The Effects of Poverty and Interventions on Early Childhood Development

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ABSTRACT

Receiving early interventions for children with disabilities and at risk children can potentially change educational outcomes. Access and parental education related to early childhood programs were both vital in the effectiveness of these programs. Limited access due to poverty or other adversities can change the course for children in need. The effects of poverty, homelessness, and parental involvement on childhood interventions as well as how accessible programs are for families in need were researched. Different early intervention and early childhood programs that eligible children and their families could potentially be a part of were compared and contrasted. The purpose of this study was to determine how effective early intervention programs are on children that are defined as at risk or developmentally delayed. Programs were researched through scholarly articles and websites related to specific programs. According to the Research and Development Cooperation researchers Karoly, and Cannon, there are proven benefits of early interventions for children. Karoly, Kilburn and Cannon published an article outlining the benefits of early intervention programs, such as DARE to be You, Parents as Teachers, Reach Out and Ready Early Head Start, Head Start, Project CARE, and Incredible You. The benefits that programs such as these are show in the study to include academic achievement, behavior, labor market success, delinquency, behavior, and educational progression and attainment (Karoly, et al., 1999).
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CHAPTER 1: THE PROBLEM

Introduction, Problem and Purpose of Study

The focal point of research for this paper was to determine the availability and utilization of resources in low income families with children with special needs, as well as the statistical numbers related to diagnosis and early intervention among lower income families compared to other groups of families receiving services for their child or children. The purpose of the study considered several parts, including how poverty affects development, what early childhood programs are available, and how these programs could benefit children. Resources for low income families, the prevalence of learning disabilities in low income families, the effects of poverty and stress on development, and how resources are utilized by parents for their children were researched. The statistics for children that are diagnosed early and the results of early interventions compared to children that did not receive early interventions were researched also.

If families had more access to services, would there be less of a chance of missing delays? One assumption was that because children should be taken for scheduled well visits, pediatricians would be actively involved in a child’s development and would be trained in what milestones a child should reach and on what timeline, thus are the logical person to go to for resources during well visits. Assuming that children have involved extended families, these extended relatives would potentially serve as resources. Other assumptions included that children are affected developmentally by poverty, whether it be due to lack of resources or lack of parent knowledge related to developmental milestones that children should achieve. Questions related to the topic included: How does poverty influence development? Are early interventions typically effective? What programs are utilized in early childhood programs?
The first three years of life for a child have been found to be some of the most formative years in development. When children are exposed to adverse experiences or extreme poverty, development is affected in some way. Beginning as early as the prenatal period, both animal and human studies suggest that fetal exposure to maternal stress can influence later stress responsiveness (Shonkoff, Garner 2012). Research outlined by Shonkoff and Garner (2012) stated that these experiences can bring lifelong effects on children if interventions aren’t put into place soon enough. Poverty and homelessness were large factors in why children were not receiving needed services. Lack of resources, transportation, and knowledge of age appropriate activities determined the amount of help a child received in many cases. In some cases, parents knew what their children needed but were unable to provide developmentally appropriate books, games and toys. Prevented issues later in life was a benefit of early interventions.

Questions

1. What programs are available for children that have disabilities or are considered at risk?

2. What criteria do children have to meet to be considered “at risk”?

3. Are early intervention programs effective?
The Effects of Poverty and Interventions on Early Childhood Development

Definitions

**Early intervention**

*Constitutive:* system of coordinated services that promotes the child’s age appropriate growth and supports families during the critical early years.

*Operational:* For the purpose of this research project, early interventions can be defined as programs that children with developmental delays and risk factors participate in during early life (ages birth to age five) and how these programs work with families.

**Developmental delay**

*Constitutive:* when a child does not meet his or her developmental milestones at the expected time.

*Operational:* any delay a child may be experiencing in speech, cognitive development, or social-emotional development.

**Developmental risk factors**

*Constitutive:* factors that play a role in a child’s academic and social emotional development

*Operational:* factors that are out of a child’s control that hinder development, such as poverty, homelessness, and lack of parental education.

**Poverty**

Constitutive: state of being extremely poor; a measure of income issued every year by the Department of Health and Human Services.

