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Philadelphia College of Osteopathic Medicine

Department of Psychology

DOES EARLY SCREENING PREDICT SPECIAL EDUCATION PLACEMENT BY  
AGE FIVE?

By Samuel Josef Friedman

Submitted in Partial Fulfillment of the Requirements for the Degree of

Doctor of Psychology

April 2019



SCHOOL OF  
PROFESSIONAL AND  
APPLIED PSYCHOLOGY™

## DISSERTATION APPROVAL

This is to certify that the thesis presented to us by **Samuel Josef Friedman** on the 18th day of March, 2019, in partial fulfillment of the requirements for the degree of Doctor of Psychology, has been examined and is acceptable in both scholarship and literary quality.

### COMMITTEE MEMBERS' SIGNATURES

Chairperson

Chair, Department of School Psychology

Dean, School of Professional & Applied Psychology

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## Abstract

The Early Screening Inventory-Revised is an early childhood assessment used to screen three and four-year-olds entering preschool. This screener assesses basic skills and one's level of functioning as he or she begins to learn in an academic environment. The purpose of this screener is to alert the school district about students who may struggle academically in a school-based setting. Based on the results of the assessment, students can receive academic or behavioral support from the school if the teacher and parents of the child deem the support necessary. Students who receive support from the school may or may not be evaluated following the academic or behavioral supports conducted in the classroom. The purpose of this study was to determine if the Early Screening Inventory-Revised predicts special education placement by the age of five. The participants included three -year-old students in the preschool setting. Based on the results of the Early Screening Inventory-Revised, it was concluded that students who were identified early and received intervention were still placed in special education; this is in comparison with their peers who were recommended for intervention but refused it. Many individuals who refused intervention were not placed in special education. It was speculated that many teachers and parents refused intervention because they wanted the students to grow and develop independently, without support. Those students who were labeled early were on the "radar", compared with their peers who refused intervention.

*Keywords:* (Early Screening Inventory-Revised, special education)

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## Chapter 1

### Introduction

#### **Overview**

The Early Screening Inventory-Revised is an early childhood assessment used to screen students entering a three and/or four-year old program of preschool (Meisels et al. 2008). The Early Screening Inventory-Revised assesses a student's basic skills and level of functioning while in preschool. Students that are screened receive a score of (1) refer, (2) rescreen at a later time, or (3) ok. A refer score alerts the class room teacher and the child does not receive preschool referral team that this student may struggle academically, in comparison with his or her peers. If a student receives a refer score, a team would meet about the student to determine if intervention is needed in the classroom. If the interventions put in place are not successful, data collection would be submitted to the Child Study Team to have the child evaluated. A rescreen score also alerts the class room teacher and preschool referral team, but the child is given more time to develop his or her skills before being reassessed. An ok score means that the child passed the screening and does not need extra support. This study was conducted to review the data on students being assessed at the three -year old level to determine if the Early Screening Inventory-Revised predicts special education placement by the age of five if intervention. However, those students who accepted the intervention were more likely to be placed in special education due to the support they received along the way, in comparison with their peers who refused intervention. It was speculated that many teachers and parents refused intervention because they wanted the students to grow and

develop independently without support. Those students who were labeled early were on the “radar”, compared with their peers who refused intervention.

### **Statement of the Problem**

More invention is needed for students who struggle in the school setting and need the extra support so that they may have the same opportunities as their typical developing peers. As we know, early intervention is pertinent to child development. Stuart (2018) states that early intervention services are a range of targeted services to help young children who have developmental delays or specific health conditions. Professionals who specialize in different areas of the field can support these children in need. Providing services early helps children catch up and increases their chances for success in school and in life overall. Babies or toddlers may receive services at home or in the community to help with development in these areas: physical skills (reaching, crawling, walking, drawing, building), cognitive skills (thinking, learning, solving problems), communication skills (talking, listening, understanding others), self-help or adaptive skills (eating, dressing), social or emotional skills (playing, interacting with others), and sensory skills (handling textures, tastes, sounds, smells). The following areas of development are not only necessary in the school setting but are also necessary for individuals to function in society. If the Early Screening Inventory-Revised is predicting special education placement, students should receive early intervention services to develop the necessary skills to function in life and/or in school or they will be given placement in the special education process. Although intervention is provided to students at school age, it may or may not be effective in a child’s academic or behavioral success.

From what can be concluded, early intervention is necessary and beneficial to a child's development and life in the future.

### **Purpose of the Study**

The purpose of this study is to determine if the Early Screening Inventory-Revised predicts special education placement by the age of five. This screener alerts the school system about students who may need more behavioral or academic support to function in a regular education setting. Students who do not pass the screener can receive intervention and support to function successfully in the regular education classroom. However, some students may not receive services due to a parent request or to a teacher believing the child needs more time to grow.

### **Summary of the Methodology**

The participants for this study included preschool students, age three who had entered school. The materials used in this study were from the Early Screening Inventory-Revised tool. For the following study, data were reviewed to determine if the Early Screening Inventory-Revised predicts special education placement by the age of five. Students that are screened receive a score of: (1) refer, (2), rescreen at later time, or (3) ok. Students with a refer score or rescreen score were monitored to determine if intervention is necessary and whether or not they will be evaluated for special education. When reviewing the data collectively, it was determined that the Early Screening Inventory-Revised assessed students at the age of three was able to predict a special education placement by the age of five for those students who received intervention. Students who received intervention were unsuccessful in comparison with their peers who were referred for intervention but refused it. The hypothesis was rejected because

those students who accepted intervention were more successful in school when compared with their peers who did not accept the intervention that was recommended to them. The null hypothesis was accepted for this study.

### **Hypotheses**

Based on the results of the Early Screening Inventory-Revised, students were recommended to receive intervention while in preschool. Students who received intervention were more successful in preschool in comparison with those students who were recommended for intervention, but refused intervention and finally were evaluated for special education. The null hypothesis is that students who received intervention after the Early Screening Inventory-Revised were not more successful, in school in comparison with those students who refused intervention.

### **Summary**

The Early Screening Inventory-Revised is an early childhood assessment used to screen students entering programs designed for the three and four-year olds in preschool. It assesses a student's basic skills and level of functioning when entering preschool. Based on the results of the screener, students may or may not receive extra support or intervention to function in a regular education setting, in comparison with their peers. The purpose of this study was to determine if the Early Screening Inventory-Revised predicts special education placement by the age of five. The participants for this study included preschool students, age three, who entered school. When reviewing the data collectively, it was determined that the Early Screening Inventory-Revised that assessed students at the age of three was able to predict a special education placement by the age

of five for those students who received intervention. Students who received intervention were unsuccessful, in comparison with their peers who were referred for intervention but refused it. The hypothesis was rejected because those students who accepted intervention were more successful in school when compared with their peers who did not accept the intervention that was recommended to them. The null hypothesis was accepted for this study.

## Chapter 2

### Literature Review

#### **Service of Delivery Models**

One of the most prominent and controversial issues that is faced today in our country is mental health. Mental Health is defined as a state of well-being in which every individual realizes his or her own potential, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to her or his community (WHO, 2014). Mental Health is important to one's way of life because it will dictate whether or not an individual will be successful in life and participate in society with or without assistance. Originally enacted in 1975, Congress created what is formally known as Individuals Disabilities Education Act (IDEA) to make available a free, appropriate public education to eligible children with disabilities throughout the nation, ensuring special education and related services to those children. Disability is a natural part of the human experience and in no way diminishes the right of individuals to participate in or contribute to society. Improving educational results for children with disabilities is an essential element of our national policy of ensuring equality of opportunity, full participation, independent living, and economic self-sufficiency for individuals with disabilities. The IDEA governs how states and public agencies provide early intervention, special education, and related services to more than 6.5 million eligible infants, toddlers, children and youth with disabilities. Infants and toddlers, birth through age 2, who have disabilities, receive early intervention services under IDEA Part C. Children and youth ages 3 through 21 receive special education and related services

under IDEA Part B (IDEA, 2018). Established in 1986, Congress created the National Early Intervention Program for children under the age of three. To be eligible for services, children must be under 3 years of age and have a confirmed disability or an established developmental delay, as defined by the State in one or more of the following areas of development: physical, cognitive, communication, social-emotional, and/or adaptive (Department of Health, 2017).

