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**EVALUATION OF AN EARLY INTERVENTION PROGRAM  
USING ELIGIBILITY CRITERIA**

by  
Emily Dana Kurlansik

A Thesis

Submitted to the  
Department of Psychology  
College of Liberal Arts and Sciences  
In partial fulfillment of the requirement  
For the degree of  
Master of Arts  
at  
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Thesis Chair: Dr. Roberta Dihoff, Ph.D.

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## **Dedication**

*I would like to dedicate this thesis to Elizabeth Benckert, Alison Hunt, Meredith Greenfield and Jessica Walsh. I never could have survived my first year of graduate school without your support, empathy and love.*

## **Acknowledgments**

I would like to thank Professor Roberta Dihoff and Professor Teri Allen for their tireless efforts and support in assisting me in the development and completion of this project.

## **Abstract**

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EVALUATION OF AN EARLY INTERVENTION PROGRAM USING  
ELIGIBILITY CRITERIA

2011/12

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Master of Arts in School Psychology

Early Intervention programs are state and federally funded programs that are available in virtually every state that provide supports to children birth to three who have developmental delays. Eligibility into the program varies by state and determining eligibility for a child is a complex task that has tremendous implications on both the program and its children. A program evaluation was conducted on a branch of an early intervention program located in New Jersey to determine whether service providers were correctly identifying children who were eligible for services. Results indicated that four of out the 112 children in the program were incorrectly identified. However, the program was effective in ameliorating developmental delays through a comparison of developmental levels at the initial and annual evaluations. These results indicate that service providers are effectively providing early intervention services, but are lacking in diagnostic and identification skills.

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## Chapter 1

### Introduction

In New Jersey, the implementation of Part C under the Individuals with Disabilities Act resulted in the Early Intervention Program, which is partially funded through the Department of Health and Senior Services. The New Jersey Early Intervention Program is a system of services and supports provided to children birth to three years of age who have developmental delays and/or a specific medically diagnosed physical or medical condition that has a high probability of resulting in a developmental delay. A referral from a medical professional is not necessary for a child to be evaluated for early intervention services. If a child is found eligible for services, a service coordinator arranges an Individualized Family Service Plan (IFSP) meeting with the family and discusses the child's areas of strength, potential needs and specific interventions. The service providers may consist of a Special Education Teacher, Occupational Therapist, Physical Therapist or Speech Therapist. These providers work with the child and family on all areas of the child's development and provide an ongoing assessment of the child's progress. Services are provided in the home based upon a 1998 requirement that the New Jersey Early Intervention deliver services to children and families in natural environments. Children not found to be eligible are discharged from the Early Intervention Program. Therefore, the eligibility criteria play an important role in whether or not a child will receive Early Intervention services (Shackelford 2006).

In New Jersey, eligibility is established upon the following criteria, which define a delay as:

1. At least a 33% delay; or a score of at least 2.0 standard deviations below the mean in one developmental area; or
2. At least a 25% delay, or a score of at least 1.5 standard deviations below the mean in two or more of the developmental areas.

Developmental areas must be measured with appropriate diagnosed instruments, including clinical opinion, and include physical (gross motor, fine motor, vision and hearing), cognition, communication, social or emotional and adaptive functioning (Policies and Procedures: New Jersey Early Intervention System 2010, p. 2).

### **Statement of the Problem**

According to Benn (1993), determining eligibility for intervention services is a complex task as, “eligibility decisions have tremendous implications for a state’s entire early intervention service delivery system and ultimately the welfare of a generation of children” (p. 18). Early intervention programs must establish appropriate measures of eligibility as well as outline procedures to document a delay. It is presumed that early intervention programs establish empirically valid methods of determining a child’s eligibility for enrollment and discharge that is adherent to federal and state mandates. However, because the requirements to determine developmental delays and growth vary by state, there is a need for further investigation into the actual levels of delay of the children determined eligible for early intervention programs. Shonkoff and Meisels (1991) warn that percent delays may not be equivalent across different ages of children. There may be a difference in severity between a three year old child and a one year old child who are both functioning 25% below age level, where the younger children is more at risk. Therefore, more research is needed regarding discrepancies between state and federal mandated levels

of developmental delays and the actual developmental delays in children enrolled in early intervention programs.

