University indicated that mothers involved with their children in a pre-school program for the handicapped with a parental involvement component has a positive impact in self-esteem, child related dejection and maternal overprotection (Cohen, 1980). A major research paper, "The Parent Is a Teacher," advocated that parents must be involved in direct instruction of their handicapped child to facilitate social, academic and self-care behavior (Hofmeister, 1977).

Another study tested the effectiveness of two approaches to parenting instruction for parents of preschool developmentally delayed children. Sixty parent-child pairs were randomly assigned to 1 of 3 groups: (1) Individual parenting only, (2) Individual plus group instruction, and (3) Comparison group with no instruction. The parent instruction programs were designed to teach parents to

change their interactions with their child, decrease conflict, and increase self-esteem of both parent and child. Findings indicated that there was a distinct difference between the treatment and comparison group. Instruction for parents was reported to be both economical and effective. Children in the treatment groups made positive gains in social interaction. The results suggest that high negative attitudes between mothers and young handicapped children can be changed (Kogan, & Tyler, 1978).

Longitudinal observations of maternal and infant characteristics were used to study early intervention for 57 infants at high risk for mental retardation due to sociocultural factors. Results indicated the mothers of high risk infants in a day care intervention program interacted with their infants in ways quite similar to mothers of high risk infants who were not enrolled in the intervention program. Both high risk groups differed from the general population of mothers on interaction and attitudinal measures. The study indicated that children's intelligence was predictable from previous maternal behaviors and attitudes and that early intervention altered the predictiveness of some maternal factors (Ramey, 1979).

Twenty-five mothers of preschoolers with Down's Syndrome completed a questionnaire related to their experiences in intervention programs. Results showed this particular sample to be actively involved in the program activities. Responses about experiences with infant stimulation activities indicated that mothers of males and mothers of lower functioning children had greater difficulty engaging their children in such activities. Mothers reported that parent group meetings provided beneficial emotional support. It was indicated that there was a need to evaluate individual differences in parent's program participation (Spiker, 1982).

Down's Syndrome babies represent a large proportion of the infants in need of early intervention services. The very nature of intervention programs requires parent involvement. Direct contact with parents provides professionals with the opportunities to share new findings that may assist parents in adjusting to the birth of their handicapped child (Abroms & Bennett, 1981).

Public Attitudes

Many states are now legislating services for handicapped infants, but many still oppose this service. Public Law 94-142 is a comprehensive law to serve all handicapped children aged 3-21. It obviously excludes the 0-3 range.

Mandatory, comprehensive services for the birth-to-3 age is provided in only five states: Maryland, Nebraska, Iowa, Michigan and South Dakota (Cohen, Semmes & Guralnick, 1979).

Legislation for early childhood intervention (federal and state) is not only inadequate, but is also fragmented and inconsistent. The HCEEP Act was a major step by the federal government, but not much legislation has followed it. A recent study indicated that state governments may indeed be retreating from an offer of services to young, handicapped children (Barresi, 1980). This study noted changes in some states from mandatory to permissive programs for preschoolers. Moreover, surveys of programs for handicapped infants confirm the fact that fragmentation exists (Interim Study Committee on Early Childhood Intervention, 1981).

Limited information is available in the literature concerning public attitudes related to early childhood intervention for handicapped children ages 0-3. Many references are made in current literature about attitudes toward visually impaired or mentally retarded students or toward the handicapped in general. Since early childhood intervention is in its infancy, there is little research to sub-

stantiate public attitude (Donaldson, 1980; Sander & Robinson, 1981; & Skrtic, 1982).

Summary

A review of early childhood intervention literature points out that an enormous discrepancy exists between the types of early education that research has found effective and the actual service being delivered. Federal and state legislation has provided funding for young handicapped children below age 3, but little is known as to the most appropriate delivery model or the most desirable agency or agencies to deliver services to young handicapped children.

CHAPTER III

METHODOLOGY

Subjects

The population pool for this study consisted of the parents of developmentally delayed children being served in Region XVI Education Service Center (home-based program) and the Amarillo State Center for Human Development area (agency-based program). The Region XVI area consists of 24 counties in the panhandle of Texas. The Amarillo State Center for Human Development area consists of two counties in the greater metropolitan area of Amarillo, Texas. Besides the group of parents described, the other subjects were the five (5) members of the Interagency Council and the directors of the fifty-six ECI programs.

Instrument

The instrument used in this study was a questionnaire of desirability/likelihood of the model of delivery of services for ECI and the most appropriate agency to provide the service. The instrument was developed by Doggett in 1981 (Appendix A). The questionnaire was developed to determine the most desirable and likely alternatives to

be included in intervention legislation in Texas. It was validated at the time of first use (Doggett, 1981; Appendix D). Three methods were used to generate data (event statements) for a desirability/likelihood questionnaire: (1) a panel of experts; (2) a review of the literature; and (3) an input questionnaire (Yates, Burks, Horton, Shirley, Soffer & Stevens, 1979). The data received was edited and combined to develop twenty statements for the questionnaire. Beside each statement were two five-point scales (1-5). The column on the left pertained to the desirability/likelihood, one (1) being least desirable/likely and five (5) being most desirable/likely. The questionnaire was used in this study to gain information as to the desirability or likelihood of changes in the ECI program as opposed to leaving it as it currently is.

Administration of Questionnaire

The questionnaire was mailed to three separate groups: (1) the members of the ECI Council, (2) parents of developmentally delayed children in Region XVI, and (3) directors of the 56 ECI programs across the State. The Region XVI Education Service Center in Amarillo collected the information from a group of parents at two separate parent meetings.

The ECI Council was composed of five members representing the following groups: Texas Department of Health (TDH), Texas Department of Mental Health and Mental Retardation (MHMR), Texas Education Agency (TEA), Texas Department of Human Resources (TDHR) and a representative of the Governor's office. The second group of questionnaire respondents were the program administrators of the fifty-six ECI programs.

The third group of questionnaire respondents were the parents of children in ECI programs in the Region XVI Education Service Center Area. Two groups of parents at a previously scheduled parent meeting were asked to complete the questionnaire. Personnel from the ESC explained the purpose of the study, gave the instructions for completing the questionnaire and requested that the parents complete the questionnaire as well as give some demographic data. The parent questionnaires were mailed back to the researcher in one package (24 of 35 responses, 69%).

The questionnaire was mailed to respondents on January 20, 1983. A cover letter, a set of directions, the questionnaire and a stamped return envelope was included. The cover letter explained the purpose of the study and requested that the questionnaires be returned by February 11, 1983. An additional letter was included with the

questionnaire from the Texas Education Agency supporting the study. Respondents were instructed to consider the likelihood and desirability of each statement and to circle the number which most closely reflects their opinion.

By February 11, 1983, 45 of the 56 questionnaires from implementors had been returned. None of the ECI Council questionnaires, and none of the parent forms had been returned. A follow-up letter was sent on February 15, 1983 to the ECI Council members and the program implementors who had not responded.