### **Early Intervention**

The term at-risk is often used to describe students or groups of students who are considered to have a higher probability of failing academically or dropping out of school. The term may be applied to students who face circumstances that could jeopardize their ability to complete school, such as homelessness, incarceration, teenage pregnancy, serious health issues, domestic violence, transiency (as in the case of migrant-worker families), or other conditions, or it may refer to learning disabilities, low test scores, disciplinary problems, grade retentions, or other learning-related factors that could adversely affect the educational performance and attainment of some students (Education Reform, 2014). At-risk students face a variety of obstacles which in turn, may or may not affect their educational experience. The time from birth to eight years is a critical period in the development of many foundational skills in all areas of development. Increased awareness of, and ability to detect, developmental delays in very young children has led to the creation of early intervention services that can reduce the need for special education placements when children reach school age. For example, earlier detection of hearing deficits sometimes leads to correction of problems before serious language impairments occur. Also, developmental delays caused by premature birth can be

addressed through appropriate therapies to help children function at the level of their typically developing peers before they begin school (Net Industries, 2018). The basic architecture of the brain is constructed through an ongoing process that begins before birth and continues into adulthood. Early experiences affect the quality of that architecture by establishing either a sturdy or a fragile foundation for all the learning, health and behavior that follow. In the first few years of life, more than one million new neural connections are formed every second. After this period of rapid proliferation, connections are reduced through a process called pruning, so that brain circuits become more efficient. Sensory pathways such as those for basic vision and hearing are the first to develop, followed by early language skills and higher cognitive functions. Connections proliferate and prune in a prescribed order; later, more complex brain circuits are built upon earlier, simpler circuits (Harvard University, 2018). Scientists now know that a major ingredient in this developmental process is the “serve and return” relationship between children and their parents and other caregivers in the family or community. Young children naturally reach out for interaction through babbling, facial expressions, and gestures, and adults respond to the children with the same kind of vocalizing and gesturing, in the absence of such responses—or if the responses are unreliable or inappropriate—the brain’s architecture does not form as expected, which can lead to disparities in learning and behavior (Harvard University, 2018). The brain is most flexible, or “plastic,” early in life to accommodate a wide range of environments and interactions, but as the maturing brain becomes more specialized in order to assume more complex functions, it is less capable of reorganizing and adapting to new or unexpected challenges. For example, by the first year, the parts of the brain that differentiate sound

are becoming specialized to the language the baby has been exposed to; at the same time, the brain is already starting to lose the ability to recognize different sounds found in other languages. Although the “windows” for language learning and other skills remain open, these brain circuits become increasingly difficult to alter over time. Early plasticity means that it is easier and more effective to influence a baby’s developing brain architecture than to rewire parts of its circuitry in the adult years (Harvard University, 2018). The brain is a highly interrelated organ, and its multiple functions operate in a richly coordinated fashion. Emotional well-being and social competence provide a strong foundation for emerging cognitive abilities, and together they are the bricks and mortar that comprise the foundation of human development. The emotional and physical health, social skills, and cognitive-linguistic capacities that emerge in the early years are very important prerequisites for success in school and later in the workplace and community (Harvard University, 2018). The basic principles of neuroscience indicate that early preventive intervention will be more efficient and produce more favorable outcomes than remediation later in life (Harvard University, 2018). Science clearly demonstrates that in situations where toxic stress is likely, intervening as early as possible is critical to achieving the best outcomes. For children experiencing toxic stress, specialized early interventions are needed to target the cause of the stress and protect the children from its consequences (Harvard University, 2018).

At-risk children can qualify for early intervention services at birth. Early intervention services include a range of targeted services to help young children who have developmental delays or specific health conditions. Babies or toddlers may receive services at home or in the community to help with development in these areas: physical

skills (reaching, crawling, walking, drawing, building), cognitive skills (thinking, learning, solving problems), communication skills (talking, listening, understanding others), self-help or adaptive skills (eating, dressing), social or emotional skills (playing, interacting with others), and sensory skills (handling textures, tastes, sounds, smells (Stuart, 2018). Once students turn 3 years old, when they become school-aged, early intervention services become discontinued and these individuals can receive support in the school setting.

### **Response to Intervention (RTI)**

In most school settings, the process of RTI is carried out to determine whether or not a child should be evaluated for special education. Response to Intervention (RTI) is a multi-tier approach to the early identification and support of students with learning and behavior needs. The RTI process begins with high-quality instruction and universal screening of all children in the general education classroom. Struggling learners are provided with interventions at increasing levels of intensity to accelerate their rate of learning. These services may be provided by a variety of personnel, including general education teachers, special educators, and specialists. Progress is closely monitored to assess both the learning rate and the level of performance of individual students (Feldman, 2018). Although there is no single, thoroughly researched and widely practiced “model” of the RTI process, it is generally defined as a three-tier (or three-step) model of school supports that uses research-based academic and/or behavioral interventions. Within Tier 1, all students receive high-quality, scientifically based instruction provided by qualified personnel to ensure that their difficulties are not due to inadequate instruction (Feldman,2018). All students are screened on a periodic basis to establish an

academic and behavioral baseline and to identify struggling learners who need additional support. Students identified as being “at-risk” through universal screenings and/or results on state- or districtwide tests receive supplemental instruction during the school day in the regular classroom. The length of time for this step can vary, but it generally should not exceed 8 weeks (Feldman, 2018). Students not making adequate progress in the regular classroom in Tier 1 are provided with increasingly intensive instruction matched to their needs on the basis of levels of performance and rates of progress. Intensity varies across group size, frequency and duration of intervention, and level of training of the professionals providing instruction or intervention. These services and interventions are provided in small-group settings, in addition to instruction in the general curriculum (Feldman, 2018). This would place students in Tier 2 or also known as Targeted Interventions. At Tier 3, students receive individualized, intensive interventions that target the students’ skill deficits. Students who do not achieve the desired level of progress in response to these targeted interventions are then referred for a comprehensive evaluation and considered for eligibility for special education services under the Individuals with Disabilities Education Improvement Act of 2004 (IDEA 2004). The data collected during Tiers 1, 2, and 3 are included and used to make the eligibility decision (Feldman 2018).

Dr. Hughes and Dr. Dexter at Penn State University presented a review on the effectiveness of different RTI models (Kordestani,2008). These studies, often referred to as field studies, are examinations of the impact of multi-tier and multi-component RTI models. On the surface, one may ask if research is needed on RTI to have confidence in its effectiveness. After all, RTI programs generally use scientific based instruction for all

students, keep track of student progress using valid and reliable measures, use data to identify students who do not meet well-developed standards and benchmarks, and then provide those students with specifically designed, evidence-based and intensive intervention. However, many educational approaches or innovations that seem to make sense do not always work in practice. Their research stresses the point of the VanDerHeyden, Witt, & Gilbertson (2007) research that states: The research conducted to date with few exceptions...has focused primarily on the efficacy of the components individually but not on the efficacy of the RTI process as an integrated whole. In theory, if the components are effective, then the overall process would be expected to produce results; however, the question on whether or not the overall process is effective must also be addressed. Hughes and Dexter created a four-step procedure to identify RTI field studies for inclusion in this review (Kordestani, 2008). The criteria for the field studies included: publishing in a peer-reviewed journal, employing instruction or intervention in at least two tiers of RTI model for students experiencing behavioral or academic issues, and providing quantifiable measures of students' academic/behavioral outcomes. Step 2 of the criteria included a list of search terms selected for a previous meta-analysis of RTI models. Step 3, a search of reference lists of each included study was conducted, as well as a previous review of RTI programs. Step 4, once a study was identified for inclusion, a descriptive analysis was conducted. Hughes and Dexter analyzed the studies in terms of the quality of the research design used, as well as other methodological variables to establish the overall quality of the research so that the reader can make informed judgements about the degree of confidence he or she can have in the study results (Kordestani, 2008). The results of Hughes and Dexter's review of RTI field studies

concluded that 16 of the RTI programs they had researched in the review can be classified either as a problem-solving model or standard protocol model as well as an existing or a researcher- developed model (Kordestani, 2008). A problem-solving model uses individually tailored interventions designed to address student failure to respond adequately to instruction, and these interventions are typically developed or selected through a team-based decision. The standard protocol model refers to the use of preselected interventions that are used when personnel deem that the existing intervention has not led to the desired response by the student. Existing model studies are studies of the effectiveness of an in-place RTI program typically developed by school, district, or state-level personnel, with the interventions delivered by building level personnel. The researcher-developed model examines the effects of an RTI program developed and implemented primarily by university-based researchers. The first major finding concluded that all the studies reviewed were examining the impact of an RTI program on academic achievement performance; these resulted in some level of improvement, and the authors attributed the changes to the RTI approach they used. Thus, there is emerging evidence that a tiered early intervention approach can improve the academic performance of at-risk students (Kordestani, 2008). The second finding concluded that there is some level of support for RTI programs improving academic performance; however, this finding relates primarily to early reading skills at the elementary level. It appears that more studies that include a focus on higher level reading skills, on other academic areas such as math, writing, and content area instruction, and on the middle and high school levels are needed to establish the breadth of impact for RTI programs (Kordestani, 2008). The third finding concluded that with the impact of RTI programs on referral and

placement rates, it appears that, overall, referral and placement rates stayed fairly constant, with some studies showing decreases. Thus, although there are emerging data indicating that RTI may not lead to increased special education placements, it is hard to make firm conclusions, given the fact that many studies did not clearly identify how these studies identified no responders (e.g. cutoff scores used) or delineated the specific processes and procedures used to establish eligibility. Last, although not the focus of the review and not an intervention variable that was directly measured, the types of supporting factors that appeared necessary for scalability and sustainability of RTI programs were striking in their consistency. These factors included: extensive, ongoing professional development, administrative support at the system and building level, teacher buy-in, involvement of school personnel, and adequate meeting time for coordination (Kordestani, 2008). The summary included findings, stating that much research base for RTI is emerging and that more longitudinal research is needed in order for professionals to be confident that RTI is an effective early intervention approach for all students; it also indicated confidence in its impact on the referral and placement rates in special education (Kordestani, 2008).