### **Purpose of the Study**

The purpose of this study was to determine whether a branch of the New Jersey Early Intervention Program (NJEIP) is in adherence to the rules and regulations set forth by the State of New Jersey and the Federal Regulations for 34 CFR Part 303, Early Intervention Program for Infants and Toddlers with Disabilities, by addressing discrepancies in eligibility for the program by developmental delays. It was hypothesized that the early intervention program is in adherence with state guidelines by means of effectively and correctly measuring developmental delays to determine eligibility into the program.

A random sampling methodology was utilized. Previously enrolled children in the program were examined. The percentages of delays in their developmental domains were compared against the state regulations of 33% in one delay or 22% in 2+ areas. Operational definitions include developmental delay: a delay is determined by dividing the level of delay, in months, divided by the child's chronological age

It was assumed that the measures utilized in the early intervention program are statistically valid, reliable and applicable. It was also assumed that the children are correctly diagnosed and the practitioners conducting the interventions are properly trained and certified for the position. In addition, an assumption was made that the practitioners were properly observing children and the results of the tests and observations were correctly representative of their behaviors/diagnoses.

## **Definitions Used in Study**

Early Intervention Program (wrightslaw.com): process of providing services, education and support to young children who are deemed to have an established condition, those who are evaluated and deemed to have a diagnosed physical or mental condition (with a high probability of resulting in a developmental delay), an existing delay or a child who is at risk of developing a delay or special need that may affect their development or impede their education.

Home Visiting programs (HRSA/ACF 2010): “an evidence-based program, implemented in response to findings from a needs assessment, that includes home visiting as a primary service delivery strategy (excluding programs with infrequent or supplemental home visiting), and is offered on a voluntary basis to pregnant women or children birth to age 3 targeting the participant outcomes in the legislation which include improved maternal and child health, prevention of child injuries, child abuse, or maltreatment, and reduction of emergency department visits, improvement in school readiness and achievement, reduction in crime or domestic violence, improvements in family economic self-sufficiency, and improvements in the coordination and referrals for other community resources and supports” (p. 7).

Developmental Delay (NJEIS 2010): The New Jersey definition of developmental delay that is measured with appropriate diagnostic instruments, procedures, and clinical opinion in the following areas of development: Physical (gross motor, fine motor and sensory: vision and hearing), Cognition, Communication, Social or emotional or Adaptive. A child must have at least 25% delay in 2 areas of development or at least a 33% delay in one area of development. It is adjusted age for premature infants are based on 40 weeks

term. There is no adjustment for infants born at or after 38 weeks gestation. Age adjustment ends at 24 months of age.

Individualized Family Service Plan (Cash 1991): A plan of services for infants and toddlers and their families. Such a plan includes statements regarding the child's present developmental level, the family's strengths and needs, the major outcomes of the plan, specific interventions and delivery systems to accomplish outcomes, dates of initiation and duration of services, and a plan for transition into public schools.

## Chapter 2

### Literature Review

#### History

In 1975, Congress passed legislation, originally named The Education For All Handicapped Children Act (EHA), to ensure that all children would receive free and appropriate education. This led to the creation of a complex special-education system throughout the United States (Ramey & Ramey 1998). This act mandated that if a state offered public education to children at any age, it could not exclude children with disabilities of the same age from a free and appropriate education (FAPE) including special education and related services. Epps and Jackson (2000) cited the following protections the EHA set forth:

1. A nondiscriminatory evaluation by an interdisciplinary team that identifies the child's strengths and weaknesses;
2. Development of an Individualized Education Program (IEP) that identifies objectives, strategies, and evaluation;
3. Assurance that children are serviced in the least restrictive environment (LRE); (e.g., appropriate participation in general education program)
4. Recognition of the importance of parents' participation in their children's education program (p. 15).