*Operational:* families that live at or below an income level determined by the federal government.
CHAPTER 2: LITERATURE REVIEW

Development in children in the first three years of life is critical. During this time of growth, children should typically have met many milestones including emotional regulation and attachment, language development, and motor skills (Karoly, et al 1999). The first signs of any developmental delays can be recognized by a parent, family member, or pediatrician if a child is not meeting developmental milestones that would be expected compared to other children at his or her current age. While some conditions that cause developmental delays, such as Down syndrome or other medical problems are typically obvious at birth, this is not the case for every child. According to the Research and Development Cooperation researchers Karoly, and Cannon, there are proven benefits of early interventions for children. Karoly, Kilburn and Cannon published an article outlining the benefits of early intervention programs, such as DARE to be You, Parents as Teachers, Reach Out and Ready Early Head Start, Head Start, Project CARE, and Incredible You. The benefits that programs such as these are were show in the study to include academic achievement, behavior, labor market success, delinquency, behavior, and educational progression and attainment.

There are interventions and services available for children ages 0-3 under Individuals with Disabilities Education Act Part C Early Intervention. Children can be referred for these interventions if disabilities related to communication, social development, and cognitive development are present. Children can also be delayed in physical or motor abilities as well. Many experts would agree that early interventions and providing services for children earlier is very important in developmental delays. Part C of IDEA provides early interventions for children with developmental delays or medical conditions that are likely to lead to a developmental delay in children ages birth to three. The Center for the Developing Child at Harvard (2007)
summarized research that states that determined that neural circuits that create the foundation for learning, behavior and health are the most flexible during the first three years of a child’s life. These neural circuits are more difficult to change over time. Additionally, persistent stress (extreme poverty, abuse and neglect or severe maternal depression) can also damage a developing brain. Positive early experiences, particularly stable relationships, appropriate nutrition, and safe, supportive environments affect the developing brain positively. Research showed that high quality intervention services can improve outcomes for not only children, but families and communities and that the earlier the interventions are implemented, the more effective and less costly it is. Although research has suggested that early interventions are extremely important, the needs of many children that would qualify for services are only beneficial if the child is receiving them. According to research, at nine months, only 9% of children who have a qualifying delay receive services and at 24 months, only 12% are receiving them. Racial disparities (black children are up to 5 times less likely to receive supports and interventions than white children), homelessness and a shortage of well trained professionals that serve children with behavioral or emotional issues are all factors in the lack of services being received. In the context of the study, it can be assumed that a well-trained professional can be defined as someone trained in working with low income, at risk families and trained in best practices in child development (Goode et al., July 2011).

Engle (2008) has found that poverty can be considered a factor in child development, or lack of. There is a chronic stress that typically comes naturally to families living in poverty. Research by Engle and Black (2008) stated that a correlation between poverty and its effect on children can be identified as early as the second year of life and can continue through high school. Readiness for kindergarten can set a student up to flourish in school. Kindergarten
readiness is most widely defined as having the academic and social-emotional skills needed to be successful. The definition of academic “readiness” differs depending on curriculum and state standards. Research stated that low income children that grow up in poverty are more likely to not graduate from high school; research from National Institute of Child Health and Human Development Early Child Care Research Network showed that children living with families in chronic poverty have lower cognitive and academic achievement.

A study by Berger, Paxson, and Waldfogel (2009) of 4,898 births in 20 U.S. cities first documented income of the family and measures of the home to determine the effects of poverty, income, and education levels in the home. The factors included items like parenting behaviors and characteristics and material aspects of the home. Children’s cognitive and behavioral outcomes were also measured. Once a baseline was measured, the next item in the study included examining how the measures of the home impacted child outcomes. It was determined that an association can be noted between income and child outcomes and that this can be accounted for by measure of the home environment. The results of the study were consistent with the research done by Berger, Paxson, and Waldfogel (2009) in that their hypothesis that low incomes do influence a children’s developmental outcome, at least in part. The effects of low income had an effect on material aspects of the home rather than the mother’s mental health and behavior. Their research equated low income with lack of materials to promote cognitive stimulation in the home. If there were effective programs and policies in place to improve educational and vocational outcomes for low income children, the cycle of poverty in some families would lessen. The hypothesis of their study was consistent with the results in that low incomes influence child development through the effects on the home environment- children that live in poverty or low income families are more likely to have less stimulating items in the home.
Poverty can also affect that kind of parenting that a child receives- parents may be more stressed and less likely to be as responsive to their children’s needs and possibly harsher in terms of punishment or how they talk to their children.