### **Intervention and Referral Services**

Another service model for school aged students in need of academic or behavioral support is known as Intervention and Referral Services (I&RS). These services provide that district boards of education shall establish and implement in each school building in which general education students are served, a coordinated system for planning and delivering intervention and referral services designed to assist students who are experiencing learning, behavior, or health difficulties, and to assist staff who have

difficulties in addressing students' learning, behavior, or health needs (NJOAL, 2018). The function of I&RS is to collect information on the identified learning, behavior, and health difficulties, develop and implement action plans that provide appropriate school or community interventions or referrals to school and community resources, and actively involve parents or guardians in the development and implementation of intervention and referral service action plans (NJOAL, 2018). Primarily, the I&RS process can be found in the state of New Jersey, which has modified and adapted the RTI model in their school districts. Although it is quite different from the RTI process, I&RS is the first step or link to students who may need special education services while in the school setting. In 2008, the New Jersey Department of Education conducted an Intervention and Referral Services (I&RS) Data Collection Project to assess the degree, quality and effectiveness of the implementation of the regulations at *N.J.A.C. 6A:16-8*, Intervention and Referral Services and the New Jersey Department of Education's (NJDOE) best practices model for implementing the I&RS regulations. A response rate of 80% of the approximately 720 schools trained by the NJDOE and a response rate of 80% of the schools that did not participate in the NJDOE's I&RS training program was anticipated. A total of 148 schools responded to the survey (6.1% of all public schools in New Jersey). The response rate achieved for schools trained by the NJDOE was 11% (78 out of the 720 responded), and 3% of schools not trained by the NJDOE responded (Mascari, 2008). According to the results of this survey, it offered to strengthen what the survey data indicates is an already strong I&RS program, with the anticipation that they will be considered by the NJDOE to make strategic improvements in the uniform and effective implementation of the program. The recommendations are separated into four broad categories: policy and

regulations, training, inter-professional activities, and research and data collection. The recommendations regarding, I&RS policy and regulations are made based on survey results and on anecdotal information that gauge the degree of compliance with the I&RS regulations and the NJDOE's best practices for I&RS. Responses to Questions #15 and #16, for example, indicate a lack of written guidelines and indicate that more can be done to encourage and monitor compliance with these regulations. Although the participating schools reported that they collect data (Question #30, 98%), more clarity or detail can be provided to the requirement for I&RS teams to "collect thorough information" (Question #31, 15-17%). In regard to training, four of the items (#2, #3, #4 and #6) suggest that additional training is needed in the areas of data collection, data analysis and program evaluation. These recommendations are based, in part, on responses to the questions about methods of data collection and the use of data and evaluation, in general. For example, question #31 indicated that only 18% of respondents reported performing records reviews prior to I&RS team meetings. Question #37 indicated that little formal follow-up evaluation is conducted with the individuals responsible for implementing I&RS action plans (57% performed no follow-up; 52% do written surveys). Many educational roles are involved in the I&RS program in various capacities. It is important that all certificated staff have a basic understanding of I&RS and their roles in the I&RS process. This can be achieved in a variety of ways, but it is critical to the long-term effectiveness and sustainability of I&RS teams. The recommendation for data collection concludes that although the sample was small, the information that it returned pointed out areas that can benefit from special attention, including the collection and utilization of data, the relationship between the I&RS teams and the Child Study Teams (especially

considering question #32, in which participants in the survey indicated that the primary use for data was to determine Child Study Team referrals - 93%). The fairly passive nature of parent involvement in I&RS programs is seen in question #36; only slightly more than half of respondents indicated that parents participated in developing I&RS action plans or that they were given responsibilities within action plans (Mascari, 2008). The I&RS process, like the RTI process is constantly being modified and adapted to fit the needs of those students, based on their respective school districts or academic placements. Even though these processes were created to support all students in regular or special education, they may not benefit all students; these students would need a special education classification in order to receive more intensive support so that they are given the same opportunity as their peers.

#### **504 Plans**

Some students with learning and attention issues do not need special education or individualized instruction, but they might need supports or services at school. Depending on their challenges, they may be able to get that help through a 504 plan. The 504 plans are designed to help children with disabilities learn beside their peers. They do this by removing barriers to learning. 504 plans are not the same as IEPs. Each is covered by different laws and works in different ways. But the end goal is the same: to help students be successful in school. One way in which 504 plans do this is through accommodations, such as extended time on tests or permission to leave the classroom for short breaks. Some students may also receive related services through a 504 plan, such as speech-language therapy or study skills classes. Schools typically create written 504 plans, but they are not required to do so. There are no set rules for a 504 plan i.e., what it should

look like, or what it should include. The only things schools must put in writing are their policies on 504 plans (Understood Team, 2018).

Section 504 is a federal law designed to protect the rights of individuals with disabilities in programs and activities that receive Federal financial assistance from the U.S. Department of Education (ED). Section 504 provides: "No otherwise qualified individual with a disability in the United States . . . shall, solely by reason of her or his disability, be excluded from the participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance . . ." The Section 504 regulations require a school district to provide a "free appropriate public education" (FAPE) to each qualified student with a disability who is in the school district's jurisdiction, regardless of the nature or severity of the disability. Under Section 504, FAPE consists of the provision of regular or special education and related aids and services designed to meet the student's individual educational needs as adequately as the needs of nondisabled students are met (US Department of Health & Human Services (USHHS), 2018). Section 504 covers qualified students with disabilities who attend schools receiving Federal financial assistance. To be protected under Section 504, a student must be determined to: (1) have a physical or mental impairment that substantially limits one or more major life activities; or (2) have a record of such an impairment; or (3) be regarded as having such an impairment. Section 504 requires that school districts provide a free appropriate public education (FAPE) to qualified students in their jurisdictions who have a physical or mental impairment that substantially limits one or more major life activities (USHHS, 2018). 504's are important to those students who do not necessarily need special education but need extra support while in the school

setting. At times, schools will recommend a child's having a 504 as the first step or intervention to supporting a regular education for the child instead of putting him or her through the whole special education process. However, with all these service models for students, research over the years has shown that early childhood is the best time to lay the groundwork for intervention, which is most effective in preparing children to be successful in the future. Early childhood is the time when it all begins, and the developmental domains come into play. Based on the specific areas of the developmental domains in early childhood, success or lack thereof in reaching these milestones will determine if a child may or may not qualify for early intervention, a 504, RTI, I &RS, and/or a special education placement while being school-aged.

### **Developmental Domains**

One of the most influential stages of human development is Early Childhood. Early Childhood has been defined as a time of tremendous growth across all areas of development. The dependent newborn grows into a young person who can take care of his or her own body and interact effectively with others. For these reasons, the primary developmental task of this stage is skill development. Physically, between birth and age three, a child typically doubles in height and quadruples in weight. Bodily proportions also shift, so that the infant, whose head accounts for almost one-fourth of total body length, becomes a toddler with a more balanced, adult-like appearance. Despite these rapid physical changes, the typical three-year-old has mastered many skills, including sitting, walking, toilet training, using a spoon, scribbling, and sufficient hand-eye coordination to catch and throw a ball. Between three and five years of age, children continue to grow rapidly and begin to develop fine-motor skills. By age five, most

children demonstrate fairly good control of pencils, crayons, and scissors. Gross motor accomplishments may include the ability to skip and to balance on one foot. Physical growth slows down between five and eight years of age, while body proportions and motor skills become more refined (Net Industries, 2018).

Physical changes in early childhood are accompanied by rapid changes in the child's cognitive and language development. From the moment they are born, children use all their senses to attend to their environment, and they begin to develop a sense of cause and effect from their actions and the responses of caregivers. Over the first three years of life, children develop a spoken vocabulary of between 300 and 1,000 words, and they are able to use language to learn about and describe the world around them. By age five, a child's vocabulary will grow to approximately 1,500 words. Five-year-olds are also able to produce five-to seven-word sentences, learn to use the past tense, and tell familiar stories using pictures as cues (Net Industries, 2018). All these developmental factors would be typical for a normally developing child. However, not all children develop at the same rate, and some may be delayed, in comparison with their peers. Children born with a birth defect, medical condition, and/or cognitive impairment would essentially develop at a much slower rate or may not develop at all. If a child shows a delay in his or her development, he or she would be an at-risk child. These children usually become labeled as at-risk children upon entering the school system.