On February 15, a call was made to the Region XVI ESC. It was reported that the questionnaires had been collected and would be mailed to the researcher. Separate telephone calls were made to each ECI Council member during the week of March 1-4, 1983.

At the time the data was analyzed, 45 of the 56 (80%) implementors had responded, none of the five ECI Council members responded and 24 of 35 (69%) parents had responded. Appendices A and B contains the questionnaire, instructions, the two cover letters, and the special support letter from the Texas Education Agency.

To insure confidentiality of the responses, a card file was established. Each questionnaire was numbered corresponding with a card in the file. As the questionnaires

were returned, the card with the corresponding number was removed. Therefore the researcher knew which ones had not been returned for follow-up letters or telephone calls. There was no trace of who responded to the questionnaires after the cards were removed. There were inclusive numbers so that the researcher knew whether the response was from a parent, implementor or an ECI Council member.

Analysis of Data

The study used a forecasting technique to analyze the data that affects the provision of services to handicapped infants and their families in the State of Texas. "The procedures selected meet the criterion advanced by Crowson (1975): they determine which alternatives are most desirable or 'best' as required by the rational model of policy analysis" (Doggett, 1981).

This forecasting technique was developed by Yates et al. (1979). The purpose of the technique is to assist decision makers to identify available alternatives and analyze those alternatives as to their desirability and likelihood. The technique is based on the theory that decision makers must consider what is ideal as well as what is feasible to parents, administrators and bureaucrats in order to make appropriate decisions.

When the questionnaires were completed and returned, responses for the desirability and likelihood of each question were totaled and a mean desirability and likelihood rating for each statement (question) was calculated. The number for each statement was placed in the appropriate cell of a desirability/likelihood matrix. Each statement in the questionnaire was given a rating of high desirability/high likelihood, high desirability/low likelihood, unusual, or unexpected, etc.

The t-test for independent samples using the standard error of the mean as the denominator was utilized to compare the means between two groups. A two-tailed t-test was used since it is more conservative than a single tailed test.

Summary

The study used a forecasting technique to analyze the formulation of future policy to provide service to handicapped infants and their families in the State of Texas. The procedure selected produced data for determining which alternatives are most desirable and most feasible. The forecasting technique was developed by Yates et al. (1979).

The subjects for the study were: (1) the members of the ECI Council, (2) the parents of developmentally

delayed children in Region XVI, and (3) directors of the 56 ECI programs across the State. The questionnaires were distributed and the data collected in a procedure which afforded confidentiality to the responders.

CHAPTER IV

RESULTS

This study investigated whether there was a difference among parents, agency implementors or the ECI Council members in their ranking of desirability for a home-based, center-based or combination approach to early childhood intervention for handicapped children. The study further investigated whether there is a difference among parents, agency implementors or the ECI Council in their desirability of the agency to assume the responsibility for the delivery of intervention services to handicapped children under three years of age. However, the ECI council members did not respond to the questionnaire.

Two separate groups completed the questionnaire. Their responses provided data as to the desirability and likelihood of services to handicapped infants. These services can be delivered by a variety of agencies in a variety of settings. The first respondents were the implementors of the ECI projects which are currently funded in Texas. Forty-five of the 56 programs responded (80%). The second respondents were a group of parents of infants enrolled in ECI programs in the Region XVI E.S.C. area

(Amarillo). Twenty-four (24) of thirty-five (35) responded (69%). Questionnaire results of the two groups will be presented separately and then compared to note similarities and differences.

Desirability/Likelihood Questionnaire
Results of the Agency Implementors

The mean desirability and likelihood scores were computed for each statement on the questionnaire. The higher the mean, the higher the desirability or likelihood of that statement; lower numbers represent low desirability and/or likelihood. Table 1 presents these results.

Item number 11, "Infants with a diagnosed handicap should be eligible for services," received the highest rating. The agency implementors felt this statement was both desirable and likely. Other items of high desirability and likelihood (3.4 or higher) are statements #4, #5, #9, #12, #16, #18, and #21. It was seen as strongly desirable that the administering agency work in cooperation with other agencies providing services to the handicapped. Further, it was felt strongly that ECI services should be provided through a combined home-based/center-based program.

The agency implmentors felt it was very desirable and quite likely that infants "at risk" or developmentally delayed would be eligible for services. It was further