Other research (Smith, et al., 1997, Klebanov, et al., 1994) showed that parent level of education and income of the family were not only predictors of learning experiences and related to academic achievement but also parental warmth in the home. Their research determined that the association between warmth (love in the home by a parent or other adult; the amount of affection received) and child outcomes was stronger due to maternal education over family income in some situations, although income still played a large role. Authors of a research study indicated that education could be linked to specific achievement behaviors in the home (Smith, et al., 1997, Klebanov, et al., 1994). A mother’s education had the most influence on cognitive and behavioral outcomes. There was a less direct influence through a stimulating environment at home (Corwyn and Bradley, 2002)-it was also found that maternal education had the most consistent direct influence on children’s cognitive and behavioral outcomes with some indirect influence through a cognitively stimulating home environment. Corwyn and Bradley examined two family mediators: learning stimulation and parental responsivity. Mediation might have emerged if other parent behaviors and attitudes were examined (Davis-Kean, 2005).

In Michigan, Early On programming is federally funded and regulated. Service providers prepare an Individualized Family Service Plan (IFSP). The Early On program is designed for children ages birth to three that have exhibited at least a 20% delay or one standard deviation below what is considered typical in cognitive, social, or speech development. To be found eligible under established conditions, a child must have a diagnosis from a qualified health or mental health care provider. A specific program that is used in a local Regional Service
Agency, called Parents as Teachers, is ideal for populations including special needs, families at risk for child abuse, income-based criteria, teen parents, first-time parents, immigrant families, low literate families, or parents with mental health or substance abuse issues. The program is designed to serve families until entry in kindergarten, beginning as early as pregnancy.

Outcomes throughout the duration of the program include increasing parent knowledge of early childhood development and improve parenting practices, providing early detection of developmental delays and health issues, preventing child abuse and neglect, and increasing children’s school readiness and school success. There are four components that are required to be provided to families participating: one-on-one personal (or home) visits, group connections, health and developmental screenings for children, and linkages and connections for families to needed resources. Those providing services using this model must provide at least 12 annual visits with families with one or no high need characteristics and 24 annual visits for families with two or more high need characteristics (PAT National Center, 2015).

In 2015, 357,715 infants and toddlers, or about 3% of the population, were reported as receiving services through Part C of Individuals with Disabilities in Education Act (IDEA). Access to information and programs for children is easy to find if you know where to look and who to ask for help. Children at the most risk for not receiving or seeking out services may include, but not necessarily limited to, low income families, families that are homeless, or children that are not visiting a pediatrician regularly. Homelessness in our country is prevalent and considered a persistent and complex problem, especially in attempting to identify infants, toddlers, and children with possible developmental delays. Not much is known at this time about families with small children that aren’t receiving services through publicly funded programs such as Head Start if the families are not residing in a homeless shelter or somewhere with an address.
Access to public services for homeless children can be tricky - families that are homeless tend to be more transient and less consistent with housing, location, and services than families that are stationary. Having that consistency of location makes accessing services easier and more effective. As previously noted, a human brain develops very quickly between birth and five years of age - this is the time frame in which the foundation for all future learning is built. The greatest impact of stress can occur in children at a young age. Childhood adversities can change the development of a child’s brain. Children exposed to stressors such as homelessness or a parent with substance abuse problems are more likely to have issues with self-regulation, school readiness, and physical and mental health later in life. Gaining access to early intervention programs can change everything for high risk children dealing with homelessness and poverty. Higher rates of emotional and behavioral issues, developmental delays, and physical delays have been associated with homelessness in comparison to their counterparts. Even after having a better handle on living situations and finances, the children were still more likely to be behind in math and reading. Transiency, lack of stability, and poverty, among other risk factors that come with homelessness, all affect a family’s ability to receive the needed services and provide for their children not only financially, but developmentally (de Sousa, 2016).
CHAPTER 3: FRAMEWORK AND METHODOLOGY

Programs that cater to early childhood interventions are outlined throughout chapter three. It was necessary to dig deeper to determine similarities and differences between each program. There were many programs to choose from in terms of what Early On chapters would use or what programs are funded for at risk children. Online scholarly articles were reviewed, as well as program specific websites that tended to give more information related to child development and what the program does.