The early intervention movement was most influenced by the EHA because it significantly changed the federal government's role in supporting services for children with disabilities. This legislation mandated the extension of the right to education for eligible three to five year olds under Part B by 1992 and provided financial incentives to

states to provide early intervention services for children zero to three under Part C. Programs under Part H would be funded by a variety of sources such as Medicaid, Social Security Act and private health insurance among others. This legislation significantly increased the number of young children receiving services. To date, all 50 states and U.S. territories receive these funds (Epps & Jackson 2000).

The legislation was reauthorized and re-entitled the Individuals with Disabilities Education Act (IDEA) in 1990, which included dramatic reforms. The IDEA act was groundbreaking for its emphasis on inclusion, which promotes enrolling children with disabilities in educational settings with children without disabilities, and its emphasis on the role of the family. Public schools were mandated to serve children with disabilities beginning at age three (Epps & Jackson 2000). This led to the creation of a large inter-agency array of services and supports in all 50 states and U.S. territories known as the early intervention system. All infants and toddlers with diagnosed developmental disabilities are eligible for early intervention services. This federally initiated early intervention system was fueled by the combined effort of parents, advocacy organizations, and early childhood specialists who recognized the importance of enhancing the development of young children and minimizing the potential of developmental delay. (Ramey & Ramey 1998).

### **Early Intervention**

Notions of attachment, sensitive periods, neural plasticity and primacy of first learning have driven the investment into early intervention programs (Guralnick 1998). Early intervention includes services and supports designed to enhance and improve the developmental trajectory of young children and minimize the potential of developmental

delay. The purpose of early intervention is to minimize the need of special education services and enhance the care giving capacity of families (Baker & Feinfield 2003). Interventions have historically been aimed at cognitive, motor development and broad-based interdisciplinary therapies. Efforts are directed toward children who are at environmental risk and who are, or may be, biologically impaired (Cooper, Schelner & Simeonsson 1982). In 1998, RAND (Karloly et al., 1998) published a report in which they examined the effects of early childhood programs. Their results showed various benefits which included: cognitive, emotional and educational gains, improved parent-child relationships, long term benefits for the child participants including reduced criminal activity, increased labor force activity, reduced welfare dependency and higher income in their adult life (Gray & McCormick 2005).

In 1997, the National Research Council (Guralnick 1998) set up a committee to review the area of early childhood interventions and publish a report on its results. Their conclusions and recommendations provided information on the short-term effectiveness of programs for improving cognitive and social outcomes in children with developmental delays and short-term gains in IQ. This can be seen in the Carolina Abecedarian Project where 18% of the control group by age 4 had an IQ less than 70. This is compared with 3% of children participating in the intervention (Guralnick 1998). Regardless of the National Research Council's findings, Guralnick (1998) explains the "there now exists unequivocal evidence that the declines in intellectual development that occur in the absence of systematic early intervention can be substantially reduced by intervention implemented and evaluated during the first 5 years of life" (Guralnick, 1998, p. 321).



## Home Visiting Programs

According to Baker and Feinfeld (2003), the most prevalent program model for early intervention programs is home-based. Although home based early intervention programs lack in an agreed upon theoretical basis and clear empirical justification, they continue to be considered an effective means of preventing or ameliorating early childhood developmental problems. These programs offer support of parent-child interaction and increase families' knowledge of developmental stages and healthy environments for their children (Halpern 1986).

Epps and Jackson (2000) summarized the goals of home-based programs:

“Accepting the parenting role with a sense of confidence, pride and enjoyment; supporting parents' self-recognition of their strengths and skills; acquiring valuable information about child development and its meaning for interaction with children; understanding and responding to child's behavior in growth-enhancing manner; using available community resources that support families and supporting fellow parents (p. 21).