According to the Centers for Disease Control and Prevention (CDC, 2017), researchers concluded that under the social/emotional domain of development, the average three-year-old tends to copy adults and friends, shows affection for friends without prompting, takes turns in games, shows concern for a crying friend, understands

the idea of “mine” and “his” or “hers”, shows a wide range of emotions, separates easily from Mom & Dad, may get upset with major changes in routine, and can dress/ undress him or herself. Under the domain of Language/Communication, the average three-year-old is able follow instructions with 2 to 3 steps, can name familiar things, understands words like “in”, “on”, and “under,” says first name, age, and sex, names a friend, says words like “I,” “me,” “we,” and “you,” talks well enough for strangers to understand him or her, and carries on a conversation using 2 to 3 sentences (CDC, 2017). In regard to cognitive, learning, & thinking, the child is able to use toys with buttons, levers, and moving parts, plays make-believe with dolls, animals, and people, does puzzles with 3 to 4 pieces, understands what “two” means, copies a circle with a pencil, turns book pages one at a time, builds towers of more than 6 blocks, and can screw or unscrew jar lids or turn door handles (CDC, 2017). Last, the domain of movement/physical development for a three-year-old includes: ability to climb, run easily, pedal a tricycle, and walk up and down stairs, one foot on each step (CDC, 2017). The CDC does share with parents and guardians information, suggesting that they take their child to a doctor if they notice the following behaviors: falls down a lot or has trouble with stairs, drools or has very unclear speech, cannot work simple toys, does not speak in sentences, does not understand simple instructions, does not play make-believe, does not want to play with other children, does not make eye contact, and/or loses skills once he or she has learned the skill.

By the time a child reaches four years old, he or she has developed new milestones and skills which helps in his or her functioning. For an average four year old, meeting the developmental domain in the area of social/emotional development, CDC (2017) states that he or she enjoys doing new things, plays “Mom” and “Dad”, is more

and more creative with make-believe play, rather play with other children than by him or herself, cooperates with other children, often cannot tell what is real and what is make believe, and talks about what he or she likes or interested in. The language/ communication domains state: the average four-year-old is able to know some basic rules of grammar, sings a song or says poem from memory, tells stories, and can say his or her first or last name (CDC, 2017). In regard to the cognitive domain, four year olds are able to name some colors and numbers, understand the idea of counting, start to understand time, remember parts of a story, understand the idea of “same” and “different,” play board and card games, start to copy capital letters, draw a person with 2 to 4 body parts, and tell you what is going to happen in a story (CDC, 2017). The movement/physical domain states that they can hop and stand on one foot up to 2 seconds, catch a bounced ball most of the time, and pour, cut with supervision, and mash their own food. CDC (2017) shares information that if a child cannot jump in place, has trouble scribbling, shows no interests in interactive games, ignores other children, resists dressing, sleeping, using the toilet, cannot retell a favorite story, speaks unclearly, and loses a skill he or she once had, parents and/or guardians of these children should go to see their doctor.

At age five, many children develop even further in the specific developmental domains. Five-year olds tend to please friends, want to be like friends, are more likely to agree with the rules, like to sing, dance, & act, are aware of gender, can tell what is real or not, show more independence, and are sometimes demanding and sometimes cooperative as they develop socially and emotionally (CDC, 2017). Five-year olds develop the language / communication domain by being able to speak very clearly, tell a simple story in sentences, use future tense, and say names & addresses (CDC, 2017).

Cognitively, the average five-year-old can count 10 or more things, can draw a person with at least 6 body parts, can print some letters or numbers, copy a triangle and other geometric shapes, and know about everyday objects like money and food. For the movement/physical domain, five-year olds can hop and stand on one foot for 10 seconds or longer, can do a somersault, use a fork, spoon, table knife, and swings& climbs (CDC, 2017). Some of the major concerns in those developmental domains for five year olds include: do not show a wide range of emotions, show extreme behavior, unusually withdrawn, easily distracted, do not respond to people, cannot give first or last name, do not talk about daily activities, cannot brush teeth, wash and dry hands, or get undressed with help (CDC, 2017). Many of these skills or developmental domains are assessed through a doctor or when a child enters the school setting. When a child does become school age, he or she is able to attend preschool where many will have the opportunity to show their strengths and weaknesses as they develop and learn how to become functioning members of society.

### **Preschool Programs**

An increased emphasis on early learning has also created pressure to prepare young children to enter school with as many prerequisite skills as possible. In 1994 federal legislation was passed in the United States, creating Goals 2000, the first of which states that, "All children will enter school ready to learn" (U.S. Department of Education, 1998). Although the validity of this goal has been debated, the consequences have already been felt. One consequence is the use of standardized readiness assessments to determine class placement or retention in Kindergarten. Preschool programs are a means to narrow the readiness gap between children whose families can provide quality early

learning environments for them and those whose families cannot (Net Industries, 2018). Curricula created in the early child hood setting have helped individuals to learn and develop by creating firm foundations and skill sets necessary to function as members in society. One of the most popularly used curricula in early child hood is Tools of the Mind.

The Tools of the Mind curriculum began in 1993, when Dr. Elena Bodrova and Dr. Deborah Leong began working together in early childhood classrooms to improve children's ability to learn and also to teach educators new techniques for working with children. Dr. Bodrova came to the United States from Russia, where she studied with students and colleagues of Russian psychologist, Lev Vygotsky, and applied Vygotskian-based teaching methods in preschool and Kindergarten classrooms. The concept of "tools of the mind" comes from Vygotsky (1978), who believed that just as physical tools extend our physical abilities, mental tools extend our mental abilities, enabling us to solve problems and create solutions in the modern world. When applied to children, this means that to function successfully in school and beyond, children need to learn more than a set of facts and skills. They need to master a set of mental tools—tools of the mind (Jake & CO., 2018). According to Vygotsky (1978), until children learn to use mental tools, their learning is largely controlled by the environment; they attend only to the things that are brightest or loudest, and they can remember something only if has been repeated many times. After children master mental tools, they are in charge of their own learning by attending and remembering in an intentional and purposeful way. In the same way that using certain mental tools can transform children's cognitive behaviors, using other mental tools can transform their physical, social, and emotional behaviors. Children

become “masters of their own behavior.” As children are taught and practice an increasing number of mental tools, they transform not only their external behaviors, but also their minds (Jake & CO.,2018). The first priority of Drs. Leong and Bodrova was to create Vygotskian-based instructional strategies that would work in U.S. classrooms, which have different cultural demands than those in Russia. They designed activities with a consistent theoretical framework and internal logic to create a coherent comprehensive curriculum and approach to teaching and learning (Jake & CO., 2018). Tools of the Mind has been the subject of numerous research studies, ranging from single district evaluations to multi-site, nation-wide implementations. In 2001, Tools was named an “exemplary educational intervention” by the International Bureau of Education, a UNESCO program (Jake & CO.,2018). A research article published by PLOS ONE in 2014 presented findings that Tools of the Mind Kindergarten program had a positive effect on executive functions, reasoning ability, the control of attention and improvements in reading, vocabulary and mathematics at the end of Kindergarten; these increased into first grade. The successes in Tools of the Mind classrooms is credited to the fact that instruction in these classrooms is based on a comprehensive theory of learning and development—the Vygotskian approach (Jake & CO., 2018).

In a Tools Pre-K classroom, a play theme unifies the room. The year begins with adaptable play themes close to children’s lives, and over the course of the year, as children’s levels of make-believe play, self-regulation and executive functions develop, the play themes develop as well. In a classroom in Maine, a lobster pound was a favorite center; in another classroom in Washington D.C., a convenience store with a ‘Redbox’ and an ATM machine was a favorite center. Teachers construct themes with children.

Children help make the props and signs, and teachers read books to build children's knowledge of what people do and say in different themed settings. Intentional make-believe play is at the heart of a Tools of the Mind Pre-K classroom, but much more goes on in a day! Children engage in activities designed to support the development of literacy, math and science skills at the same time as self-regulation and executive functions skills are developed. Most learning takes place in small groups and partnered activities, engaging children in interacting with one another to learn, build social relationships and create a positive classroom culture.

