

Fostering Resilience for Children Living in Poverty: Effective Practices & Resources for EHDI Professionals

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Abstract

This *EHDI Issue Brief* examines issues that should be considered by EHDI professionals who are serving children living in poverty. It begins with definitions and data on poverty and a description of the issues, including research, trends, and the impact on child development. A framework of effective practices and strategies, a description of family influences that professionals can impact, and a list of exemplary programs, including awareness and advocacy activities, home visiting, and family support, is then provided. Finally, this document provides guidance for faculty and program administrators to develop course and professional development

content through case studies, questions for reflections, group discussion prompts, visuals, and a multimedia presentation related to how services are best provided to families and children who are deaf or hard of hearing and living in poverty. This document is most effective when used in conjunction with other resources, such as Jensen (2009, 2013), Gorski (2013), Neuman (2009), and Suskind (2015).

Introduction

There is mounting evidence for the positive power of early stimulation on child development across domains. The earliest years of childhood are a highly sensitive, critical period for early learning. The experiences of the early years crucially

“But even if you can’t always take away bad housing or bad schooling, you can build in the parent an inner strength and resilience, so they can be the best parent they can be.”

—Nick Wechsler (*in Tough Text*, pp. 40-41).

“Perhaps a poverty solution must start with a hug.”
—Nicholas Kristoff

impact long-term cognitive, language, and social outcomes. Unfortunately, approximately 15.8 million American children live in poverty (Jiang, Ekono, & Skinner, 2015a). It has long been known that children living in poverty face increased risk of poor social, emotional, behavioral, and educational outcomes, but recent neurobiological evidence suggests that poverty negatively impacts brain development as well (Evans & Schamberg, 2009; Garner et al., 2012; Hanson, Chandra, Wolfe, & Pollak, 2011; Lipina & Colombo, 2009; Lipina & Posner, 2012; Mercy & Saul, 2009; Noble, Houston, Kan, & Sowell, 2012; Rao et al., 2010). Despite this potentially despairing prospect, as early hearing detection and intervention (EHDI) professionals, we have the power to spark change and chip away at the overwhelming circumstance of poverty. By encouraging, supporting, and facilitating relationships and attachment, we can help parents buffer their children from the deleterious effects of poverty.

What Are We Talking About?

Poverty has been described as “the extent to which an individual does without resources . . .” (Payne, 2005, p. 7), implying one can experience

a variety of types of poverty—be it resource poor or educationally poor. A more common characterization—grounded in terms of adequate financial resources and income—is described by Cauthen & Fass (2008), “Families and their children experience poverty when they are unable to achieve a minimum, decent standard of living that allows them to participate fully in mainstream society” (p. 1). The U.S. federal government uses an income standard to calculate those above, at, or below the poverty line. However, the data analysis used to establish this cut-point has been criticized, as thought to be based on outdated assumptions of family spending. Critics also purport that the calculation doesn’t accurately account for variance in cost of living based on place of residence (Cauthen, 2007; Cauthen & Fass, 2008). Regardless, the federal government sets the standard, which includes the federal poverty guidelines and thresholds, by which families are deemed poor (HHS Poverty Guidelines, 2015). By exploring potential income-cost budget combinations (for user-friendly calculators, see <http://www.nccp.org/tools/>), one can get a sense of how a family whose income is technically above the federal poverty threshold may in fact still be functioning in poverty. Originally based on data from the 1950s, the poverty threshold was set at three times the cost of food and adjusted for family size. Since then, the measure has been updated only for inflation. Food now comprises only about one-seventh of an average family’s expenses, while the costs of housing, child care, health care, and transportation have grown disproportionately (Cauthen & Fass, 2008). The current poverty thresholds are arguably arbitrary and too low (Cauthen, 2007).

How Big Is This Problem?

Poverty is not something that only impacts children in a far-off land or Third World countries. It affects children in our own neighborhoods, hospitals, clinics, and classrooms. Recent estimates suggest more than 15.8 million American children live in poverty (Jiang, Ekono & Skinner, 2015a).



Photo courtesy of Sound Beginnings/Utah State University

Consider this:

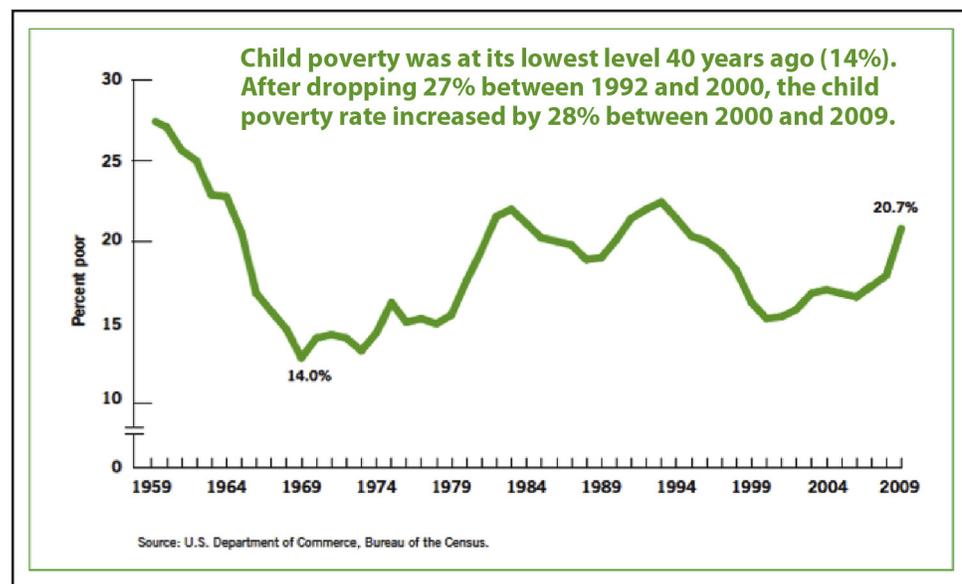
- In the U.S., one baby is born into poverty every 29 seconds.
 - The poverty rate in the U.S. is higher than any other industrialized nation.
 - Seven to ten poor children come from “working families”—defined as a family in which one adult works at least part-time for a portion of the year.
 - In 2014, 1 in 5 children—approximately 15.5 million in total—were poor.
 - Forty-nine percent of American babies born into poor families will be poor for at least half of their childhoods.
 - Children who are black or Hispanic experience higher levels of poverty than white or Asian peers.
 - Young families—or those with the primary caregiver under 30 years old—seem to be most vulnerable to poverty, with rates nearing 38%.
- (Children’s Defense Fund, 2011; Children’s Defense Fund, 2015a; Ratcliffe, 2010; Redd, Sanchez Karver, & Murphey, 2011).

According to the U.S. Census Bureau reporting, it appears the number of children living in poverty in the U.S. has been on the rise since 2000, increasing by 21% from 2000-2008 (see *Figure 1*). This increase translates to an estimated 2.5 million more children living in poverty today than in 2000. The percentage of infants and toddlers living in poverty increased by 5% from 2007 to 2013 (Jiang, Ekono, & Skinner, 2015b).

Using the Federal Poverty Level (FPL) thresholds, a family of four with an annual income less than \$24,250 (\$2,035/month, \$470/week, or \$67/day) would be considered to live in poverty. The term extreme—or deep—poverty is used when a family’s income is less than half of the poverty level (Ekono, Jiang, & Smith, 2015). For a family of four, extreme poverty would equate to an annual income of \$12,209 or less (\$1,017/month, \$235/week, or \$33/day). Of those living in poverty, 45% fall into the extreme poverty range. In 2014, 6.8 million children lived in extreme poverty. Nearly 1 in 4 children under the age of 5 live in poverty.

While these numbers are troubling enough, the official measures of poverty only tell a portion of this story. Research suggests that families need an income of nearly twice the federal poverty level to keep up with their costs (Cauthen, 2007; Cauthen & Fass, 2008; Wight, Chau, & Aratani, 2011). Families with incomes less than two times the FPL are considered low income. The National Center for Children in Poverty reports that 47% of infants and toddlers (approximately 5.3 million) live in low-income families (Jiang, Ekono, & Skinner, 2015b). Forty-one percent of the nation’s children live in low-income families (Addy & Wight, 2012a). Families who were once at work earning middle incomes are now struggling to provide the most basic needs for their families—food, clothing, shelter, and health care (Anthony, King, & Austin, 2011). The long-term impact of so many families falling into short-term poverty is yet unknown. The children of these families, along with those who come from generational poverty, are the children being served by our EHDI programs.

Figure 1
Trends in Child Poverty Rate, 1959-2009



(US Census Bureau, 2012)

Who Is Most At Risk?