To facilitate these goals, most home visiting programs use interventions such as the provision of social support, practical assistance such as referral to community resources and education regarding parenting and/or child development. Home visiting programs are linked by their method of service delivery in the home, their goal of helping children through helping the parents of these children and their focus on young children. The home visiting method offers advantages to parents who do not have reliable transportation, time off from work or childcare (Sweet & Appelbaum 2004). Having the intervention in the home provides the opportunity for “more whole-family involvement, personalized service,

individualized attention and rapport building” (Sweet & Appelbaum 2004). The home-based method can also increase retention rates in early intervention program (Sweet & Appelbaum, 2004, p. 1435). Most programs theorize that the creation of a trusting relationship between parent and home visitor “can be a first step in developing the parent’s ability to form and sustain secure relationships with others, including their own children” (Gomby et al, 1999, p. 7). Beyond these common characteristics, home visiting programs differ in their goals, duration of service, levels of service, staffing and clientele (Gomby et al, 1999; Sweet & Appelbaum, 2004).

The Infant Health and Development Program (IHDP) (Guralnick 1998) was developed in 1984 and was the largest trial testing on the effectiveness of early childhood intervention during the twentieth century. A sample of 985 low birth weight infants were provided pediatric care and parents were referred to services available in their communities to assist them in caring for their newborns. Of the sample, 377 infants and their parents were assigned to an intervention group which consisted of participating in a three-year education program of home visits from workers who provided family support and facilitated parent-child activities (McCormick et al 2006). The IHDP measured the children’s outcomes at ages 1, 3, 5 and 8 years of age. At age three, children in the intervention group scored higher on IQ tests, had fewer behavior problems and demonstrated better language skills than children in the control group. At age five and eight, there were no statistically significant differences between the groups in terms of behavior, cognitive or academic skills (IHDP 1990). However, in a follow up study, participants at 18 years of age in the intervention group showed higher rates of school

completion and reduced crime rates and delinquency that were not anticipated in the original study. (McCormick et al 2006).

The Early Head Start National Research and Evaluation project (ACF 2003) is one of the largest effectiveness studies of early childhood intervention conducted to date that addressed the impact of Early Head Start on early childhood trajectories, adherence to Head Start standards and location of services. Early Head Start was designed to serve low-income women and families with children up to the age of three. This “two generation program” provided families with child development services that were delivered through home visits, childcare, case management, parenting education, health care and referrals and family support. The program services were tailored to meet the needs of the families and selected among program options (home-based, center-based, combination “mixed approach”). Research was conducted on whether the center, home based or mixed approach to services would have more of an impact in Early Head Start programs. Researchers anticipated that adopting a mixed approach of home and center-based services would be more effective than a singular approach (Love, J., Kisker, E., Ross., C., Raikes, H., Costantine, J., Boller, K...Vogel, C. (2005).

Early Head Start home based programs produced impacts in fewer domains than did mixed approach programs, despite the fact that the home-based program constituted the largest program subgroup and thus had the greatest statistical power (Love et al 2005) In the home-based programs, children scored higher in their social-emotional development than their control counterparts. Overall, Early Head Start programs had significant impacts in the mixed-approach domain and included higher performance on children’s cognitive, as quantified by IQ score, and language functioning as well as a reduction in aggressive

behavior as rated by their primary caretaker (Love et al 2005). Previous research (Love et al 2005, Sweet & Appelbaum 2004, Gomby 1999) has suggested that programs combining home visiting with center-based care were more effective across a wider range of outcomes than programs that implement a singular approach. Center based and mixed programs are more likely to produce effects on children's cognitive development. (Love et al 2005, Sweet & Appelbaum 2004).

Berlin, L., O'Neal, C. & Brooks-Gunn, J. (1999) suggested a framework for understanding effective early intervention programs. This framework is based on three dimensions: the program, its participants and their interaction. Program characteristics include the recipients of program services, curriculum of activities, method of service delivery, quantity and timing of services, program staff (interpersonal relationships, personal characteristics and training) and cultural sensitivity of services. Participant characteristics include child characteristics, family characteristics, community characteristics and the cumulative risk of "accumulation of biological and environmental conditions that have been shown to decrease children's opportunities for achieving their full potential and increase the likelihood of developmental delays and problems" (Berlin et al., 1999, p. 11). Interaction characteristics include participant engagement and the match between the participant's needs and program services. According to Berlin et al., (1999), taking into consideration the three dimensions is a requirement to understanding how early interventions work. They suggest focusing on the third dimension, the interaction between program and participants to develop programs that focus on relationships within early intervention. Instead of evaluators questioning whether an intervention worked, Berlin et

al., (1999) suggests instead posing the question, “for whom and under what circumstances are particular services most effective?” (Berlin et al., 1999).