TABLE 1: MEAN DESIRABILITY AND LIKELIHOOD RATINGS OF AGENCY IMPLEMENTORS ON TWENTY-ONE INFANT INTERVENTION STATEMENTS

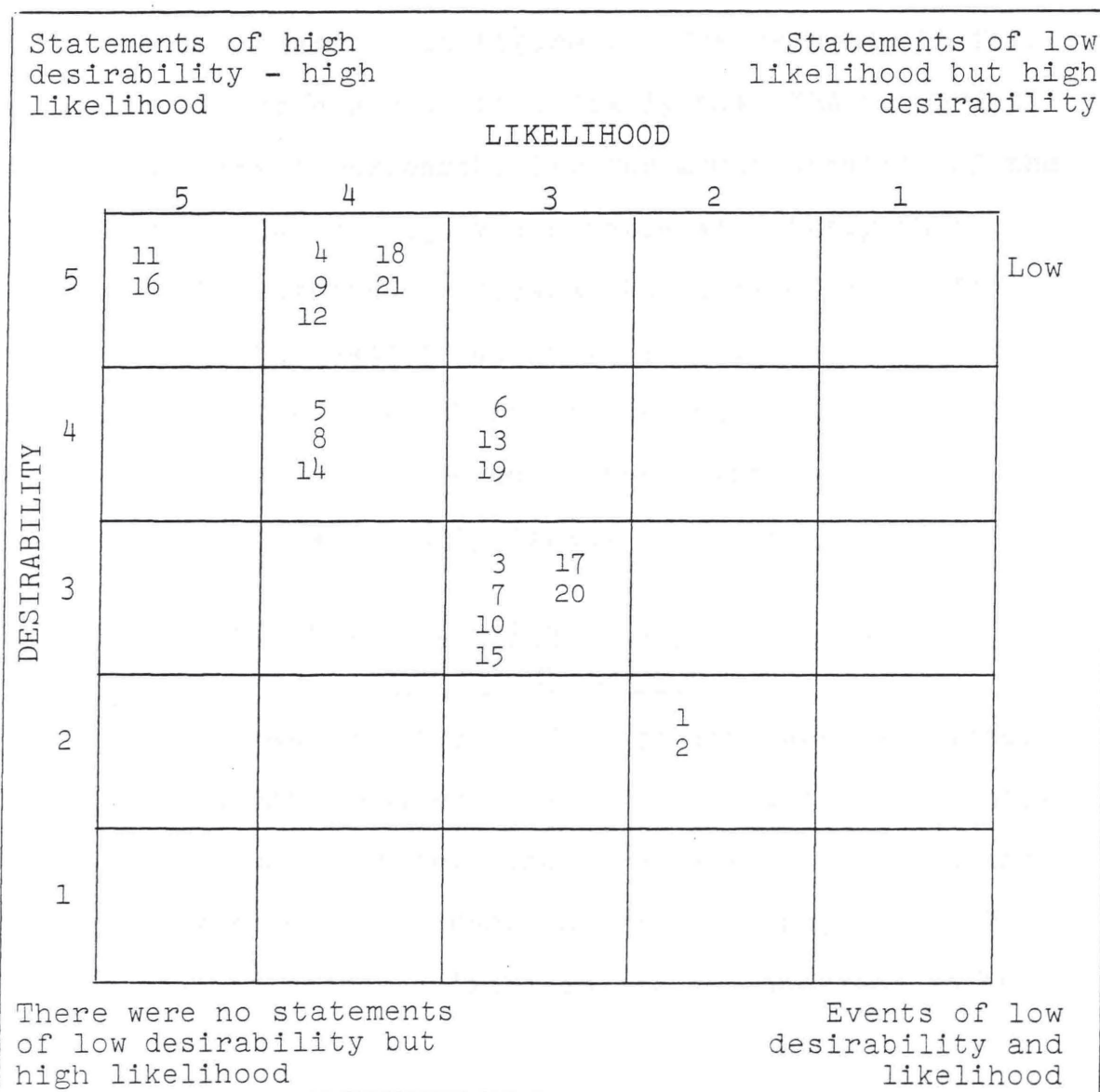
Forecast Statements	Desirability Mean	Likelihood Mean	Difference
1. TEA should have direct responsibility for administering the program.	2.18	2.32	-0.14
2. TDMHMR should have direct responsibility for administering the program.	2.25	2.34	-0.09
3. The Department of Health should have direct responsibility for administering the program.	2.51	2.97	-0.46
4. The administering agency should work in cooperation with the State Commission for the Blind, the Commission for the Deaf, the Crippled Children's Division, the Office of Child Development, the Department of Human Resources, TDMHMR, TEA and the Department of Health.	4.74	3.64	1.10
5. The administering agency should contract with the appropriate public or private agency for the delivery of services.	4.06	3.65	0.41
6. Regional Service Centers should deliver services in coordination with appropriate local agencies.	3.53	3.09	0.44
7. Local educational agencies should deliver services.	2.69	2.50	0.19
8. Services should be provided through a home-based program.	3.51	3.73	-0.22
9. Services should be provided through a combination-home-and center-based program.	4.46	3.97	0.49
10. Services should be provided through a center-based program.	3.36	3.39	-0.03
11. Infants with a diagnosed handicap should be eligible for services.	4.88	4.83	0.05
12. Infants "at risk" or developmentally delayed should be eligible for services.	4.72	4.30	0.42
13. Funding for services should be totally provided by state appropriations.	3.74	2.74	1.00
14. State and local funds should be used to provide services.	3.65	3.55	0.10
15. Parents should be required to pay a sliding-fee for services.	2.67	2.79	-0.12
16. An Individualized Education Service Plan should be written on each infant served.	4.65	4.65	-0-
17. The infant's educational program should be developed and monitored by a certified teacher.	2.62	2.76	-0.14
18. The infant's education program should be developed and monitored by a team of professionals.	4.51	4.13	0.38
19. Legislation should be mandatory.	3.86	2.91	0.95
20. Legislation should be permissive.	3.13	3.40	-0.27
21. Related services needed by the infant to benefit from the educational services should be made available.	4.72	3.55	1.17

felt that each infant served should have an individualized education service plan with the necessary related service provided. This program should be developed and monitored by a team of professionals.

Items with low ratings were considered by agency implementors to be less likely and less desirable. Items with both low desirability and likelihood (2.4 or lower) are #1 and #2.

Eight items had a higher likelihood than desirability rating: items #1, #2, #3, #8, #10, #15, #17, and #20. The respondents did not consider these items very desirable but felt they were likely to occur. These items had a 1.0 point or more difference between desirability and likelihood: items #4, #13, and #21. On all three of these statements, the respondents found these to be more desirable than likely.

The mean score for each statement was rounded off to the nearest whole number and placed in the Desirability/Likelihood Matrix (Figure 1). The purpose of the matrix is to isolate statements of high desirability/high likelihood, high desirability/low likelihood or unusual placements in the matrix. Twelve of the twenty-one items were higher in desirability than in likelihood.



1. TEA should have direct responsibility for administering the program.
2. TDMHMR should have direct responsibility for administering the program.
3. The Department of Health should have direct responsibility for administering the program.
4. The administering agency should work in cooperation with the State Commission for the Blind, the Commission for the Deaf, the Crippled Children's Division, the Office of Child Development, the Department of Human Resources, TDMHMR, TEA and the Department of Health.
5. The administering agency should contract with the appropriate public or private agency for the delivery of services.
6. Regional Service Centers should deliver services in coordination with appropriate local agencies.
7. Local educational agencies should deliver services.
8. Services should be provided through a home-based program.
9. Services should be provided through a combination-home-and-center-based program.

10. Services should be provided through a center-based program.
11. Infants with a diagnosed handicap should be eligible for services.
12. Infants "at risk" or developmentally delayed should be eligible for services.
13. Funding for services should be totally provided by state appropriations.
14. State and local funds should be used to provide services.
15. Parents should be required to pay a sliding-fee for services.
16. An Individualized Education Service Plan should be written on each infant served.
17. The infant's educational program should be developed and monitored by a certified teacher.
18. The infant's educational program should be developed and monitored by a team of professionals.
19. Legislation should be mandatory.
20. Legislation should be permissive.
21. Related services needed by the infant to benefit from the educational services should be made available.

Figure 1.

Desirability/Likelihood Matrix
of Agency Implementor Responses

In order to clarify the results, the items on the matrix were summarized in Figure 2. The respondents felt it was undesirable and quite unlikely that TEA or TDMHMR would have direct responsibility for administration of the ECI program. It was highly desirable and likely that infants with diagnosed handicaps should be eligible for services and that each should have an individualized education service plan. Most of the statements on the questionnaire were considered by the respondents to be highly desirable and highly likely to occur.

Desirability/Likelihood Questionnaire
Results of Parents

Responses from twenty-four parents were analyzed. Thirty-five questionnaires were given out but only twenty-four chose to participate. The parents were in attendance at regularly scheduled parent inservice. They were all parents of handicapped infants in the ECI programs in the Amarillo area.