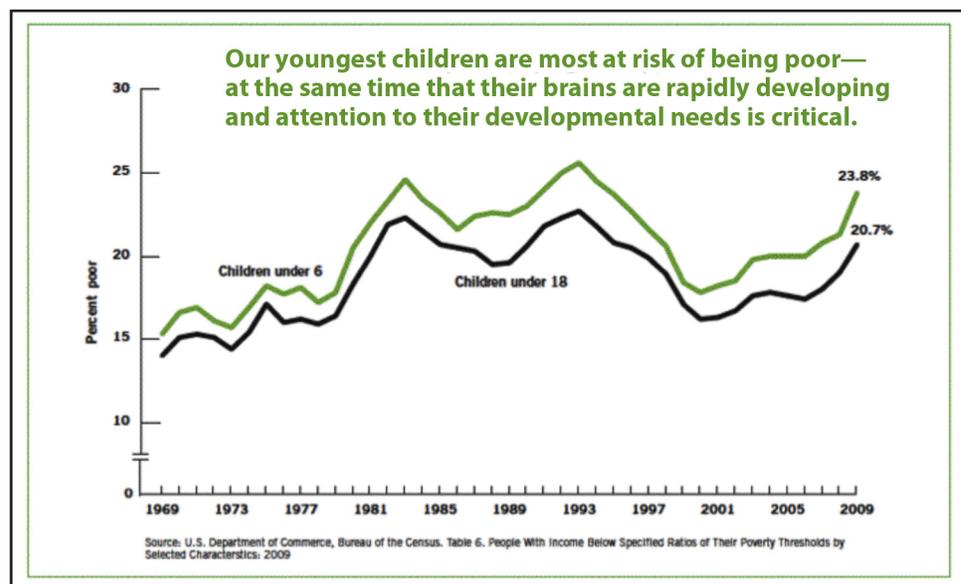
Certain populations of children and families are at an increased risk (Evans & Kim, 2010; Mitchell & Campbell, 2011; Neuman, 2009; Walker et al., 2011). Families of children with disabilities or health impairments already face increased levels of stress, pressure, and financial costs, as compared to families with typically developing children (Parish, Shattuck, & Rose, 2009; Park, Turnbull, & Turnbull, 2002; Shahtahmasebi, Emerson, Berridge, & Lancaster, 2011). Add to the complexity the circumstance of poverty, and it is difficult not to feel fully overwhelmed by these increased challenges. So how—as early intervention providers, audiologists, therapists, and educators—can we capitalize on family strengths and enhance family resilience when children have so many strikes against them? Effective providers acknowledge the additional challenges resulting from poverty, recognizing how they might interact and influence family goals and priorities for the child with hearing loss

in order to provide comprehensive service delivery in a compassionate manner to ensure success (Hamren, Oster, Baumann, Voss, & Berndsen, 2012). We know as service providers, the families in our schools, clinics, and sessions are in need of much more than our expertise on hearing loss and language development. Now more than ever, they also look to us for community resources to help fulfill some of their most basic needs.

The U.S. Census Bureau (2012) reports that children under age 6 are most at risk of being poor (see *Figure 2*). According to a report from the National Center for Children in Poverty (Jiang, Ekono & Skinner, 2015b), there are more than 11 million infants and toddlers under age 3 in the U.S. (Addy & Wight, 2012). Of these children, 47% live in low-income families and 25% live in poor families. The percentage of infants and toddlers living in low-income families (both poor and near poor) has been on the rise over the past 10 years. Unfortunately, this undesirable upward trend follows a decade of decline in the 1990s (see *Figure 2*).

Effective providers acknowledge the additional challenges resulting from poverty, recognizing how they might interact and influence family goals and priorities for the child with hearing loss in order to provide comprehensive service delivery in a compassionate manner to ensure success.

Figure 2
Trends in Child Poverty Rate by Age Group, 1969-2009



(US Census Bureau, 2012)

Children with disabilities are more likely to grow up in poverty—living under conditions that have been shown to impede development—than their nondisabled peers.

A recent study in the United Kingdom examined the relationship between children with disabilities and poverty (Shahtahmasebi et al., 2011). The researchers found that children with disabilities are more likely to grow up in poverty—living under conditions that have been shown to impede development—than their nondisabled peers. A possible explanation for these findings is that additional direct and indirect costs of raising a child with a disability may in fact increase a family’s risk of descending into poverty. While this by no means suggests a causative relationship between disability and poverty, readers are advised to consider how unmeasured “third factors,” such as conditions passed on genetically or those leading to social isolation, can increase the risk of both poverty and childhood disability. Restated, the presence of a disability doesn’t cause poverty, but two theories might help to explore this increased incidence. Perhaps one’s lower socioeconomic position increases incidence and prevalence of health impairments. Or perhaps this association is reflective of some unidentified, unmeasured factors that independently increase the risk of disability and poverty. In either case, it becomes important to strengthen the resources available to parents of children with disabilities as well as the children themselves. Plainly stated by Park, Turnbull, and Turnbull (2002), “It is becoming increasingly evident that poverty has a tremendous impact on the educational results of all children, including those with disabilities. Thus, poverty is not a secondary topic in the field of special education services and disability policy anymore” (p. 152). Estimates suggest 28% of children with disabilities, ranging in age from 3 to 21, are living in poverty (Fujiura & Yamaki, 2000).

What Are the Primary Challenges Stemming from Poverty?