### **Eligibility Criteria in Early Intervention Programs**

The purpose of eligibility is to determine whether a child meets the definition or criteria for enrollment in early intervention programs established by states and jurisdictions under Part C (Dunst & Trivette 2004). A major challenge to policy makers in implementing the Early Intervention Program Part C, is determining definitions of developmental delay and criteria of eligibility for young children. Eligibility criteria impact the number and types of children receiving early intervention services, the types of services provided and the cost of services. Participating states must provide services to children who either have a developmental delay or those at risk of developing a developmental delay from a diagnosed mental or physical condition (Shackelford 2006). Information is obtained through early identification of a developmental delay, clinical opinion (the consensus of a multidisciplinary team that includes parents and information from multiple sources) and other procedures to make an eligibility determination (Shackelford 2006).

Each state has varied eligibility criteria and therefore varied outcomes regarding which children are deemed eligible for services (Dunst and Trivette 2004). There is wide variability in the type of eligibility criteria states use to describe developmental delay in addition to the wide range of in the level of delay states require for eligibility. Common measurements are 2 standard deviations or 25% delay below the mean in one or more areas of development, or 1.5 standard deviations or 20% delay in two or more areas. However, variability ranges from 50% delay in one area in multiple states to only “observable and measurable” delays (Shackelford 2006).

Dunst & Trivette (2004) developed three major categories of eligibility determination practices through a literature review. The first category is decision-making procedures that are used to make an eligibility determination based on assessment information and eligibility criteria. The second category is the characteristics of states' eligibility criteria that impact early intervention. The third category is state and local eligibility criteria and policies that effect enrollment in early intervention programs (Dunst & Trivette 2004).

States are required to identify, “appropriate diagnostic instruments, procedures (including the use of “informed clinical opinion”, and levels of functioning or other criteria that will be used to determine eligibility” (Shackelford 2006). States represent criteria for delay quantitatively in the difference between a child’s chronological age and actual performance in a percentage of chronological age, delay shown as a certain number of months below chronological age or delay demonstrated by standard deviation below the mean on a norm-referenced assessment. Criteria are also expressed qualitatively, with delay being indicated by atypical behaviors or development (Shonkoff & Meisels 1991).

### **Program Evaluation**

Program evaluation is comprised of interrelated components that provide policymakers and practitioners with information that can be used for a variety of purposes. Epps & Jackson (2000) described program evaluation as “the systematic collection of information about the activities, characteristics, and outcomes of programs to make judgments about the program, improve effectiveness and/or inform decisions about future programming” (Epps & Jackson 2000 p. 230). The American Evaluation Association provides five principles based on best practice standards for designing a program

evaluation in early intervention programs. These guiding principles include: conducting a systematic inquiry that is data-drive, providing competent services, ensuring the integrity and honesty of the evaluation process, respecting the people involved in and affected by the evaluation and being sensitive to the diversity of interests and values of those evaluated (Epps & Jackson 2000).

Program evaluations usually focus on the effectiveness of an early intervention program by assessing the changes in child behavior or development with standardized instruments, observation or clinical judgment from a professional evaluator (Epps & Jackson 2000). When evaluating family outcomes, policymakers focus on whether families feel their children received the services they felt were needed and whether they perceived those services had a positive impact on development and behavior. Parent's satisfaction with their child's services is a critical outcome in a program evaluation because a child's services are rated as a parent's top priority (Bailey, D., McWilliam, R.A., Darkes, L., Hebbeler, K., Simeonsson, R.L., Spiker, D. & Wagner, M. (1999). Gray and McCormick (2005) suggest a program design for improving the effectiveness of early intervention programs: (1) Programs should be center-based or a mixed program of both center-based and home components rather than solely home-based (2) developing a program model that can be tailored to individuals and particular ethnic groups and (3) not using models which rely on case management.