The main desirability and likelihood rating was computed for each item on the questionnaire (Table 2). The higher the mean the higher the desirability and/or likelihood of that event. For example, item number 11, "Infants with a diagnosed handicap should be eligible for services" received the highest rating. Other items the

LIKELIHOOD			
	High	Medium	Low
DESIRABILITY	11. Infants with Diagnosed handicap should be eligible for service.		
	16. An I. Service Plan should be written on each infant served.		
	4. The Administrating Agency should work in cooperation with the State Commission for the Blind, Commission for the Deaf, Crippled Children's Division, Office of Child Development, TDHR, TDMHMR, TEA, and TDH.		
	9. Services should be provided through a combination of home and center-based programs.		
	12. Infants "at risk" or developmentally delayed should be eligible for services.		
	18. The infants educational program should be developed and monitored by a team of professionals.		
	21. Related services needed by the infant to benefit from the educational services should be made available.	6. Regional Service Centers should deliver services in coordination with appropriate local agencies.	
	5. The Administrating Agency should contract with the appropriate public or private agency for the delivery of services.	13. Funding should be totally provided by state appropriations.	
	8. Services should be provided through a home-based program.	19. Legislation should be mandatory.	
	14. State and local funds should be used to provide services.		
	3. The Dept. of Health should have direct responsibility for administering the program.		
	7. Local E.A.'s should deliver services.		
	10. Services should be provided through a center-based program.		
	15. Parents should be required to pay a sliding fee for services.		
	17. The infants educational program should be developed and monitored by a certified teacher.		
	20. Legislation should be permissive.		
			1. TEA should have direct responsibility by administering the program.
			2. TDMHMR should have direct responsibility by administering the program.
	Low	Medium	Low

Figure 2
Summary of Agency Implementors Responses

TABLE 2: MEAN DESIRABILITY AND LIKELIHOOD RATINGS OF PARENTS
ON TWENTY-ONE INFANT INTERVENTION STATEMENTS

Forecast Statements	Desir- ability Mean	Like- lihood Mean	Differ- ence
1. TEA should have direct responsibility for administering the program.	4.29	4.09	0.2
2. TDMHMR should have direct responsibility for administering the program.	2.62	3.04	-.42
3. The Department of Health should have direct responsibility for administering the program.	2.52	2.78	-.26
4. The administering agency should work in cooperation with the State Commission for the Blind, the Commission for the Deaf, the Crippled Children's Division, the Office of Child Development, the Department of Human Resources, TDMHMR, TEA and the Department of Health.	4.56	4.34	-.22
5. The administering agency should contract with the appropriate public or private agency for the delivery of services.	3.82	3.76	.06
6. Regional Service Centers should deliver services in coordination with appropriate local agencies.	4.29	4.09	0.2
7. Local educational agencies should deliver services.	3.21	2.95	.26
8. Services should be provided through a home-based program.	4.29	4.31	-.02
9. Services should be provided through a combination-home-and center-based program.	3.50	3.27	.23
10. Services should be provided through a center-based program.	2.21	2.39	-.18
11. Infants with a diagnosed handicap should be eligible for services.	4.62	4.50	.12
12. Infants "at risk" or developmentally delayed should be eligible for services.	4.37	4.04	.33
13. Funding for services should be totally provided by state appropriations.	4.04	3.81	.23
14. State and local funds should be used to provide services.	3.70	3.45	.25
15. Parents should be required to pay a sliding-fee for services.	2.04	2.65	-.61
16. An Individualized Education Service Plan should be written on each infant served.	4.00	3.95	.05
17. The infant's educational program should be developed and monitored by a certified teacher.	3.87	3.68	.19
18. The infant's education program should be developed and monitored by a team of professionals.	4.33	4.09	.24
19. Legislation should be mandatory.	4.29	3.50	.79
20. Legislation should be permissive.	2.54	3.60	-1.06
21. Related services needed by the infant to benefit from the educational services should be made available.	4.20	4.00	0.2

parents rated as high desirability and likelihood ratings (3.4 or higher) were #1, #4, #5, #6, #8, #12, #13, #14, #16, #17, #18, #19, and #21.

Items with low ratings were considered by respondents to be less desirable and less likely to occur. The only item with both low desirability and a low likelihood rating (2.4 or lower) was item number 10. Obviously the parents feel it is not desirable or likely that early childhood intervention services should be provided through a center-based program.

Fifteen of the twenty-one items had a higher desirability mean than likelihood mean. They are #1, #4, #5, #6, #7, #9, #11, #12, #13, #14, #16, #17, #18, #19, and #21. The parents felt these items were desirable but not as likely to occur.

Only six items had a higher mean likelihood than desirability rating: #2, #3, #8, #10, #15, and #20. Respondents felt these statements were likely to happen but they were not very desirable. One item had a 1.0 point or more difference in the mean of desirability and the likelihood mean (Item #20). The respondents felt it was likely that legislation would be permissive but not desirable.

The mean score for each statement was rounded off to the nearest whole number and placed in the Desirability/

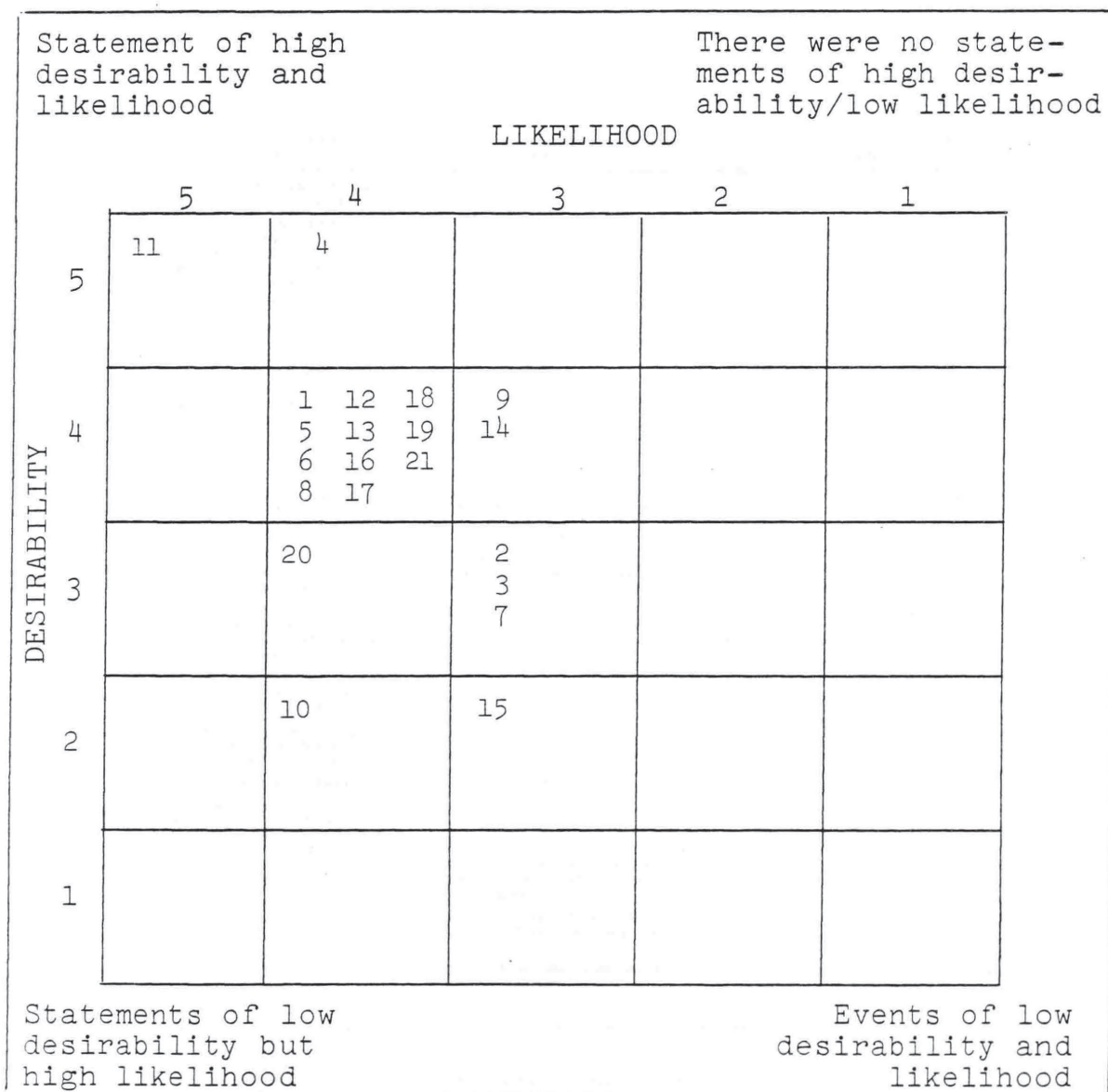
Likelihood Matrix (Figure 3). The purpose of the matrix is to locate statements of high desirability and likelihood, high desirability/low likelihood, low desirability/high likelihood, and low desirability/low likelihood.