There are a variety of programs and methods used with families and children that receive Early On services. While the programming available for families is vast, many parents may not have the accessibility needed for these programs, or even know where to go to find the information needed to become part of one of the many programs available. Some of these programs include DARE to be You, Parents as Teachers, Reach Out and Ready Early Head Start, Head Start, Project CARE, and Incredible You. While these programs are all working toward providing interventions for children with developmental delays, some of the targeted populations and outcomes are different. The approaches to interventions in these programs differ in some ways. Of these programs, the chosen programs to evaluate and compare DARE to be You, Parents as Teachers, Incredible You, Head Start, and Great Start Readiness Program. Finding information about these programs and exactly what they do proved to be a challenging task. In order to find out more information, the programs being researched had to be narrowed down to avoid becoming overwhelmed. DARE to be You, Parents as Teachers, Great Start Readiness Program and Head Start were all programs that were researched further to determine where more information was needed.

In comparison, the focal goal for all of these programs is aimed toward at risk children
and families, either economically or academically. Children are eligible for special education services based on a documented delay or health condition, thus making them eligible for an early intervention program. Parents as Teachers and DARE to be You are typically implemented early enough that families and children reap the most benefit. Children that qualify for special education services are eligible for a Great Start Readiness Program, but not typically a Head Start program. However, both GSRP and Head Start service low income and at risk students.

Receiving services or preschool through any of these programs would be more beneficial than having nothing implemented. Many of the research studies indicated that asking a pediatrician, having involved families, and having a good support system were all a good start to identifying developmental delays and getting the help needed to implement early interventions. While not all children qualify for Head Start or GSRP, families could also elect to enroll children in other preschool programs. Contrasting these programs became difficult, as the ultimate goal of early interventions for at risk and developmentally delayed students appeared to be the same in each program. Because these populations of students are at a particular risk of falling behind in school when old enough, early education programs are, or should be, a priority. Information about these programs was found on their websites and through links listed on the websites. Contact information can be located on many of the websites if a parent or family member would like to contact someone for more information or if there are concerns about child development. No formal interviews were conducted as part of the research process, however personal experiences with some of the programs assisted in finding out more information about some of the programs, specifically Parents as Teachers and the Early On program as a whole. Parents as Teachers through a local Regional Educational Service Agency (RESA)/Early On provides weekly play groups for children with speech and other developmental delays. Biweekly home visits are also
provided to families that qualify. These play groups and home visits are offered throughout the summer. In order to compare and contrast these programs, information needed to be readily available and easy to access. It appeared that information was harder to find for some programs over others. While information related to the programs outlined are potentially more easily accessible for families that qualify for the services, the accessibility for the average family that is exploring didn’t appear to be as easily found.

The difference in the goal of each program was not very clear. The primary goal of all of all of the programs appeared to be early intervention and servicing at risk students as well as their families. However, in order to find a contrast between programs, research had to take a step further. MI School Data provides the number of Michigan children enrolled in early childhood programs throughout the state. This website also has an option to click on links that provide more information for the broader spectrum programs, such as Early On, Great Start, and Head. The other programs, such as Parents as Teachers, tended to be under the umbrella of one of the other programs, particularly Early On, being used throughout the said programs. For example, Parents as Teachers tended to be under the Early On umbrella whereas Great Start and Start, while maybe implementing some of the Parents as Teachers strategies, were more preschool programs for at risk students. Another area that helped in differentiating between Early On and Great Start/Head Start were tools on the MI data page. Comparatively, the numbers of children enrolled in the programming and how students qualify for said programs. According to the MI School Data page, 18,891 children were enrolled in Early On programming during the 2015-2016 school year. 27,300 children were enrolled in full day and 6,616 children in half day Great Start programs in the same year.
CHAPTER 4: ANALYSIS OF INFORMATION AND DATA