Program evaluation consists of facilitating program improvement by means of a formative evaluation and identifying the value of a program through a summative evaluation. A *formative evaluation* is focused on the collection of data to improve outcomes. The goal of formative evaluations is to improve the quality of services to assist

in the assessment of program goals and objectives. An important component of formative evaluations is to closely monitor child and family progress toward intended outcomes. A *Summative evaluation* focuses on the work and value of a program to determine its impact. This evaluation focuses on treatment fidelity, or whether the program is being implemented as designed. A second important aspect of summative evaluations is evaluating the program's outcomes (Epps & Jackson 2000).

Gomby (1999) describes the primary purposes of program evaluations are to answer three questions: (1) what services did the program provide? (2) Who received the services? (3) Did the services produce the anticipated outcomes? The first question, of what services did the program provide can give useful information to improve the program and interpret the results of evaluations focused on program effectiveness. The intensity of services (e.g. differentiating various therapies and services), content and quality of the visits received (e.g., sensitivity of professionals to child's needs and style, ability to establish rapport, ability to communicate effectively with parents, whether services directly address perceived needs) and ancillary services are all issues that should be evaluated and addressed under the evaluation of a program's services (Bailey et al 1999). Evaluating who participated in a particular services, as well as eligibility and exclusion criteria, is an important element in making future decisions about which populations will receive services in the future (Gomby 1999). Information is usually gathered about eligible participants and then who actually received the services. Evaluators use this type of information to make decisions about enrollment and participation among different groups of people. Evaluating a service's anticipated outcomes is the final step in reaching a conclusion about the early intervention program's effects on children and families.



Evaluators should select outcomes based on their implicit and explicit theories of how their services are purported to create change. They must also determine how to measure outcomes. Measurements that have been confirmed to be valid and reliable are typically chosen to assess the population that is participating in the program. Even more critical for program evaluation, is the inclusion of a comparison or control group. This addition to an evaluation design determines the extent to which an evaluator can claim their program caused the observed benefits (Gomby 1999).

## Chapter 3

### Methodology

The present researcher used participants who attended an Early Intervention program in Southern New Jersey from 2010 to 2011. One hundred and twelve children met eligibility criteria for the program in the 2010-2011 cycle. Ninety children were from an area servicing Atlantic County, Camden County, Gloucester County and Salem County. 18 children were from a service area in Cumberland County and four children were located in the Burlington County service area. It was hypothesized that the Rowan University early intervention program was in adherence with state guidelines by means of effectively and correctly measuring developmental delays to determine eligibility into the program. In order to be eligible for the early intervention program, the children must have displayed a 33% delay in one developmental area, or a 25% delay in two or more developmental areas. All of the children who participated in the current study were determined eligible for early intervention services by meeting the state and federal early intervention eligibility requirements.

Archival data was utilized from the program. The New Jersey measures of developmental delay were also used to compare against the participant's documented levels of delay. The data consisted of date of birth, children's levels of developmental delay at the time of enrollment and levels of delay at the six-month and annual reviews. Enrolled children's levels of delay were compared against the Policies and Procedures outlined in the New Jersey Early Intervention System at entry and reviews. The NJEIS states, "eligible child must demonstrate: at least a 33% percent delay or a score of at least 2.0 standard deviations below the mean in one developmental area; or at least a 25%

percent delay or a score of at least 1.5 standard deviations below the mean in two or more developmental areas” (Policies and Procedures New Jersey Early Intervention System 2010 p 2).

The present experimenter used a t-test design. The independent variable was the documented level of delay in six developmental areas: cognitive, gross motor, fine motor, expressive communication, receptive communication, adaptive/self-help and social functioning. The dependent variable was the difference between the state mandated levels of delay: 33% delay in one developmental area or a 25% delay in two or more developmental areas, and the documented levels of delay in the children participating in the program.

The data was collected from an archived source in the Early Intervention Program database. The measures of developmental delay for each child were documented to determine if eligibility into the program met state and federal standards. The measures for each child were compared against the required 33% delay in one developmental area or 25% delay in two or more developmental areas for admission into an early intervention program.