Play Planning is a good example of the Tools approach to designing activities to develop foundational executive functions and self-regulation skills, and at the same time to develop core academic skills. Tools activities, such as Play Planning, are multi-level, designed to challenge and support each child at his or her own level. Children who are developing typically and those who have special needs are engaged in the same activity, performing at a challenge level appropriate to each child. (Jake & CO., 2018). In Play Planning, children plan their play before playing in centers. A Play Plan typically describes the role and actions that a child will engage in during the first few minutes of intentional make-believe play. This initial plan helps children act purposefully—the first step to becoming self-regulated learners. Play Plans also support children's literacy development. As children plan their play, they draw a picture of their plan; this will help them remember what they are going to do (Jake & CO.,2018). For Vygotskians, drawing is an important precursor to writing. These drawings gradually become more representational as children use their pictures to review previous plans and discuss their plans with other children. As children learn more about literacy, they begin to represent

their intentions using the Tools approach to writing: Scaffolding Writing (Jake & CO., 2018). Another curriculum used in Early Childhood is Creative Curriculum.

The Creative Curriculum for Preschool is a comprehensive curriculum based on child development and early education research and theory (Dodge, Durham, Duckett, & Stover, 2011). It is widely used in programs across the United States (Hyson, 2008). Curriculum materials detail how to (a) create learning environments, (b) individualize for diverse learners, (c) teach content areas, and (d) integrate in-depth investigations of topics of interest to children (Teaching Strategies, 2018). Through studies, which are hands-on, project-based investigations, The Creative Curriculum for Preschool helps teachers build children's confidence, creativity and critical thinking skills, and promote positive outcomes.

Teaching Strategies (2018) updated the foundation to keep pace with new research and the evolving needs of early childhood educators. A brand-new volume, *Science and Technology, Social Studies & the Arts*, helps teachers encourage children to make and test hypotheses, develop skills for using technology, explore their world and the people in it, and engage their creative thinking skills. These teaching guides offer comprehensive daily plans that support teachers as they help every child explore, investigate and learn. They get Intentional Teaching Cards that help them adapt activities for each child and the Mighty Minutes that help them turn "in-between" time into learning time (Teaching Strategies, 2018). Creative Curriculum includes a collection of fiction and nonfiction children's books with Book Discussions that help them promote children's language and literacy learning as well as their social-emotional development during Read-aloud.

Effectiveness of the Creative Curriculum for Preschool was recently examined in a study conducted by independent researchers. The study focused on preschool children's cognitive achievement when teachers used the Creative Curriculum for Preschool for one or for two years. Children in classrooms where teachers had been using the Creative Curriculum for Preschool for two years had significantly higher literacy and mathematics scores than children in classrooms where the teachers used another curriculum or had used Creative Curriculum for Preschool for only one year. These results implied that the Creative Curriculum for Preschool is effective in promoting children's cognitive achievement when teachers had sufficient time to implement the program (Teaching Strategies, 2018). Another study examined the curriculum/assessment linkages. Preschool children who were enrolled in programs using the Creative Curriculum for Preschool made expected progress on knowledge, skills, and behaviors in the areas of development assessed by Teaching Strategies Gold (Durham, 2013). Teaching Strategies Gold has 23 objectives, organized within six areas: social emotional, language, cognitive, literacy, and mathematics. Objectives were developed from research-based predictors of school and life success (Heroman, Burts, Berke, & Bickart, 2010); they align with the Head Start Child Development and Early Learning Framework and also with early learning standards in every state (Teaching Strategies, 2018). Teaching Strategies Gold is widely used in all states for Pre-K assessment. Its publisher, Teaching Strategies LLC, has 22 state-level agreements for Pre-K assessment and 12 state-level agreements for Kindergarten assessment. This makes it especially important that the measurement properties and effectiveness of the instrument be reported (Snow & Van Hemel, 2008). The present study was conducted by independent researchers to examine the language,

cognitive, literacy, and mathematics outcomes as assessed by Teaching Strategies Gold for preschool children in classrooms where teachers used the Creative Curriculum for Preschool and for children in classrooms where teachers used a curriculum other than Creative (Teaching Strategies, 2018). The participants for the study included over 400,000 Pre-Kindergarten children Teaching Strategies Gold Data. A sample of 16,717 children was selected from schools where teachers used both the Creative Curriculum for Preschool and Teaching Strategies Gold and another sample of 18,000 children were selected in classrooms where teachers used a different curriculum and Teaching Strategies Gold. The sample of children (n=34,717) was enrolled in Head Start, child care, and school-based programs and was paired geographically and by other demographic factors to ensure comparable and representative samples (Teaching Strategies, 2018). Results indicated that children in classroom where teachers used both the Creative Curriculum for Preschool and Teaching Strategies Gold scored higher in Language, Cognitive, Literacy, and Mathematics than did children in classrooms where their teachers used a different curriculum, along with Teaching Strategies Gold. These results agree with previous studies examining the effectiveness of the Creative Curriculum for Preschool. The study extends the work of Durham and colleagues (Durham, 2013), by adding a comparison group who did not use the Creative Curriculum for Preschool, thereby strengthening the findings and their inferences in practice (Teaching Strategies, 2018). Current study results imply that the curriculum and assessment measure work in concert with one another to support the development and learning of children from diverse backgrounds. Both the Creative Curriculum for Preschool and Teaching Strategies Gold are rooted in theory and research, with particular

emphasis on predictors of school success (Heroman et al., 2010; Teaching Strategies, 2018). With much emphasize placed on the early childhood curriculum and assessment model, educational settings have been able to identify specific children who may be in need of more support or intervention while in the school setting. Fortunately, with the variety of service models provided to students in education, educational professionals work closely with the curriculum and assessment model to provide intervention and support when necessary.

### **The Pyramid Model**

The Center on the Social and Emotional Foundations for Early Learning (CSEFEL, 2001), funded by the U.S. Department of Health & Human Services, is focused on promoting the social emotional development and school readiness of young children birth to age 5. CSEFEL (2001) is a national resource center funded by the Office of Head Start and Child Care Bureau for disseminating research and evidence-based practices to early childhood programs across the country. The Center has developed training and technical assistance (T/TA) materials that reflect evidence-based practices for promoting children's social and emotional development and preventing challenging behaviors. The Center will work with professional organizations and with Head Start and child care T/TA providers to ensure the use of the evidence-based practices in local demonstration sites. Through CSEFEL (2001), “the pyramid model” was adapted in order to promote the social, emotional, and behavioral well-being of preschool students as they enter the school setting. According to the National Center for Pyramid Model Innovations (2001), School-Wide Positive Behavioral Interventions and Supports (SW-PBIS) refers to the implementation of a multi-tiered approach to social, emotional, and behavioral

support within schools. Like SW-PBIS, the Pyramid Model is a multi-tiered framework composed of a continuum of evidence-based practices that are organized in a three-tiered continuum of promotion, prevention, and intervention. However, the Pyramid Model is uniquely designed to address the needs and contexts of programs serving infants, toddlers and preschoolers, including children in public school early childhood classrooms and early childhood care and education programs in the community. The implementation of the Pyramid Model within early childhood programs is often referred to as Early Childhood Program-Wide Positive Behavior Support (PW-PBS) or Program-Wide Positive Behavior Intervention and Support (PW-PBIS). When schools are implementing PBIS and want to include preschool classrooms, they may use the Pyramid Model to define the practices appropriate for use with young children and their families. Module 1 or the base of the Pyramid Model includes High Quality Supportive Environment and Nurturing and Responsive Relationships. This part of the pyramid is the first tier or the universal tier that is created for all individuals in the educational setting. Relationships form the foundation of the pyramid and are necessary for everything else that individuals do. Well-designed environments support children's appropriate behaviors and make it less likely that children will need to engage in challenging behaviors. In addition, environments can be designed to teach children expectations and promote their engagements and interactions. When all of this is done, children are less likely to engage in challenging behavior. Thus, it is less likely to need to design intensive, individualized interventions. The success of individualized interventions depends on the extent to which the other levels of the pyramid have been addressed (CSEFEL, 2001). Module 2 or the second tier of the Pyramid Model is Targeted Social Emotional Supports. This tier

provides more support than the first tier of the pyramid because it addresses specific needs of students. CSEFEL (2001) states that the second tier or Module 2 focuses on teaching social emotional skills, identifying strategies for supporting the development of friendship skills, defining emotional literacy, identifying activities that build “feeling vocabularies,” understanding the importance of providing opportunities for children to begin to understand their own as well as others’ emotions; it also emphasizes discovering the reasons why children need to learn to control anger and handle disappointment, and of understanding the importance of teaching problem solving and fosters the capability of identifying problem-solving steps. Students would reach this tier if they are struggling with the support from tier 1. Module 3 or the third tier of the Pyramid Model is Individualized Intense Interventions. This tier was created to support challenging behavior in the classroom. When students are unable to succeed with universal and/or supplemental supports, they may need more intense intervention in order to support their needs and levels of functioning. CSEFEL (2001) defines tier 3 as understanding the difference between PBS and traditional discipline approaches, defining forms and function of communication and identifying the behavioral mechanisms that contribute to viewing challenging behavior as communicative, describing methods that may be used to determine the function of challenging behavior, and using interview and observational data to determine the communicative function of challenging behavior and develop behavior hypotheses. The top of the pyramid or Module 4 deals with Leadership Strategies for Adopting the Pyramid Model with Fidelity. CSEFEL( 2001) states that tier 4 shares & informs families about the importance for early childhood programs to have a continuum of approaches that range from promoting social emotional well- being and

building positive relationships in all the children and also discuss individualized intensive interventions because they are necessary for only a small number of children if the base of the Pyramid is present. CSEFEL (2001) reminds the professional staff working with students in need that adult behaviors influences the behaviors of the children. If adults use proven approaches, the behaviors of the children will be more positive (there will be fewer children at the top of the Pyramid). If the adult behaviors are not effective, the behaviors of the children will become more challenging, requiring more intensive interventions. At this level, students model the RTI process in which they have been given intense support but show no progress. Once a student reaches this tier, an evaluation may be suggested; student may or may not qualify for special education services. At the preschool level, the Preschool Intervention and Referral Team (PIRT) would be responsible to provide support and intervention if a student in struggling at the first tier of the Pyramid Model.