As evident from the matrix no statements were considered to be high desirability/low likelihood or low desirability/low likelihood. Most of the statements on the questionnaire were considered by the parents to be highly desirable and highly likely to occur. Only one item, #10 "Services should be provided through a center-based program, was considered to be undesirable but likely to occur.

In order to communicate the results of the parents responses to the questionnaire, the statements were summarized on a desirability/likelihood matrix in Figure 4. Items with means of 3.5 to 5 were considered to be highly desirable and/or highly likely; items with means from 1.0 - 2.4 were considered to be low desirability/likelihood; items with means of 2.5 - 3.4 were considered to be of moderate desirability or likelihood.

Differences Between Agency Implementor and Parent Responses

In order to analyze how the views of parents and the agency implementors who responded to the questionnaire differed on their views of how early childhood intervention



1. TEA should have direct responsibility for administering the program.
2. TMMHMR should have direct responsibility for administering the program.
3. The Department of Health should have direct responsibility for administering the program.
4. The administering agency should work in cooperation with the State Commission for the Blind, the Commission for the Deaf, the Triple P Children's Division, the Office of Child Development, the Department of Human Resources, TMMHMR, TEA and the Department of Health.
5. The administering agency should contract with the appropriate public or private agency for the delivery of services.
6. Regional Service Centers should deliver services in coordination with appropriate local agencies.
7. Local educational agencies should deliver services.
8. Services should be provided through a home-based program.
9. Services should be provided through a combination-home-and-center-based program.

10. Services should be provided through a center-based program.
11. Infants with a diagnosed handicap should be eligible for services.
12. Infants "at risk" or developmentally delayed should be eligible for services.
13. Funding for services should be totally provided by state appropriations.
14. State and local funds should be used to provide services.
15. Parents should be required to pay a sliding-fee for services.
16. An Individualized Education Service Plan should be written on each infant served.
17. The infant's educational program should be developed and monitored by a certified teacher.
18. The infant's educational program should be developed and monitored by a team of professionals.
19. Legislation should be mandatory.
20. Legislation should be permissive.
21. Related services needed by the infant to benefit from the educational services should be made available.

Figure 3.
Desirability/Likelihood Matrix
of Parent Responses

services for the handicapped should be delivered and what components should be included, a t-test (two-tailed) was run on the desirability and likelihood ratings for each statement. On those items where significant differences were found (.01 level) an asterisk was placed at the item. Desirability results are presented in Table 3 and likelihood results are presented in Table 4.

On the desirability test items #1, #9, #10, #15, and #17, there was a significant difference between the parents and the agency implementors. On the likelihood test there were more significant differences. They were on items #1, #2, #6, #9, #10, #13, #16, and #17.

Analysis of Hypotheses

Hypothesis 1:

There will be no significant differences among parents, agency implementors, or the ECI Council in their ratings of appropriateness of the home-based, center-based, or combination approach to early childhood intervention.

The analysis of the data led to the rejection of the null hypothesis. There was a significant difference among the parents and agency implementors on several of the twenty-one items on the questionnaire. Eight (8) items at the .01 or more probability level on the likelihood items and five (5) items at the .01 or more level on the desirability scale.

Table 3. RESULTS OF A t-TEST COMPARISON BETWEEN PARENTS AND AGENCY IMPLEMENTORS ON TWENTY-ONE DESIRABILITY ITEMS.

ITEM	PARENTS			IMPLEMENTORS			t ^{2,3}	df ³	p ⁴
	MEAN	SD	N ¹	MEAN	SD	N ¹			
1	4.29	1.16	24	2.18	1.47	43	5.97	65	<.001
2	2.62	1.24	24	2.25	1.42	43	1.05	65	
3	2.52	1.08	23	2.51	1.45	43	.28	64	
4	4.56	.79	23	4.74	.73	43	.91	64	
5	3.82	1.11	23	4.06	1.39	43	.70	64	
6	4.29	1.00	24	3.53	1.49	43	2.20	65	
7	3.21	1.51	23	2.69	1.50	43	1.32	64	
8	4.29	1.16	24	3.51	1.34	41	2.34	63	
9	3.50	1.06	24	4.46	1.01	43	3.61	65	<.001
10	2.21	1.38	23	3.36	1.36	41	3.18	62	<.01
11	4.62	.97	24	4.88	.63	43	1.31	65	
12	4.37	1.17	24	4.72	.77	43	1.45	65	
13	4.04	1.08	24	3.74	1.33	43	.93	65	
14	3.70	1.43	24	3.65	1.23	43	.15	65	
15	2.04	1.26	23	2.67	1.49	43	1.70	64	
16	4.00	1.14	24	4.65	.97	43	2.43	65	
17	3.87	.99	24	2.62	1.46	43	3.69	65	<.001
18	4.33	1.05	24	4.51	1.10	43	.55	65	
19	4.29	1.27	24	3.86	1.40	37	1.19	59	
20	2.54	1.44	24	3.13	1.46	37	1.52	59	
21	4.20	1.25	24	4.72	.73	43	2.17	65	

1. Ns within a group vary from item to item because not all respondents rated all items.
2. The absolute value of t is presented since no directionality of difference was predicted and the direction of obtained difference can be determined by inspecting the means.
3. $t = \frac{|\bar{X}_1 - \bar{X}_2|}{s_{\bar{X}_1 - \bar{X}_2}}$, df = $N_1 + N_2 - 2$ (degrees of freedom)
 $s_{\bar{X}_1 - \bar{X}_2}$ (standard error of the mean)

Hypothesis 2:

There will be no significant difference among parents, agency implementors, or the ECI Council in rankings of the appropriateness of the Department of Health, Mental Health-Mental Retardation, Human Resources, Texas Education Agency, and Private Agencies to assume the responsibility for delivering intervention services to handicapped children under 3 years of age.