## Chapter 4

### Results

It was hypothesized that the Early Intervention program at Rowan University was in adherence with state and federal laws regarding eligibility requirements. Results indicated that four out of the 112 children in the program were falsely considered eligible for the program. These four children had levels that did not meet the state and federal criteria of a 25% delay in two or more developmental areas or 33% delay in one developmental area for eligibility into an early intervention program. Child #1, female from Camden County, had 22% delays in gross and fine motor movement. Child #2, male from Gloucester County, had a 30% delay in receptive communication. Child #3, male from Gloucester County, had a 20% delay in gross and fine motor movement, but at annual review was found eligible for services due to a decline in functioning. Child #4, female from Salem County, had a delay of 24% in gross motor movement.

In order to assess whether the program was effective in assisting children in increasing their developmental levels, the researcher measured pre and post measures of children who had comparable levels at the initial evaluation and annual evaluation. Twenty children had levels at both the initial and annual evaluations. The results of a paired samples t-test for cognitive levels at initial and annual evaluations revealed scores of  $t=5.876$ ,  $df=11$  and  $p=0.00$ . Gross motor levels had a  $t=6.696$ ,  $df=9$  and  $p=0.00$ . Fine motor levels had a  $t=8.285$ ,  $df=9$  and  $p=0.00$ . Receptive communication had a  $t=7.046$ ,  $df=10$  and  $p=0.00$ . Expressive communication revealed a  $t=5.148$ ,  $df=11$  and  $p=0.00$ . Adaptive functioning had a  $t=4.181$ ,  $df=9$  and  $p=0.02$ . Social functioning had a  $t=5.923$ ,  $df=9$  and  $p=0.00$ .

The average developmental level of cognition at the initial evaluation was 8.8 months. At the annual review, the average level was 19.6 months. The average developmental level of gross motor functioning was 9.1 months and at the annual review, was 20.8 months. The average developmental level of fine motor movement at the initial evaluation was 8 months, and at the annual review was 19.4 months. The average level of receptive communication at the initial evaluation was 6.4 months and at the annual review was 18 months. The average developmental level of expressive communication at the initial evaluation was 7.8 months and at the annual review was 16.8 months. The average level of adaptive functioning at the initial evaluation was 8.1 months, and at the annual evaluation was 16.8 months. The average level of social functioning at the initial evaluation was 10.5 months and at the annual evaluation was 20.4 months (See figure 1).