There are a variety of programs and methods used with families and children that receive Early On services. While the programming available for families is vast, many parents may not have the accessibility needed for these programs, or even know where to go to find the information needed to become part of one of the many programs available. Some of these programs include DARE to be You, Parents as Teachers, Reach Out and Ready Early Head Start, Head Start, Project CARE, and Incredible You. While these programs are all working toward providing interventions for children with developmental delays, some of the targeted populations and outcomes are different. The approaches to interventions in these programs differ in some ways. Of these programs, the chosen programs to evaluate and compare DARE to be You, Parents as Teachers, Incredible You, Head Start, and Great Start Readiness Program. Finding information about these programs and exactly what they do proved to be a challenging task. In order to find out more information, the programs being researched had to be narrowed down to avoid becoming overwhelmed. DARE to be You, Parents as Teachers, Great Start Readiness Program and Head Start were all programs that were researched further to determine where more information was needed. For this section of the project, different programs are outlined more specifically based on research found on program websites, as well as some scholarly articles.

DARE to be You has, in the past, been a program primarily for children ages 5-18 as well as their parents to prevent children from abusing drugs and alcohol. 15-18 hours of community training is provided in which four components are taught: decision making and problem solving skills, assertiveness in communication and conflict management, responsibility for one’s behavior, and esteem for oneself. Parent workshops reflect these four components. While this program was aimed for older, school aged children, DARE to be You developed into a
prevention program for ages 2-5. This particular program is aimed primarily at the family aspect and parenting skills that potentially contribute to children becoming resilient to drug and substance abuse later in life. According to a study done over a 5 year span in which families were randomly placed into either an experimental or control group, data revealed that after completing the program, persistent increases in child rearing practices were noted, as well as decreases in harsh discipline, targeted developmental levels were enhanced, and oppositional behavior declined. The research noted in the study argued that adolescent problems typically originate much earlier in development and often in families who struggle to meet basic needs, both physical and emotional. Early intervention with the family is very important if problems later are hoped to be avoided. Community based programs in this type of intervention are most effective because they tend to target multiple contexts rather than just the child or parent. Although the main purpose of DARE to be You is to prevent substance abuse, the results of the study showed that children that participated in the treatment group had high developmental levels and less oppositional and behavioral problems (Miller-Heyl, 1998).

Parents as Teachers is another early childhood intervention program. This program provides services for families pre-birth until kindergarten. Families receive home visits, group connections, resource networking, and child screening with primary goals being increasing parent knowledge of early childhood development, early detection of developmental delays and health issues, preventing child abuse and neglect, and increasing children’s school readiness and success. An executive summary on this particular program stated that around 82% of poor children that heavily participated in the Parents as Teachers program as well as preschool entered kindergarten ready to learn, compared to 64% of children that didn’t participate in either program. Similarly, the effects were the same in affluent families (93% v. 81%. The gap was
significantly smaller in both groups. Children noted as not ready for kindergarten scored one standard deviation below the average kindergartner. Children that participated in both Parents and Teachers as well as preschool showed that the academic benefits of participating carried through to grade three (Edward Zigler, Judy Pfannenstiel, April 2007)

Head Start was started in 1968 with a main goal of improving school readiness of low income children. Other goals of Head Start include providing comprehensive services that include preschool education, medical, dental, and mental health care, nutrition services, and efforts to help parents foster development in their child. When Head Start reauthorization was reviewed in 1998, a study was done in order to determine the impact of the program on school readiness and parental practices that support child development as well as to determine under what circumstances the program achieves its greatest impact and for what children.