### **Preschool Intervention and Referral Team (PIRT)**

The New Jersey Department of Education (NJDOE, 2017) states The Abbott decision provides an historic opportunity to alleviate the educational disadvantages related to poverty for all children, including children with challenges due to a physical, learning or behavioral disability. Through Abbott's requirement for universal access to preschool, there are far greater opportunities for children to be educated in an inclusive setting with their peers and to have access to all the resources necessary to address their individualized needs. Abbott districts should lead the way in implementing a visionary approach to preschool. The goal is to provide each child the opportunity to access the preschool learning environment with the individualized supports needed for the child to

succeed. When a child demonstrates learning or behavioral difficulties, it is up to the classroom teacher to observe closely and document the child's behavior. In order to support the child who is having difficulties, the teacher will attempt to adapt the activities and environment to meet the child's distinct learning or behavioral needs. The teacher will also enlist the help of the child's parents because they are the primary source of information concerning the child. Another resource is the classroom master teacher who works in conjunction with the classroom teacher to provide curriculum modifications to meet the child's needs and to facilitate full participation in the preschool classroom. School based social workers and family workers can help with additional family and community outreach to support the child's needs (NJDOE, 2017). Because more preschoolers enroll in early childhood programs, educators report an increase in challenging behaviors exhibited by children. The presence of challenging behaviors may or may not indicate that a child is deemed eligible to receive special education services. The preschool intervention and referral team (PIRT) should help school district preschool staff modify children's challenging behaviors (i.e. physical, social, language, emotional) that block successful participation in a general preschool classroom through development and implementation of intervention plans. Intervention plans will address a variety of behaviors (i.e. a child who hits, a child who does not have any friends, a child with separation anxiety from the caregiver, a child who stutters, a child unable to learn new concepts, a child who cannot eat independently with utensils, a child who does not speak (NJDOE, 2017). Abbott preschool programs receive funding for a four-member PIRT for every 750 preschool students. In Abbott school districts with fewer than 750 preschool children, one team is allocated for every 750 children in preschool through grade three. In

this case, the school district's preschool budget funds the preschool proportion of the team. The primary role of the PIRT is to provide support and suggest interventions to teachers so that all children can succeed within the general education classroom.

Collectively, PIRT members should have a strong background and be knowledgeable about early childhood education, child development, the district chosen curriculum, and the four levels of the Positive Behavior Support (PBS) pyramid. The team may include any combination of the following: teachers, behavior specialists, psychologists, learning disabilities teacher-consultants, school social workers, speech and language pathologists or other specialists and be supervised by the school district preschool administrator (NJDOE, 2017). Some of the major roles of PIRT include: providing support, including written strategies for classroom staff; modeling strategies in the classroom when appropriate; providing professional development and providing consultation to classroom staff, parents, administrators and master teachers; providing ongoing professional development based upon PBS pyramid for district staff (i.e. administrators, teacher assistants, master teachers, teachers); coordinating data from ESI-R screenings, and transitioning of all PIRT case files to other programs as necessary (i.e. Kindergarten, CST) (NJDOE, 2017). The Early Screening Inventory-Revised (ESI-R) is the assessment tool that PIRT uses to identify students at-risk or who may have trouble performing. This tool drives intervention and support in the preschool setting.

### **Early Screening Inventory-Revised (ESI-R)**

According to findings of the National Research Council (2002), locally driven, universal screening of young children is associated with better outcomes for all children and will help identify those most at-risk for achievement and those with potential

behavior problems. It is required that all three-and four-year-old children in Abbott school districts be administered a screening device by the classroom teacher upon entry to the program; an example would be the Early Screening Inventory-Revised (ESI-R: Meisels et al., 1996). This information should never be used to determine or deny placement. Rather, it is used to determine if a child is within one of the three screening categories: refer, re-screen, ok. Parents must be notified before and after all screenings have taken place (NJDOE, 2017). The Early Screening Inventory -Revised (ESI-R) is a brief developmental screening instrument that is individually administered to children aged 3 years to 5 years. It samples performance in the areas of speech, language, cognition, perception, and motor coordination. The ESI-R is designed to identify children who may need special educational services in order to perform successfully in school (Meisels, Marsden, Wiske & Henderson, 2008). The ESI was first introduced for 4 to 5-year olds in 1975 as the Eliot-Pearson Screening Inventory (EPSI; Meisels & Wiske, 1975). The majority of the items on the test were developed by the authors. Five items were adapted from the following well-known diagnostic and screening instruments: the Stanford Binet (Terman & Merrill, 1937), (Terman & Merrill, 1960), (Terman & Merrill, 1973) the Denver Developmental Screening Test (Frankenburg et al., 1967), the Gesell Developmental Schedules (Gesell & Amatruda, 1947) and the Illinois Test of Psycholinguistic Abilities (McCarthy & Kirk, 1978). Based on extensive trial-testing and preliminary reliability and validity studies, the renamed Early Screening Inventory (ESI; Meisels et al., 1983) underwent five major revisions prior to the ESI-R revision (Meisels, 2008). Specific items on the ESI were chosen for the ease, speed, and reliability with which they could be administered and scored. Most of the items that were selected

indicate a child's ability to perform tasks that are representative of a broad area of development. In addition, a few items were included that are more closely associated with school readiness (e.g., color naming, counting) than with the ability to learn. These items were included because they are well normed and can indicate whether or not the child has learned what most children his or her age have learned. Finally, items were selected that require only a small number of inexpensive test materials that appeal to young children (Meisels et al.,2008). In 1993, the authors decided to revise the 3-year-old and 4- to 5- year old versions of the ESI in order to make them more continuous with one another and to improve their efficiency without diminishing their accuracy. The major change that occurred in this revision was to extend the age range of 3-year-old version of the ESI to include children in the first half of age 4. Hence, the revised ESI (ESI-R) now consists of the ESI-P (Preschool) for ages 3 through 4 years 5 months and the ESI-K ( Kindergarten) for children aged 4 years 6 months, through 5 years 11 months ( Meisels et al., 2008). The ESI-R provides a quick overview of a child's development in three major areas: Visual-Motor/Adaptive, Language and Cognition, and Gross Motor (Meisels et al.,2008). The Visual-Motor/Adaptive section uses block building, drawing tasks, and a visual memory game to assess fine motor skills, eye-hand coordination, short-term memory skills, and the ability to reproduce two- and three- dimensional forms and structures (Meisels et al., 2008). The Language and Cognition section focuses on language comprehension and verbal expression, the ability to reason and count, and the ability to remember auditory sequences (Meisels et al.,2008). The Gross Motor section targets the expectations of each age level and, quite specifically, show the child's performance on a continuum of development. The successful acquisition of motor control

and skill is necessary for speaking, writing, reading, and other perceptual tasks (Meisels et al.,2008). Because the ESI-R is used to help identify students in need, PIRT is able to provide specific intervention and support to those students so that they may not need special education services.

### **ESI-R and the Link to Special Education**

The purpose of this study is to determine if the Early Screening Inventory-Revised, predicts special education placement by the age of five. This screener alerts the school system about students who may need more behavioral or academic support to function in a regular education setting. Students who do not pass the screener can receive intervention and support to function successfully in the regular education classroom. However, some students may not receive services due to a parent request or to a teacher believing the child needs more time to grow. The results of this study were reviewed to determine that students who receive intervention after not passing the Early Screening Inventory-Revised would be more successful in school than those students who are recommended for intervention but refuse it.