The analysis of the data sustained part of hypothesis 2 and rejected part of the statement. There was a significant difference (.001) on item #1 on the questionnaire, "TEA should have direct responsibility for administering the program," between parents and agency implementors. The parents felt it was highly desirable but unlikely that TEA administer the ECI program; agency implementors felt it was undesirable and unlikely. Further the parents viewed TDMHMR as the chief administrator of the program as undesirable and medium in likelihood; the agency implementors viewed TDMHMR as undesirable and unlikely. Both parents and agency implementors viewed TDH as undesirable and unlikely. It was strongly felt by both groups that the ECI program should be administered through coordination between all agencies providing services to handicapped infants.

Both parents and agency implementors felt it was desirable but fairly unlikely the Regional ESC's would deliver services in coordination with appropriate local agencies. The two groups of respondents further felt it

was unlikely and to some degree undesirable that local education agencies deliver services. Parents had a "medium" response while implementors had a rating of "low" on desirability.

The parents rated "very desirable" and "very likely" that services should be provided through a home based program. They felt it was undesirable and unlikely that a center-based ECI program would be provided. Agency implementors viewed the provision of home-based service as somewhat desirable ($\bar{x} = 3.51$) and somewhat likely to occur ($\bar{x} = 3.73$).

The combination of home-based and center-based services was viewed by the parents as acceptable ($\bar{x} = 3.50$) and medium in likelihood ($\bar{x} = 3.2$). The implementors of the ECI program felt the combination approach was very desirable and likely to occur. The parents rejected the center-based program as undesirable and unlikely while agency implementors rated both desirability and likelihood as medium on this approach.

Summary

There was a significant difference between the two groups of respondents on many of the statements on the questionnaire. One of the hypotheses was rejected by the

analysis of the data collected and the other hypothesis was partially sustained and partially rejected.

CHAPTER V

SUMMARY, DISCUSSION, AND RECOMMENDATIONS

Introduction

The purpose of this chapter is to present the summary, conclusions and recommendations that resulted from this study. The summary will review the purpose of the study, the procedures used in the study, limitations of the study, and the findings as indicated by the analysis of data. The conclusions present inferences drawn from the study. Recommendations are made to decision makers as they look at the future direction of the early childhood intervention program for handicapped infants in the state of Texas.

Summary

Purpose

The purpose of this study was to determine whether Early Childhood Intervention Services are better furnished by state/private center-based agencies, by state/private home-based programs, or by a combination program. Specifically the study was designed to determine whether there is a difference among parents, agency implementors or the ECI

Council in their expressed desirability for a home-based, center-based or combination approach to early childhood intervention for handicapped infants. It also was designed to determine whether there was a difference in the desirability and likelihood of the agency to assume the responsibility for the delivery of intervention services to handicapped children under 3 years of age.

An additional purpose was to determine whether, since a similar survey was conducted by Doggett in 1981, Forecasting Analyses of Birth to Three Legislation for the Handicapped, the perceptions had changed as to the most appropriate model for the delivery of services and the agency best suited to deliver the service.

Procedures

The procedures followed in this study consisted of six steps. These steps were: (1) A comprehensive review of related research and literature in the area of early childhood intervention for handicapped infants, (2) the search and permission gained for the use of an instrument to be used for the collection of data, (3) the sampling of an appropriate population for the study and distribution of the questionnaire, (4) the collecting, tabulating, and analysis of the data for the research, (5) the determining

of implications suggested by the analysis of the data and (6) the writing of the dissertation.

A questionnaire was administered to three groups: (1) parents, (2) agency implementors and (3) the Early Childhood Intervention Council. Forty-five of the fifty-six agencies receiving ECI funds responded; twenty-four of the thirty-five parents responded; none of the ECI Council responded to the questionnaire.

The questionnaire (Doggett, 1981) was designed to analyze the most desirable and likely alternatives to be included in intervention legislation in Texas. Since legislation has now been implemented in Texas (S.B. 630), the instrument was used in this study to determine the most desirable and likely model for the delivery of ECI services in Texas and to determine which agency or combination of agencies can best deliver the service. The instrument was validated at the time of Doggett's study in 1981 (Appendix D).

After the data was collected, responses for the desirability and likelihood of each of the twenty-one (21) items or statements were totaled and a mean desirability and likelihood rating for each statement was calculated for

the two groups of respondents. The number for each statement was placed in an appropriate cell on a desirability/likelihood matrix. Each statement was given a high desirability/high likelihood, high desirability/low likelihood, low desirability/low likelihood, low-likelihood/high likelihood rating.

A t-test was used to analyze the significant difference in responses to the twenty-one desirability/likelihood statements on the questionnaire by the two groups of respondents.

Findings

There was a significant difference in the responses from the two groups to some items on the questionnaire. The agency implementors assigned a very low rating to the concept of TEA having administrative responsibility for the E.C.I. program while the parents rated this concept very high. The ECI council members did not respond.

The agency implementors felt it was undesirable and unlikely to occur for T.E.A., TDMHMR or TDA to have the direct responsibility for administering the E.C.I. program. The parents however, felt it was very desirable and quite likely that T.E.A. should administer the program. The parents had a low desire for TDMHMR or TDH to administer the program.

Both groups of respondents felt it was highly desirable and likely that the administering agency should work in cooperation with the State Commission for the Blind, the Commission for the Deaf, Crippled Children's Division, the Office of Child Development, the Department of Human Resources, TDMHMR, TDH, and TEA. Both groups felt that the administering agency should contract with the appropriate private or public agency for the delivery of services.

The parent group felt it was desirable and likely that Regional Service Centers should deliver services in coordination with appropriate local agencies. The agency implementors rated this item as fairly desirable but medium likelihood.

Local education agencies delivering services were seen as low desirability and low likelihood to occur by the agency implementors. The parents rating was medium to low on desirability and likelihood for this item.

The parents responded very strongly to the statement that services should be provided through a home-based program. The agency implementors responded in the medium to high range in desirability and likelihood on the provision of a home-based program.

The agency implementors felt very strongly that the ECI service should be a combination home-based, center-based program. The parents, however, had a medium response to this model for the delivery of services.

The parents rejected the center-based provision of service with a low desirability/low likelihood rating. The agency implementors had a medium response to the center-based model for the delivery of services.