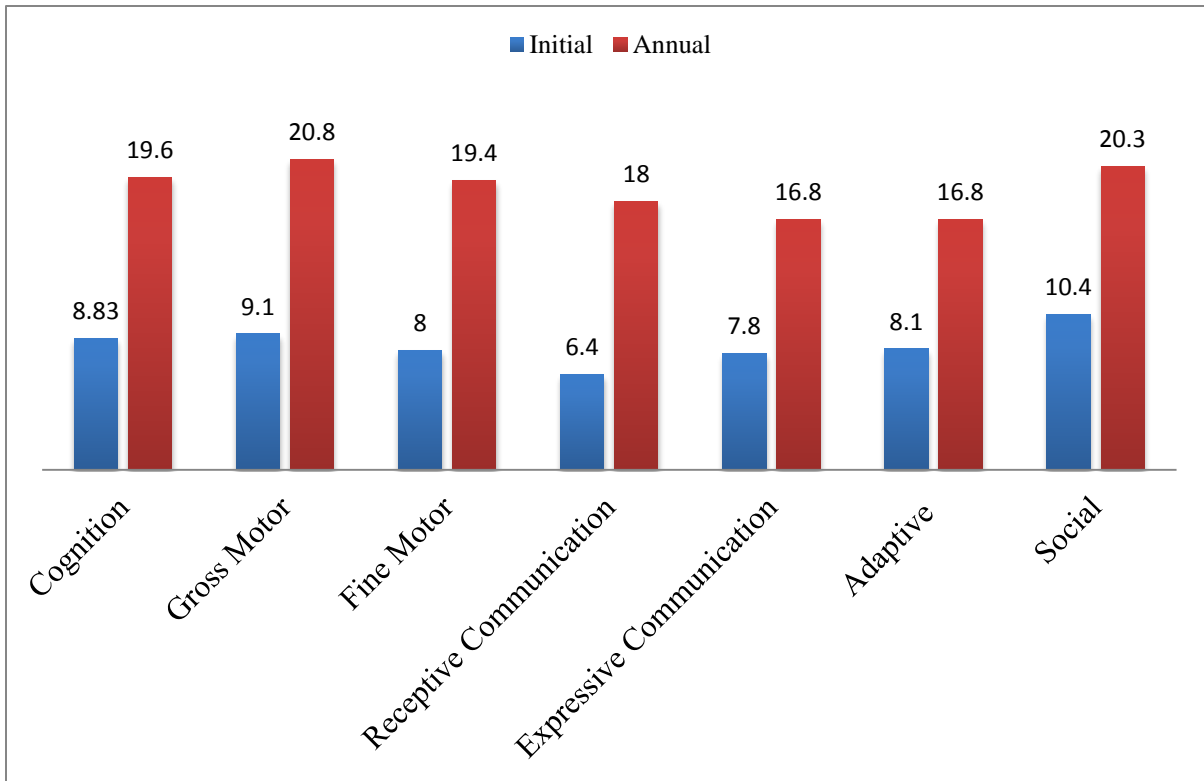


Figure 1

Developmental Levels

## Chapter 5

### Summary, Conclusions and Recommendations

There are now home visiting programs in virtually every state across the United States. These programs are serving thousands of young children and their families, most of who are in great need of intervention services. Yet, few of these programs have been rigorously evaluated for their effectiveness (Guralnick 1998). The present results did not support the hypothesis that service providers were adhering to state and federal guidelines regarding eligibility into an early intervention program. Four out of the 112 children participating in the early intervention program were found to be incorrectly eligible for services. Their developmental levels did not meet the criteria of a 33% delay in one developmental area or a 25% delay in two or more developmental areas. The present findings serve as a warning that service providers in early intervention programs may benefit from additional training or supervision. Given that almost no early childhood intervention studies have discussed the possibility of children being falsely admitted into early intervention programs, the impact of eligibility criteria in early intervention programs require further investigation and the present findings require replication (Dunst & Trivette 2004; Shonkoff & Meisels 1991). Due to the discrepancies found in the results of the present study, home visitors might benefit from additional training in measurement of developmental criterion and state and federal mandates regarding eligibility. Further investigation is warranted in regards to the recruitment, training and supervision of home visitors in early intervention programs.

The current results also provide evidence for the effectiveness of home-based early intervention programs. Results indicated that this early intervention program was an

effective means of ameliorating the children's developmental problems. The children enrolled in the program made strong developmental gains during their one year enrollment in the early intervention program. They demonstrated statistically significant improvement in behavior, cognitive and motor skills after one year in the program. This is an important discovery as it supports previous research that early intervention programs can minimize the potential of developmental delay (Gomby et al 1999; Sweet & Appelbaum 2004; McCormick et al 2006).

The limitations of the present study include the preliminary nature of its effectiveness results, which indicates a need for continued longitudinal follow-up. In addition, the pool of participants was pulled from a similar geographic area of the southern region of New Jersey, resulting in the inability to generalize results to other early intervention program. The present researcher also narrowed the client base to fit specific criteria to determine the efficacy of the program. This resulted in a sample that did not reflect the entire pool of participants in the program. Future replications of the present study should address the demographics of the service providers to determine whether a particular field or service area is lacking the skills or training of correctly identifying eligible children.

This current study is necessary to bridge the gaps between research, policy and practice in order to improve the real-world effectiveness of early childhood intervention. The present study suggests that not all early intervention programs are in adherence with eligibility criteria, but are effective in improving the developmental trajectory of a child. The personal and professional qualities of its service providers may be the most important ingredient of effective early childhood intervention.



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