Effective providers recognize the numerous challenges facing families living

in poverty. For example, a cascading effect of job loss, leading to loss of income, leading to an inability to pay rent or mortgage, results in use of any savings, which leads to lack of money for down payments, health care costs, fuel, and transportation. This lack of mobility—or reliance on often inadequate public transportation systems—further isolates families and limits their ability to ascertain work and health services, thereby increasing their risk for the primary challenges associated with poverty. These challenges include: food insecurity, housing insecurity, health disparities, access to hearing technologies, lack of transportation, increased risk of child maltreatment, and lack of enriching environments and relationships. While the scope of practice for many EHDI professionals would not encompass direct service provision for some of these primary challenges, in order to best serve children and families, we can certainly make referrals and collaborate with other agencies and practitioners across disciplines.

Food insecurity. Though access to food is necessary for optimal development of children and function of adults, nearly 21% of households with children experience some degree of food insecurity (Cook & Frank, 2008). It has been demonstrated that food insecurity—or lack of dependable access to enough food for healthy living—puts children at risk for adequate growth, health, and diminished cognitive and behavioral potential. Infants and toddlers are most at risk. The Food Resource Action Center (FRAC) reports the grim responses of Americans to a 2011 Gallup poll question, “Have there been times in the last 12 months when you did not have enough money to buy food that you or your family needed?” Nearly 20% of individuals surveyed answered “yes” to this question (Cooper & Burke, 2012, p. 1). The U.S. Department of Agriculture (USDA) provides food and nutrition assistance programs to promote access to healthy food and nutrition education to many low-income Americans (Coleman-Jensen, Nord, Andrews, & Carlson, 2011).

Children with hearing loss who come from lower-socioeconomic environments, born to single parent, or nonwhite families are less likely than more affluent children to be referred for cochlear implantation evaluation.

Housing insecurity. It has been estimated that each year, 1.5 million American children—or 1 in 50—experience homelessness (Kilmer, Cook, Crusto, Strater, & Haber, 2012). While many recognize homelessness as a clear indicator of risk, there are many more children whose development may be impacted by their experience of housing insecurity. The term “housing insecurity” is used to describe a range of circumstances, including but not limited to, multiple families sharing single-family dwellings, lower-quality homes, temporary housing, and use of extended-stay hotels as primary residence. Housing insecurity leads to greater familial stress, increase in family turmoil, and is also a marker of food insecurity, according to a recent study (Cutts et al., 2011). Half of the families who rent homes spend 30% or more of their income on rent. A quarter of renter families spend more than 50% of their income on rent. If 30-50% of a family’s income is going towards rent, consider how little income remains for other basic needs, such as food, clothing, health care, and the like (Cutts et al., 2011).

Health disparities. Health disparities or inequities, as defined by Braveman (2006), include any “difference

in which disadvantaged social groups—such as the poor, racial/ethnic minorities, women, or other groups who have persistently experienced social disadvantage or discrimination—systematically experience worse health or greater health risks than more advantaged social groups” (p. 167). A National Institutes of Health (NIH) working group provided one of the earliest definitions of health disparities, describing these as “differences in the incidence, prevalence, mortality, and burden of diseases and other adverse health conditions that exist among specific population groups in the United States” (National Institutes of Health, 2002). It has been suggested that the lack of consensus regarding terminology related to health disparity has left room for wide variance in measurement, documentation, and relevance of this data (Braveman, 2006). Alternatively, efforts to ensure health equity relate specifically to social justice. Health insurance coverage, or lack thereof, can influence one’s ability to access medical care, thereby influencing a measure of health equity—though it is certainly not the only factor which influences one’s pursuit of good health. In the U.S., 17% of children lack health insurance (Children’s Defense Fund, 2012). Data from Florida suggests 31% of poor children lack health insurance (Wight et al., 2011). Nearly 11% of children under age 3 remain uninsured. Without major reform, the number of uninsured Americans could reach 54 million by 2019 (Elmendorf, 2009). While we watch the politicians and policymakers debate and negotiate revisions to the American health care system, we are left with plenty of health disparity to overcome before we achieve true health equity. The simple fact remains, in America, individuals who are most socially disadvantaged experience the poorest health (Braveman, Cubbin, Egerter, Williams, & Pamuk, 2010).

EHDI programs, which bridge both medical and educational service delivery models, must consider the impact of health disparity on the primary goal of EHDI. While Universal Newborn Hearing Screening is widely accepted as part of the newborn birth package—and a likely example of policy promoting health equity—the need for



Photo courtesy of Advanced Bionics

“Growing up in poverty puts you at a disadvantage at every step” (Krugman, 2008).

services just begins at the time of hospital discharge. Suskind and Gelbert (2009) have explored the issue of health disparity as it relates to cochlear implantation for children with hearing loss. They report that children with hearing loss who come from lower-socioeconomic environments, born to single parent, or nonwhite families are less likely than more affluent children to be referred for cochlear implantation evaluation. The literature goes on to document the effects of socioeconomic status on post-implantation outcomes. Suskind and Gelbert contend, “...there are already strong indications that a disparity exists in both rates of implantation and outcomes between lower SES and minority children and their more affluent counterparts” (p. 557). A survey of pediatric cochlear implant audiologists provides further evidence of the health disparity permeating our field (Kirkham et al., 2009). The qualitative responses of the audiologists surveyed indicate a strong perception by providers that patients from lower-socioeconomic strata are more likely to experience reduced spoken language outcomes than their more affluent counterparts. Potential explanations for this health disparity include factors related to parental influence as well as external systematic influences. We can do better, and we must.