## Chapter 3

### Method

#### **Overview**

The participants for this study included preschool students, age three, who entered school. The materials used in this study was the Early Screening Inventory Revised-tool. For the following study, data were reviewed to determine if the Early Screening Inventory –Revised predicts special education placement by the age of five. Students who are screened receive a score of: (1) refer, (2), rescreen at later time, or (3) ok. Students with a refer score or rescreen score were monitored to determine if intervention was necessary and/or if they were evaluated for special education. The data collected determined that there was a relationship between the Early Screening Inventory for students assessed at age three and special education placement by age five, and which students accepted or rejected intervention. Students who received a refer or rescreen score at age three were enrolled in special education because they were identified or provided intervention in the school setting, compared with those students who were recommended for intervention but refused it. Data collection did not support the hypothesis stating that students who received intervention were more successful than their peers who were recommended for intervention but refused it.

#### **Participants**

The participants for this study included preschool students, age three, who entered school. These students were new to preschool and had no exposure to an educational setting. They were screened after being in school for at least six to eight weeks. These participants were from a low SES community; the majority of the participants in this

study included African American and Mexican students. The minority of the participants in this study were White.

### **Materials**

The Early Screening Inventory-Revised tool provided the materials used in this study. The Early Screening Inventory -Revised (ESI-R) is a brief developmental screening instrument that is individually administered to children ages 3 years to 5 years. It samples performance in the areas of speech, language, cognition, perception, and motor coordination. The ESI-R is designed to identify children who may need special educational services in order to perform successfully in school (Meisels et al., 2008). The ESI-R provides a quick overview of a child's development in three major areas: Visual-Motor/Adaptive, Language and Cognition, and Gross Motor (Meisels et al.,2008). Students administered this screener can receive a score of, ok, rescreen, or refer. An ok score indicates that a child "passed" the assessment. A rescreen score means that the child did not "pass or fail" the assessment but is given another six to eight weeks to be screened again. A refer score means that the child did not "pass" the screener and it alerts teachers that a child may or may not need extra supports in the classroom.

### **Procedure**

For the following study, data were reviewed to determine if the Early Screening Inventory-Revised predicts special education placement by the age of five. The Early Screening Inventory-Revised assesses a student's basic skills and level of functioning when entering preschool. Students screened receive a score of: (1) refer, (2), rescreen at later time, or (3) ok. A refer scores alerts the classroom teacher and preschool referral team that a student may struggle academically in comparison with their peers. A rescreen

score means the child must be reassessed in six to eight weeks to determine if he or she needs more time to develop or will be able to obtain an ok score. An ok score means that the child is functioning at the average level of functioning among school aged children. The data tracked students entering at age three. Students with a refer score or rescreen score were monitored to determine if intervention were necessary and/or whether they were evaluated for special education. The data collected determined that there was a relationship between the Early Screening Inventory for students assessed at age three and special education placement by age five in which students accepted or rejected intervention. Students who received a refer or rescreen score at age three were enrolled in special education because they were identified or provided intervention in the school setting, compared with those students who were recommended for intervention but refused it. Data collection did not support the hypothesis, stating that students who received a refer or rescreen score recommended for intervention were more successful than their peers who were recommended for intervention but refused it.

### **Hypothesis**

The hypothesis for this study states that students who received intervention were more successful in preschool in comparison with those students who are recommended for intervention but refused intervention and are eventually evaluated for special education. The null hypothesis is that students who received intervention after the Early Screening Inventory-Revised with a refer or rescreen score were not more successful in school, in comparison with those students who refused intervention and evaluation.

## Chapter 4

## Results

**Total Participants**

Table 1 shows the frequency of students' early screening inventory scores, intervention, and special education placement. The early screening inventory scores were divided into three tiers of the students' scores: referred, rescreen, and refused. For this study, 65 students were in the referred range; 48 students were in the rescreen range, and five students refused, for a total of 118 students. According to the data, of the five students that refused, only one student received intervention and special education placement and the other four did not receive anything. Based on these numbers, these five students were not included in the rest of the data analysis because there is not enough data to support refusal, intervention, and special education.

Table 1

*Frequency of Students' ESI Scores, Intervention, and Special Education Placement*

ESI Scores	Referred (n = 65)		Rescreen (n = 48)		Refused (n = 5)	
Intervention	yes (n = 29)	no (n = 36)	yes (n = 4)	no (n = 44)	yes (n = 1)	no (n = 4)
Special Education						
Yes	12 0	4	0	0	1	
No	17 4	32	4	44	0	

**Total Participants Excluding Refusal Range**

Table 2 shows the frequency of students' early screening inventory scores, intervention, and special education placement, excluding the 5 students who refused the assessment. The early screening inventory scores were divided into two tiers of the students' scores: referred and rescreened. For this study, 65 students were in the referred range and 48 students were in the rescreen range, for a total of 113 students. Of the 65 students who scored in the refer range on the early screening inventory, 29 students received intervention. Of the 29 students who received intervention, 12 students were placed in special education and the other 17 students were not placed in special education. In the refer range, 36 students of the 65 students did not receive intervention.

Four students of the 36 who did not receive intervention were placed in special education and the other 32 students were not placed in special education. In the rescreen range, there were 48 students who placed in this range. Of the 48 students who fell into the rescreen range, 4 students received intervention and the other 44 students did not. The 4 students who received intervention were not placed in special education nor did the other 44 students who did not receive intervention at all.

Table 2

*Frequency of Students' ESI Scores, Intervention, and Special Education Placement*

EST Scores	Referred (n = 65)		Rescreen (n = 48)	
Intervention	yes (n = 29)	no (n = 36)	yes (n = 4)	no (n = 44)
Special Education				
Yes	12	4	0	0
No	17	32	4	44

**Percentage of ESI Scores and Intervention**

Table 3 found that students who are referred for intervention services are significantly more likely to receive intervention services, as compared with those students who are not referred and who are recommended for rescreening ( $X^2(1, n=113) = 17.58$ ,  $p < .001$ ). Forty-four percent students referred for intervention services received these services but only 8% of students who were recommended for rescreening received intervention services. Note, that although referred for services, 55% of students did not receive any interventions.

Table 3

Frequency of Students' ESI Scores and Intervention

ESI Scores	Referred ( <i>n</i> = 65)	Re-Screen ( <i>n</i> = 48)	Total ( <i>n</i> = 113)
<b>Intervention</b>			
Yes	29 (44%)	4 (8%)	33 (29%)
No	36 (55%)	44 (92%)	80 (71%)

### **Percentages of Both Referred and Rescreened to Special Education**

Table 4 describes the percentages of students in the referred range and rescreened range and also those students who were enrolled in special education. The data show that of the 33 students that were in the refer or rescreen range, 36% of these students who received intervention were placed in special education. 64% of the students who received intervention, were not placed in special education ( $X^2(1, n=113)=18.91, p<.001$ ). Of the other 80 students who made up the refer and rescreen range combined and did not receive intervention, only 5% of the students were placed in the special education and 95% of those students were not placed in special education.

Table 4

*Frequency of Students' Intervention and Special Education Placement (Both Referred and Rescreened)*

Intervention	Yes ( <i>n</i> = 33)	No ( <i>n</i> = 80)	Total ( <i>n</i> = 113)
Special Education			
Yes	12 (36%)	4 (5%)	16 (14%)
No	21 (64%)	76 (95%)	97 (86%)

### Percentage of ESI Scores and Special Education

Table 5 shows the relationship, directly, between students' early screening scores and special education placement. Of the 65 students who scored in the referred range, 25% of those students were placed in special education and 75% of those students were not. Of the 48 students who were recommended for rescreening, 0% of the students were placed in special education ( $X^2(1, n=113)=13.76$ ,  $p<.001$ ).

Table 5

*Frequency of Students' ESI Scores and Special Education*

ESI Scores	Referred ( <i>n</i> = 65)	Rescreen ( <i>n</i> = 48)	Total ( <i>n</i> = 113)
Special Education			
Yes	16 (25%)	0 (0%)	16 (29%)
No	49 (75%)	48 (100%)	98 (71%)

**Percentage of Intervention and Special Education for Referred Students**

Table 6 shows the percentage of students who received a refer score and were provided with intervention services to prevent special education or were enrolled in special education. A total of 65 students received a refer score. Of the 65 students, 29 students received intervention and 36 students did not receive intervention. Forty-one percent of the students who received intervention were also placed in special education, whereas 58% of students did not place in special education ( $X^2(1,n=65)=7.93, p<.01$ ). Of the 36 students who were referred for intervention and did not accept services, 11% of those students were placed in special education and 89% of students were not placed in special education. Students who were referred for intervention services and did receive intervention services were more likely to be placed in special education.