In summary, the parents favored the home-based model and rejected the center-based approach. They had a high-medium desire for the combination model of delivery of services. The agency implementors agreed that the home-based approach and the center-based approach were feasible but preferred the combination home-based, center-based model of service. Both groups of respondents said it was highly desirable and likely that infants with a diagnosed handicap should be eligible for service and infants at "high risk" or developmentally delayed should be eligible for service.

The parents felt it highly desirable and likely that funding for services should be totally provided from state appropriations. The agency implementors felt this was somewhat desirable but not as likely. Both groups felt

it was desirable and likely that state and local funds should be used to provide ECI services. Both groups of respondents rated undesirable and unlikely parents being required to pay a sliding-fee for services.

Agency implementors reported high desirability and likelihood that an individualized educational service plan should be developed for each infant served. That the program should be developed and monitored by a certified teacher received a low desirability and low likelihood rating. Parents rated both of the above items as medium-high to high in both desirability and likelihood. Both groups of respondents rated highly desirable and highly likely that the infants' educational program should be developed and monitored by a team of professionals.

Agency implementors and parents rated highly desirable and highly likely that legislation should be mandatory. Agency implementors rated permissive legislation nearly the same as mandatory which means they probably didn't understand the question. Both groups of respondents felt it was highly desirable and highly likely that related services needed by the infant to benefit from educational services should be provided.

Limitations

Limitations to this study are:

1. The parent sample was from a Regional Education Service Center area. It could not be assumed that it was a representative sample of the views of other parents of handicapped infants in the state.
2. None of the five E.C.I. Interagency Council Members responded to the questionnaire. This limited valuable data since this council is charged with the responsibility for administering the E.C.I. program.
3. Items #18, mandatory legislation, and #19 permissive legislation, were obviously misunderstood since they received a high desirability-high likelihood rating by the parent respondents.
4. Directions were mailed to the agency implementor respondents; parents were given verbal directions. Being able to meet with all of the respondents to explain the purpose of the study and the directions for completing the questionnaire would have strengthened the study.

Discussion

In the study by Doggett in 1981 it was suggested that the following alternatives were highly desirable and likely to occur:

1. the administering agency should work in cooperation with other agencies.
2. Services should be provided through a combination of home and center-based programs.

3. Both infants with a diagnosed handicap and those at risk or developmentally delayed should be eligible for services.
4. IEP's should be written for infants.

All of these alternatives were considered highly desirable and highly likely in this follow-up study.

Several items on the questionnaire dealt with the appropriate agency to deliver ECI services. In Doggett's study respondents rated the T.E.A. as highly desirable and highly likely to administer the program. In this study, parents rated this item as very desirable and likely while agency implementors rated T.E.A. as very undesirable and unlikely. TDMH-MR and TDH both received a low desirability/low likelihood rating from both groups of respondents in this study. Both groups agreed that a cooperative effort was desirable and likely but differences occurred on which agency should direct the effort.

Parents felt the Regional E.S.C.'s should provide services in coordination with appropriate local agencies while agency implementors found this to be of moderate desirability and likelihood. In the previous study the education service centers were not viewed by either group of

respondents as highly desirable or likely. Local education service centers were rated low in desirability and likelihood by agency implementors and average by the parent group. Obviously, there is still no consensus as to the most appropriate agency to administer the ECI program, even though the Interagency Council is charged with this responsibility.

The home-based program was rated as highly desirable and highly likely by the parent respondents. This was also the case in the previous study. The most obviously desirable/likely model for the delivery of early infant intervention services is the combination home-based/center-based programs. This preference is not surprising since many of the best known programs utilize this model.

Recommendations

Results of the study suggest several issues which need further investigation:

1. Decision makers must consider what is ideal as well as feasible to parents and administrators in order to make appropriate decisions.
2. A second issue is which agency or combination of agencies can best administer the E.C.I. program. This study strongly suggests the T.E.A., TDMH-MR and TDH are not the appropriate agencies. Regional Education Service Centers received a high rating. Perhaps this agency should be investigated as the primary administrators of the E.C.I. program contracting with appropriate private or public agencies for the delivery of appropriate services.

3. It is obvious from this study that the center-based model for the delivery of ECI services is unacceptable. The combination home-based, center-based approach is most accepted by those interested in providing quality services to handicapped infants. Since this combination approach is costly, further investigation needs to be made to determine a way of funding this model.
4. Parents and professionals need to lobby for continued funding of the E.C.I. program making the service available to all handicapped infants. At the present time only fifty-six programs are funded leaving many handicapped infants unserved regardless of the model of service or the agency providing the service.
5. Decision makers need to carefully examine the findings of this study as they strive for more funding and to provide direction to a program which is in its infancy.
6. A follow-up study should focus on a larger parent sample, the E.C.I. Council Opinions and perhaps a survey of early childhood intervention services for handicapped infants in other states.

APPENDICES

APPENDIX A

QUESTIONNAIRE

Instructions for filling out questionnaire

Purpose of the Study

A questionnaire has been devised to ascertain which components of infant intervention various groups think are desirable and likely to be needed in an extension of services to handicapped infants and their families in the state of Texas. Surveys of infant services have shown that different types of organization choose different components when setting up services for handicapped infants. Please let us know your preference by filling out the questionnaire provided for you and by including the demographic data requested in the following section. The differences in the responses of administrators, parents, and the ECI Council will be analyzed and reported on.

Demographic data

Are you a member of the ECI Council? yes____no____

Are you a parent of a handicapped child? yes____no____

Are you involved in a center-based program? yes____no____

Are you involved in a home-based program? yes____no____

Are you involved in a combination program? yes____no____

Which agency sponsors your program? TEA____, MH-MR____,
Health Dept.____, other____

How to fill out the Questionnaire

The questionnaire includes 21 statements generated by parents, teachers, administrators, university faculty, and health personnel. The statements reflect concepts which these experts feel are important in the future direction of the ECI Program. Beside each statement are two columns of numbers (1-5). The column on the left pertains to the likelihood of that concept's inclusion in future legislation. The numbers reflect the degree of desirability/likelihood: one (1) is least desirable/likely, and five (5) is most desirable/likely. Consider the likelihood and desirability of each statement and circle the number which most closely reflects your opinion.

EXAMPLE:

Desirability						Likelihood				
lo		hi				lo		hi		
1	2	3	4	5	All cars should be fuel efficient by 1982.	1	2	3	4	5

This response indicates a high degree of desirability and a low degree of likelihood.