How Does Poverty Impact Child Development?

The ways children living in poverty differ from their peers who don't live in poverty include nutrition, access to health care, both quality of environment and quantity and quality of caregiver language input and stimulation. These factors independently—much less when combined or commingled—can all have significant detrimental effects on a child's language development. Behavioral research has long indicated the negative impact of poverty on a variety of educational and developmental outcomes (Clearfield & Jedd, 2012; Cooper, 2010; Duncan & Brooks-Gunn, 2000; Duncan, Brooks-Gunn, & Klebanov, 1994; Duncan & Rodgers, 1988; Eshbaugh et al., 2011; Garrett-Peters, Mill-

Koonce, Zerwas, Cox, & Vernon-Feagans, 2011; Hill & Duncan, 1987; Sohr-Preston et al., 2012). It is common practice for researchers to control for a child or family's socioeconomic status. A groundbreaking study conducted by Hart and Risley (1995) explored the language experiences of young children across socioeconomic strata. While many interesting findings resulted from this work, one of particular pertinence to this topic was the stark difference in caregiver language input at various income levels—with the spread among welfare, working class, and professional parents differing significantly. The degree of parent talkativeness directed towards the child explained all variance in correlations between socioeconomic status, race, verbal, and intellectual accomplishments of the children. We can improve outcomes for children living in poverty by focusing our interventions not wholly on eliminating poverty but by enhancing the caregiver input to enrich the child's language experience. The Hart and Risley work has certainly spurred many more researchers to continue to explore the impact of language environments, caregiver talk, and communication behavior in the early years.

While the behavioral evidence is robust, given recent technological advances in imaging, we now have evidence of physiologic and neurobiological changes to developing brains based on early experience and attachments. We know “early secure and consistent relationship with caring, trustworthy adults contribute significantly to healthy brain development” (National Scientific Council on the Developing Child, 2004). Conversely, research is also demonstrating “that prolonged periods of excessive stress (sometimes referred to as “toxic stress”) in early childhood can seriously impact the developing brain and contribute to lifelong problems with learning, behavior, and both physical and mental health” (Shaw & Goode, 2008, p. 1). In a report from the American Academy of Pediatrics (AAP; Garner et al., 2012), toxic stress is cited as one of the primary challenges of overcoming poverty. The AAP recommends the adoption of an integrated ecobiodevelopmental framework to help

explain the adverse effect of toxic stress on brain development and the implications for pediatric health care providers. This framework combines findings from the fields of neuroscience, biology, and social sciences to articulate how “significant childhood adversity, as results from poverty, can disrupt brain development, which cascades into further impacts on behavioral, educational, economic, and health outcomes throughout ones’ life” (Garner et al., 2012, p. e225). One of the key AAP recommendations is the establishment of pediatric medical homes to promote positive parenting techniques, screen for toxic stressors, and identify appropriate resources.

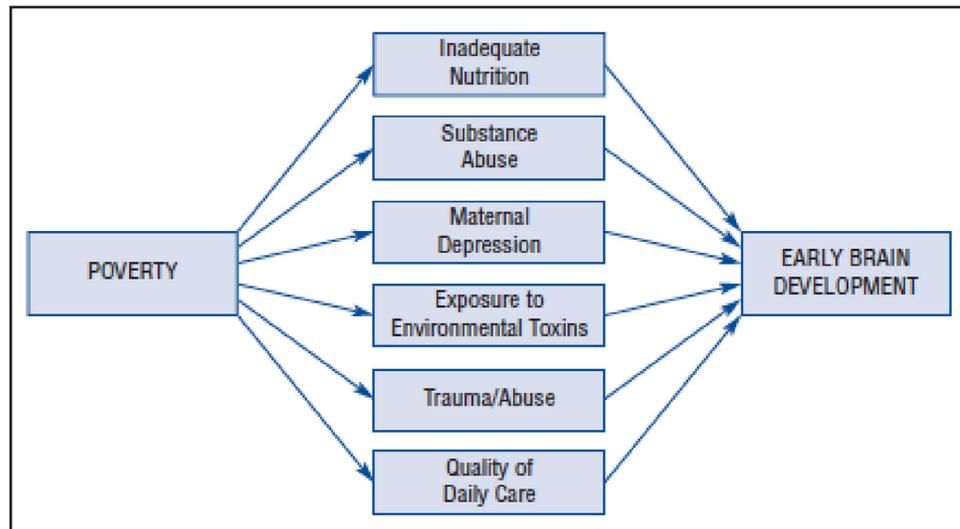
Leading experts contend the impact of socioeconomic status on development must be explored in terms of comingled, multiple risk factors (Evans & Kim, 2010; Garner et al., 2012; Marcenko, Hook, Romich, & Lee, 2012). The National Center for Children in Poverty (1999) has created a schematic (see *Figure 3*) identifying a set of pathways in which brain development can be impacted by poverty. It remains unclear which pathway is most responsible