Table 6

*Frequency of Intervention and Special Education Placement for Students **Referred** for Intervention*

Intervention	Yes (n = 29)	No (n = 36)	Total (n = 65)
Special Education			
Yes	12 (41%)	4 (11%)	16 (24%)
No	17 (58%)	32 (89%)	49 (75%)

### Percentage of Intervention and Special Education for Rescreened Students

Table 7 shows the percentage of students who received a rescreen score and were provided with intervention services to prevent special education or were eventually enrolled in special education. Of the 48 students who received a rescreen score, 4 students received intervention services and were not placed in special education. Although only 4 students received intervention, none of the other 44 students was placed in special education.

Table 7

#### *Frequency of Intervention and Special Education Placement for Students **Rescreened***

Intervention	Yes ( <i>n</i> = 4)	No ( <i>n</i> = 44)	Total ( <i>n</i> = 48)
Special Education			
Yes	0	0	0
No	4 (100%)	44 (100%)	48 (100%)

## Chapter 5

## Discussion

**Implications**

The results of this study suggest that the individuals screened on the early screening inventory-revised (ESI-R), who had received a refer score were more than likely placed in special education even after receiving intervention services. According to Table 3, the frequency between students' early screening scores and intervention showed that 44% of students were referred for intervention and 55% of students were not referred. More than half of the students who should have received intervention may not have received services due to the fact the parents refused services, or the teacher did not feel the child needed extra support. Students in the rescreen range showed that 92% were not referred for intervention and only 8% needed intervention. Students were more likely referred for intervention if they received a refer score. Table 4 shows the frequency of interventions for students and special education placement both for referred and for rescreened students, which supports the current hypothesis that intervention prevents special education placement. Of the 113 students used in this study, only 14% of students were referred for special education, having either refer or rescreen scores. Eighty-six percent of the students did not end up in special education. However, 36% of students who received intervention were placed in special education. If students did not receive intervention, they were not placed in special education even if they had a refer or rescreen score. These numbers are more prominent in Table 6. Table 6 displays the frequency of intervention and special education placement for students referred for intervention. Of the 65 students who were referred for intervention, 41% of these who received intervention

were placed in special education whereas 89% of students who did not receive intervention and were recommended for it, were not placed in special education. Only 11% of students who did receive intervention were placed in special education. Table 5 validates the results by displaying the frequency of students' early screening scores and special education. Of the 48 students who were in the rescreen range, 100% of the students did not enter special education. When looking at early screening scores of all the students assessed for this study and the correlation to special education with or without receiving intervention, 29% of the students were placed in special education and 71% were not placed in special education. The data are suggesting that students who were identified for receiving intervention services, may have had a higher probability of being placed in special education.

As stated previously, many students were referred for intervention and did not receive it. It was speculated that teachers and/or parents felt the student did not need extra services and that is the reason why they did not receive intervention. In some cases, many of the 3-year old's start school for the first time and have had no experience in the classroom setting. Therefore, the expectations of what makes a student successful could have an impact on the child's development and/or learning experience. Teachers and/or parents may have decided to let their child have an extra year to develop so they may have refused intervention. Regarding child development theories, not every child develops or performs at the same rate so it must be kept in mind that the young child is far too complex and develop or matures at his or her own pace. Part of Early Childhood development is language and the ability to communicate with others, which is pertinent to the ESI-R assessment. Some students did not participate in the screening due to shyness

or lack of language, which does not necessarily relate to a cognitive or developmental impairment. Students that have refused the assessment in the beginning of the school year have time to develop their language abilities in the classroom by being exposed to greater amounts of language and to the other students around them. The results of the data showed that students identified for intervention were likely to be placed in special education as well. This result perpetuates the ongoing discussion of labeling children. Many have debated the idea for years that placing a child in special education labels that child to that setting forever. In fact, the majority of student placed in special education, do not get out of special education. By intervening at young age to help a child become successful, “labels” a child by alerting others to a behavioral or academic concern. When students are displaying behavioral, social-emotional, and/or cognitive issues, they are “targeted” to receive intervention or may be passed onto the next grade level with some type of identifying information regarding their behavior. In preschool, children are provided with intervention, but the interventions are very limited or not accepted by the families/classroom teachers. Therefore, when children enters Kindergarten, they may or may not be placed in a specific setting or referred to receive extra support if they are struggling in preschool. However, students who are not referred for intervention and stay below the “radar” are less likely to be identified/ classified for special education. The results of the study showed that a student is screened, is referred for services or not, may or may not get labeled, whereas a student who is screened and does not get referred, will not be labeled or identified for needing special education.

Looking at the ESI-R as well, this assessment is subjective, and a teacher must make his or her best guess when a child answers a question or follows through with a

specific task demanded by the assessment. If the child's score on the assessment was on the border of the rescreen score or a refer score, a child may have had a score in the refer range but did not need intervention because he or she could have scored in the rescreen range. Within a few months of the school setting, the child may develop with their peers and not have any academic or behavior concerns. This could be another implication because so many students were in the refer range but refused intervention and were not placed in special education; they simply needed more time to develop and grow. The assessment was accurate; the facts indicated that all the students in the rescreen range did not need special education and were able to develop successfully in the regular education setting with their peers.

### **Limitations**

One of the major limitations to this study is the fact that the interventions themselves were not tracked, concerning their success or lack thereof. If the interventions were tracked to determine whether or not they helped the children, that could have determined different results of the study: to infer that those students placed in special education truly needed to be there, based on the supports of the intervention. If the interventions helped the students but special education was still necessary for the child to be successful, that would have different results for this study as well. Likewise, if the interventions had a negative impact on the child making the behavior worse, that too would have shown a different outcome. If the interventions were not followed with fidelity and consistency over time, that too may or may not have had an impact on the child's performance. Tracking the outcome of the intervention would have determined if

the intervention had been carried out with fidelity and also whether or not it would have kept students out of special education.

Another limitation to this study was the small sample size. Only 113 students were used in this study, whereas there are over hundreds of students in the preschool program that cycle in every year. Data used for this study did not include every student. Having a larger sample size would have looked at more students and more interventions that were conducted to determine how many were successful if referred for intervention. Also, many students were excluded from the study because they transferred schools or withdrew from the program after the first year. There were 5 students excluded from the study; they were part of the data analysis, but they refused to partake in the assessment. One student was placed in special education and the other 4 were not; however, this study did not look at the correlation between refusal of the assessment and special education placement. There were no data collected on the other four students who refused the assessment. Data that were collected from the preschool in this study demands some consideration: students are not required to attend to program so many students do not return to the preschool program if the parents do not want them to re-enter after year one. The early childhood program may become inconvenient for families so they will withdraw their children from the program and re-register them for Kindergarten. The school district is in a transitory community; therefore, students are constantly coming and going in the district. The numbers of students are always changing, so some students may not stay a full year or may come back when they turn four years old. Some students received a refer score or rescreen score but left the program so there is no way to know if the intervention helped because they left.

**Future Research**

An analysis of the relationship between students' early screening scores and special education showed that if students were referred for special education, they ended up in special education. Although data showed that students who were identified early needed special education, it did not show the progress of intervention or the outcome for a student receiving intervention. To truly assess one's placement in special education, tracking the progress of intervention, whether it was successful or not, and the implementation of intervention should be analyzed and considered for future research. By tracking the early screening scores and the impact that the intervention had on the child may or may not best defend the relationship of the early screening scores and special education. Tracking the intervention may help develop a clearer picture of these students' needs and the best outcome of placement for that child.

Another area to consider for future research is tracking the number of students assessed who have already had a diagnosis. In most cases, students entering the school setting from early intervention or an outside placement, may have a specific diagnosis and automatically qualify for special education. In this instance, these students will be placed in special education, contributing to the number of students in special education. Although it may appear the numbers are higher for students placed in special education, students diagnosed with a disability or mental health issue have already been "targeted" and will go right to that setting. Comparing the number of students already diagnosed with a disability vs. the number of students screened as potentially having a disability would also give more insight into the number of students placed in special education. Not

only would it give a larger sample size and include every student, it would give a more accurate picture of which students truly need special education.

Part of the future research for this study would be to analyze the debate about labeling children early for special education. It would be helpful to track how many individuals refused intervention because of the idea that they do not want their child in special education or to receive extra services because of what it would do to their child. It would be more meaningful to track how many students are referred to special education for a behavior concern and not just an academic concern. In the school setting, many are referred for behavior issues and this study did not track behavior concerns. Comparing the students with a behavior issue and whether they have an academic concern vs the students who are referred for an academic issue only would show whether the special education placement is truly necessary because of ways in which the behaviors would impede their learning. However, at the preschool level, students cannot be referred for having a behavior issue due to their age and because it is developmentally appropriate for a young child not always to follow the directions and/or have a temper tantrum because of his or her age. At times, the demands of school and the curriculum can be such a struggle for preschoolers because of what they are capable of handling and understanding. It may look as if these children need special education and have academic/behavior issues, but it is necessary to remember the age of this population and the abilities these children have, compared with older students. Most of these students are still developing and may need Kindergarten to understand self-regulation and how to perceive the world around them.

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