Great Start Readiness Program (GSRP) is funded by the State of Michigan. Children must be four years old and eligible for the GSRP program. Each intermediate school district is allocated funds to implement the program. There are seven qualifying risk factors that deem a child eligible for the GSRP program. These include low family income (family income equal to or less that 250% of federal poverty line), environmental risk (loss of a parent, high risk neighborhood, military family, etc.), parent(s) with low educational attainment, diagnosed disability or delay, abuse or neglect of child or parent, primary home language other than English, and severe or challenging behavior. This program typically takes place in a school setting with a main goal of increasing kindergarten readiness for at risk children (Michigan Department of Education; HighScope Educational Research Foundation Center for Early Education Evaluation, February 2016).

Based on the research cited throughout the paper, children with developmental delays
benefit from early interventions. Parental involvement, income and education level can all play roles in how children develop and how resources are accessed. Not only are children with delays able to benefit from early interventions, but typically developing children that are at risk can also benefit from early programming, such as Head Start and Great Start Readiness Program. The benefits of school readiness programs and early childhood programs include potential increased IQ, increased kindergarten readiness academically and socially, and preventative measures put into place can cut costs of programming later in life if services had not been received during the optimal period between the ages of birth and five. Early intervention in the cases of existing delays in speech and development is also beneficial in that the impact later in a child’s life, correcting or addressing an issue would typically be easier the earlier the services are received.

Risk factors such as poverty and homelessness were shown to be influencers in child development across the board. The lack of resources that families can afford can affect a child’s development. Parents may not have transportation to appointments, thus well visits may not consistently be happening. When well visits are missed, pediatricians are unable to ask vital questions related to possible developmental delays. If parents are keeping well visit appointments and there is a still the question of whether parents are able to take off work, have the transportation, or have reliable childcare for other children, the risk of finding a delay too late are lessened.

The difference in the goal of each program was not very clear. The primary goal of all of all the programs appeared to be early intervention and servicing at risk students as well as their families. However, in order to find a contrast between programs, research had to take a step further. MI School Data provides the number of Michigan children enrolled in early childhood programs throughout the state. This website also has an option to click on links that provide
more information for the broader spectrum programs, such as Early On, Great Start, and Head. The other programs, such as Parents as Teachers, tended to be under the umbrella of one of the other programs, particularly Early On, being used throughout the said programs. For example, Parents as Teachers tended to be under the Early On umbrella whereas Great Start and Start, while maybe implementing some of the Parents as Teachers strategies, were more preschool programs for at risk students. Another area that helped in differentiating between Early On and Great Start/Head Start were tools on the MI data page. Comparatively, the numbers of children enrolled in the programming and how students qualify for said programs. According to the MI School Data page, 18,891 children were enrolled in Early On programming during the 2015-2016 school year. 27,300 children were enrolled in full day and 6,616 children in half day Great Start programs in the same year. To find more information about these programs and their similarities and differences, it was required to give a deeper look. Some of the information appeared to be repetitive, as the main purpose for many intervention programs are to provide support for children with disabilities and their families. All research articles cited were scholarly articles available online.
CHAPTER 5: DISCUSSION/CONCLUSION

In concluding the research study, it could be noted that nearly all, if not every one of, the studies and research reports indicated that even in nondisabled/typically developing students, early childhood programs are beneficial, particularly for at risk students (Berger, et al., 2009; Goode, et al., July 2011). Children coming from low income families that likely would not have extra funds to participate in things outside of school or pay for developmentally appropriate books and toys would typically be at a higher risk for not being ready for kindergarten and tended to benefit more than children coming from affluent homes. Children that met the criteria for developmental delays that received earlier interventions had the tools to be more successful entering kindergarten had the interventions not been received. It should also be noted that parents that don’t make the effort to find the needed help had children that were less likely to be successful in the classroom setting and were further behind in receiving needed services. More information related to early education programming can be found by visiting specific websites for each program (Parents as Teachers- www.parentsareteachers.org, Dare to be You- www.dtby.colostate.edu, Head Start- www.michheadstart.org, Early On- www.1800earlyon.org, www.michiganpreschool.org). Parental surveys could also be completed to determine where parents feel their children are developmentally and how they could use help in receiving services. Another way to find out more information about child development would be to consult with a pediatrician or local school district.
CHAPTER 6: REFERENCES


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