for variance in developmental outcomes, but this will likely be the focus of much investigation in the near future.

According to Lipina & Posner (2012), animal studies have long shown that an impoverished environment results in diminished gray matter. Neuroimaging is now being used in combination with behavioral research to explore the impact of poverty on the brains of young children living in impoverished environments. The experience of poverty adversely impacts cognition, including development of language, executive functioning, attention, and memory (Evans & Schamberg, 2009; Fernald, Marchman, & Weisleder, 2013; Lipina & Colombo, 2009; Lipina & Posner, 2012; Mercy & Saul, 2009; Noble et al., 2012; Rao et al., 2010). Given that low-socioeconomic status and the experience of poverty can have profound effects on both the developing brain and the body, impacts on mental and physical health and development are likely. Future investigation should explore the strategies and interventions that affect neuroplasticity, especially during sensitive periods of development. While much more research

“Poverty in early childhood poisons the brain” (American Association for the Advancement of Science).

Figure 3 The Impact of Poverty on Brain Development: Multiple Pathways



“...we should pay more attention to parents’ nurturing, and we should do what we can as a society to foster these skills, because clearly nurturing has a very, very big impact on later development.”

—Joan Luby on the impact of brain changes linked to mother’s nurturing

is needed regarding the efficacy of specific interventions, early educators should be encouraged that these efforts may serve to mediate the negative impact of poverty (Lipina & Posner, 2012). Key factors to include in early childhood programs include (Center on the Developing Child, Harvard University, 2007):

- The expertise of staff and their capacity to build warm, positive, responsive relationships with young children.
- Small class sizes with high adult-to-child ratios; age-appropriate materials in safe physical settings.
- Language-rich environments.
- Consistent levels of child participation.

What Can We Change?

If we’ve learned anything from history, we’ve come to understand that there is no magic pill to eliminate poverty. Stemming from President Johnson’s War on Poverty, the poverty rates fell from 23% in 1963 to 14% in 1969 (Krugman, 2008). Tragically, current poverty rates are higher than they were in 1969. The gap between rich and poor has widened. Given our country’s political polarization, we might not realize changes in health care accessibility or remediation of the fiscal crisis in time for the children currently in our care, but we can work to impact the relationships and attachments they have with their primary caregivers. The negative effects of childhood poverty continue to impact individuals long into adulthood. As a nation, we are all adversely affected by lost productivity, poor health, and higher crime rates. This lack of lasting progress ought not thwart us from continuing to address this problem.

Despite the serious threats to development stemming from life in impoverished environments, children are resilient. With targeted, evidence-based interventions during this sensitive time, we can protect children from the numerous risk factors that impede development. Garner and colleagues (2012, p. e228) note, “Protecting young children from adversity

is a promising, science-based strategy to address many of the most persistent and costly problems facing contemporary society, including limited educational achievement, diminished economic productivity, criminality, and disparities in health.” The provision of high-quality early intervention programs can significantly contribute to improved child outcomes as measured by educational success, workplace productivity, responsible citizenship, and successful parenting of the future generations (Center on the Developing Child, Harvard University, 2007; National Scientific Council on the Developing Child, 2004). While it may not be possible to provide educational intervention for all risk factors stemming from poverty, by striving for a model of resilience and promoting positive reaction to adversity, researchers, educators, and practitioners will have plenty of opportunity to design comprehensive programs and interventions to combat poverty (Thomas-Presswood & Presswood, 2007).

As EHDI practitioners, we have already established family-centered, interdisciplinary, strengths-based programs. Yet within our current systems, we have families floundering as we work to learn how to best serve them. So where do we begin? The strongest evidence to date is to begin with the caregiver-child relationship (Eshbaugh et al., 2011; Komro, Flay, & Biglan, 2011; Mercy & Saul, 2009; Milteer, Ginsburg, Council on Communications and Media Committee on Psychosocial Aspects of Child and Family Health, & Mulligan, 2012; Phillips & Lowenstein, 2011; Thompson, 2011; Wikeley, Bullock, Muschamp, & Ridge, 2009). Amidst the relative chaos of an impoverished family’s life, we can support and encourage stability by enhancement of loving, connected, nurturing relationships.