Desirability/Likelihood Questionnaire

Desirability						Likelihood				
lo		hi				lo		hi		
1	2	3	4	5	TEA should have direct responsibility for administering the program.	1	2	3	4	5
1	2	3	4	5	TDMHMR should have direct responsibility for administering the program.	1	2	3	4	5
1	2	3	4	5	The Department of Health should have direct responsibility for administering the program.	1	2	3	4	5
1	2	3	4	5	The administrating agency should work in cooperation with the State Commission for the Blind, the Commission for the Deaf, the Crippled Children's Division, the Office of Child Development, the Department of Human Resources, TDMHMR, TEA and the Department of Health.	1	2	3	4	5
1	2	3	4	5	The administrating agency should contract with the appropriate public or private agency for the delivery of services.	1	2	3	4	5
1	2	3	4	5	Regional Service Centers should deliver services in coordination with appropriate local agencies.	1	2	3	4	5
1	2	3	4	5	Local educational agencies should deliver services.	1	2	3	4	5

Desirability						Likelihood				
lo				hi		lo				hi
1	2	3	4	5		1	2	3	4	5
					Services should be provided through a home-based program.					
1	2	3	4	5	Services should be provided through a combination-home-and-center-based program.	1	2	3	4	5
1	2	3	4	5	Services should be provided through a center-based program.	1	2	3	4	5
1	2	3	4	5	Infants with a diagnosed handicap should be eligible for services.	1	2	3	4	5
1	2	3	4	5	Infants "at risk" or developmentally delayed should be eligible for services.	1	2	3	4	5
1	2	3	4	5	Funding for services should be totally provided by state appropriations.	1	2	3	4	5
1	2	3	4	5	State and local funds should be used to provide services.	1	2	3	4	5
1	2	3	4	5	Parents should be required to pay a sliding-fee for services.	1	2	3	4	5
1	2	3	4	5	An Individualized Education Service Plan should be written on each infant served.	1	2	3	4	5
1	2	3	4	5	The infant's educational program should be developed and monitored by a certified teacher.	1	2	3	4	5
1	2	3	4	5	The infant's educational program should be developed and monitored by a team of professionals.	1	2	3	4	5
1	2	3	4	5	Legislation should be mandatory.	1	2	3	4	5
1	2	3	4	5	Legislation should be permissive.	1	2	3	4	5
1	2	3	4	5	Related services needed by the infant to benefit from the educational services should be made available.	1	2	3	4	5

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APPENDIX B

LETTERS OF TRANSMITTAL

DAINEY LEGÉ
P.O. Box 2751
Austin, Texas 78768
(512) 834-4488

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January 20, 1983

At the present time, research is being conducted in conjunction with the Department of Child Development and Family Living at Texas Woman's University. This research is designed to provide data for decision makers in determining which components of infant intervention various groups think are desirable and likely to be needed in an extension of services to handicapped infants and their families in the State of Texas. It will also provide valuable information as to which agency or agencies can best provide early childhood intervention services.

Enclosed you will find the desirability/likelihood questionnaire which will provide the data to be analyzed. Please complete the items as indicated in the instructions and return the questionnaire in the envelope provided. So that your opinion input can be included in this study, please return this questionnaire to us by February 11, 1983.

Thank you for your interest and assistance in this project.

Sincerely,

Dainey Legé

Dainey Legé

Texas Education Agency



- STATE BOARD OF EDUCATION
- STATE COMMISSIONER OF EDUCATION
- STATE DEPARTMENT OF EDUCATION

201 East Eleventh Street
Austin, Texas
78701

January 19, 1983

Ms. Dainey Lege
6113 A Shadow Valley Drive
Austin, Texas 78731

Dear Ms. Lege:

We are very pleased that you have chosen to do a replication study of early childhood intervention home-based and center-based programs for handicapped children birth through age 2 in Texas. With the first study of this subject having been conducted prior to the passage of S. B. 630, it is important that we have the opportunity for study now that programs are in operation throughout the state.

The ECI program is in the second year of funding local programs and it is vitally important that the ECI Council and member agencies have information concerning the impact, if any, of the programs upon services to birth to 2 year olds and upon the public school programs for 3 and 4 year old handicapped children.

Information from such studies will no doubt significantly contribute to the decision to be made concerning future development and operation of the ECI program.

While we realize that responding to the survey is optional, we sincerely hope that you will receive a very good response to your survey and look forward to you sharing your findings with us.

Please feel free to contact this office if we may be of further assistance.

Sincerely,

A handwritten signature in cursive script, reading "Kenneth L. Crow".

Kenneth L. Crow, Director
Special Education Developmental Services

KLC:cb

cc: Dr. Donna Livingston

Dainey Lege
P.O. Box 2751
Austin, Texas 78768
(512) 834-4488

February 18, 1983

Dear _____,

On January the 20th you received a letter and questionnaire requesting that you participate in a study designed to provide data for decision makers in determining directions for the early childhood intervention program for handicapped infants in Texas.

Your input is very much needed. Will you please take a few minutes of your time to complete the questionnaire and return it to me at your earliest convenience.

Another questionnaire and a self-addressed envelope is included.

Sincerely,

Dainey Lege

... ..

... ..

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... ..

... ..


... ..

... ..

APPENDIX C

Dainey Lege has my permission to use the Desirability/Likelihood Questionnaire developed by me for use in her dissertation study.

I understand that I shall be credited as the author of the questionnaire in her dissertation and in all printed materials referencing the study.



Libby Doggett, Ph.D.

December 13, 1982

Date

APPENDIX D

APPENDIX D

VALIDITY AND RELIABILITY OF THE QUESTIONNAIRE

Content analysis was used to establish validity for the desirability/likelihood questionnaire developed by Doggett in 1981 at The University of Texas at Austin. Content analysis is a structured document-analysis technique in which the researcher first constructs a set of mutually exclusive and exhaustive categories that can be used to analyze a document and then records the frequency or intensity with which each of these categories is found in the document studied (Bailey, 1978). Content analysis is defined as "a research technique for making inferences by systematically and objectively identifying specified characteristics within the text" (p. 5).

Five steps must be completed in order to analyze the content of a document (Bailey, 1978). The first step is to specify the document to be sampled which in this case was the legislation recommended to the 1981 Legislature by the Interim Study Committee (Senate Bill 630). The second step was to specify the content categories to be measured. In order to note the common elements of the matrix data and the recommended legislation. The

twenty forecast statements from the questionnaire were used as categories against which the bill was analyzed. The third step was to define a recording unit to be used. The final step in content analysis was to choose the system of enumeration to be used to qualify the data. Coders were asked to note whether the statements appeared in Senate Bill 630 (Doggett, 1981).

In order to verify predictability of the instrument, the percentage of accurate matrix results was grouped into three categories:

1. Events rated either 4 or 5 on both desirability and likelihood.
2. Events rated 3 on either desirability or likelihood.
3. Events rated either 1 or 2 on desirability or likelihood.

Reliability of the content analysis procedures was established in two ways. Intercoder reliability was established by having two researchers use the categories, units and systems of enumeration chosen to analyze the legislation. Coders agreed on all but one item (95% agreement). Instrument reliability was established by having one of the researchers then repeat the process one week later. The researchers agreed on all items (100%) when analyzing the bill contents one week later (Doggett, 1981).

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