We are fortunate to serve the youngest children of our population and their caregivers—the portion of the population where our investment dollars can have the greatest impact. Economist James Heckman and colleagues have conducted in-depth analyses regarding the economics

of poverty. This exploration of the cost-benefit ratio of investment in anti-poverty programming clearly points to investing early when the greatest rate of return on an investment is possible (Cunha & Heckman, 2009; Doyle, Harmon, Heckman, & Tremblay, 2009; Heckman, 2006). Since the adverse impact of poverty appears to stem from a lack of early stimulation, later remediation strategies may have less of a lasting impact or be wholly ineffective.

Brain development. Periods of high brain plasticity—the same periods often cited for sensitive or critical periods of language development and benefits of early auditory access—cause children to be ripe for learning in the early years. This highly plastic window of opportunity also causes children to be more vulnerable to the effects of toxic stress (Garner et al., 2012; Shonkoff, Boyce, & McEwen, 2009). Expert panelists from the National Scientific Council on the Developing Child suggest that positive early experiences—ascertained through nurturing caregivers and stimulating environment—can build and reinforce important neural pathways relating to language development and executive functioning (Center on the Developing

Child, Harvard University, 2010). Adverse early experiences can weaken these connections. The Adverse Childhood Experiences (ACE) Study (CDC-ACE Study, 2012) has provided plentiful data by which to explore the relationship between early adverse experiences, longitudinal health, and developmental outcomes. Researchers have found that the number of traumatic events in a child's life is proportional to their risk for medical and social difficulties as adolescents and adults (Shonkoff et al., 2012).

Researchers continue work to identify those interventions in medical and educational domains that might provide protection to the developing brain and increase a child's ability to cope or be resilient. Author Paul Tough (2011) cites the director of the ACE Study, Dr. Vincent Levitt, as suggesting that currently the primary intervention for young children with adverse experiences should include enhancement of supportive relationships among educators, parents, and young children. These enhanced relationships will serve to buffer developing children from the adverse effects of poverty.

Parenting. Parents have the power to profoundly change their child's outcomes. Simply, "Parents and other caregivers who are able to form close, nurturing relationships with their children can foster resilience in them that protects them from many of the worst effects of a harsh early environment" (Tough, 2012, p. 28). A comparison study investigating the warmth and frequency of parent-child activities of low-income families versus families of typically developing children found that children with disabilities receive less-responsive parenting than nondisabled children (Eshbaugh et al., 2011). A primary implication of this work is that if parents of children with disabilities can be helped to increase their responsiveness to their children, the effects of the delays may be ameliorated. Though intervention providers may be experts in their disability-specific disciplines, we are reminded that, "The need to provide parents with strategies for optimal parenting may go beyond those

"Intervention is likely to be more effective and less costly when provided earlier in life rather than later. (National Scientific Council on the Developing Child, 2007).



Photo courtesy of Octicon A/S

“When you are bombarded by poverty, uncertainty, and fear, it takes a superhuman quality to provide the conditions for a secure attachment.”

—Alicia Lieberman
in “How Children Succeed,” p. 38.

families for which we are already providing services” (Eshbaugh et al., 2011, p. 521). EHDI providers may be particularly interested in research exploring the intersection of poverty, parenting, and the impact on child language development. Converging evidence indicates that language is one of the developmental systems most at risk for children in poverty (Hackman, Farah, & Meaney, 2010; Fernald, Marchman, & Weisleder, 2013). Reviews of behavioral, electrophysiological, and neuroimaging studies suggest that both language and cognitive control are most sensitive to differences in socioeconomic status (Hackman & Farah, 2009; Lipina & Colombo, 2009). If we acknowledge parents and other caregivers as the young child’s first and most important teacher, we can begin to realize opportunities for enhancement of the caregiver-child connection, including their communication with one another. Parents of all socioeconomic backgrounds provide their children with experiences by which communication takes place. These experiences certainly vary in diversity and richness. By encouraging increased caregiver responsivity, contingency, joint attention, frequent syntactically complex, and lexically rich child-directed talk, the caregiver can drastically improve their child’s language experience (Guttentag et al, 2014; Gilkerson & Richards, 2008; Hoff, 2006; Suskind, 2015).

Professional competence. EHDI professionals have the opportunity to support caregivers in creating a positive environment for their child, but the professionals must have the knowledge about the impact of poverty and the skills needed to reduce the negative effects of poverty on child development. Professional organizations and the Supplement to the Joint Committee on Infant Hearing Position Statement (2013) provide recommendations for professional competencies, but this guidance is limited on the topic of serving children and families who live in poverty. Resources for preservice and inservice professional development that focus primarily on teaching and learning for children living in

poverty include the work of Gorski (2013), Jensen (2009, 2013), and Neuman (2009). Communication development strategies for children living in poverty are addressed in the work of Roseberry-McKibbin (2013) and Suskind (2015). Tough (2011) focuses on the qualities of character that can profoundly influence the achievement of children living in poverty.

Recent studies of professional preparation programs have identified ways to increase the competence of preservice professionals in serving children living in poverty. Some professional preparation programs have developed approaches to enhancing the knowledge of preservice professionals, including discussion and activities in courses and through experiential learning in practicum and service learning projects (Amatea, Cholewa, & Mixon; 2012; Conner, 2010; Dunn-Kenney, 2010; Hughes, 2010; Ullicci & Howard; 2015). When EHDI professionals are well aware of the impact of poverty and have a variety of effective practices and strategies to use in their work, children and families will have better outcomes.

What Programs and Approaches Are Being Used with Families to Ameliorate the Impact of Poverty on Child Development?

In an effort to provide models that may be useful to EHDI providers, we reviewed a number of proven and promising programs and approaches currently being used with families living in poverty (see *Appendix A*). The programs are categorized as awareness and advocacy, community-based, home visiting, play- and communication-based, school-based, hearing technology, and programs that address issues that may be related to poverty. We provide a brief description of several programs and include links to websites (see *Appendix A* for these programs and approaches).

How Can a Program Be Adapted and Applied to Benefit Children with Hearing Loss and Their Families?

In this section, we provide a more detailed description of the Promise Neighborhoods initiative listed in *Appendix A* and show how EHDI professionals working with children who are deaf and their families can use the resources of this program to implement quality services for the families they serve. The PNRC designed the Creating Nurturing Environments framework (<http://promiseneighborhoods.org>) to guide efforts to increase the proportion of children who will develop successfully (Komro et al., 2011).

The framework includes outcomes in developmental phases and the prenatal-infancy phase (birth to age 2), identifies outcomes in cognitive development, social and emotional competence, absence of psychological and behavioral problems, and physical health. One of the PNRC working groups focuses on choosing, integrating, and implementing evidence-based strategies (Komro et al., 2011, p. 114). The PNRC identified 17 proximal influences, including family, school, and peer influences that have a significant effect on children's overall development. We suggest that eight of the family influences (see *Figure 4*) are areas in which EHDI providers can have an impact by providing resources and engaging families in activities that increase the likelihood of positive family influences and decrease the influences of cumulative family risk. While the examples of ways in which EHDI professionals can support and encourage caregivers are commonly used by many EHDI providers, families living in poverty may have a greater need for these types of intentional support.

EHDI professionals can improve outcomes by providing information and emphasis on high-quality early childhood education and providing resources and information related to some of the distal influences

identified by the PNRC, such as access to nutritious foods, exposure to toxins, and media exposure. The PNRC website includes additional principles and recommendations that EHDI programs may find beneficial in meeting the needs of families living in poverty.

What Strategies Have EHDI Professionals Used?

In *Figure 5*, we have listed effective practices and associated strategies that we found in our review of the research, from our own experiences, from participants at past EHDI meetings, and input from attendees at other presentations we have given to professionals currently in practice. The strategies are organized in the framework of effective practices we developed; however, note that many of the exemplar strategies apply to multiple effective practices.

What Resources Are Available to Support Positive Outcomes for Children Living in Poverty?

Appendix B provides resources for professionals interested in learning more about families living in poverty and ways to mitigate the negative impact of poverty on child development.

Appendix C is a plan designed to be used for professional learning at the preservice or inservice level. The plan includes a PowerPoint presentation that may be used in conjunction with the content of this *Issue Brief* or on its own. The instructor may adapt the plan to meet the needs of the learners by including more opportunities for discussion or additional information from the local community. We designed the PowerPoint and activities for a 90-minute session with the related activities suggested for additional sessions or workshops of longer length. The PowerPoint is available at the following link: <http://www.infantheating.org/ehdi-ebook/index.html>

"What I fundamentally believe—and what the president believes—is that the only way to end poverty is through education."

—Arne Duncan

Figure 4 Family Influences EHDI Professionals Can Impact

Family Influences	EHDI Professionals Can Support & Encourage . . .	Examples of EHDI Professional Action
Involvement in Learning-Related Activities	Positive interaction in warm, responsive environments and opportunities for play and communication.	Early intervention provider guides caregiver in playing routine games that include nurturing and affection, such as “patty-cake,” “peek a boo,” and “how big is baby?”
Involved Monitoring	Parent engagement in ways to guide children’s behavior.	Audiologist asks questions about child’s listening in daily routines and encourages caregiver to observe child’s responses to sound and provide positive feedback when child responds.
Non-Harsh Limit Setting	Parenting that uses moderate amounts of restrictiveness and is consistent and responsive to children’s needs.	Early intervention provider shares information with parents about positive behavior support approaches, such as <i>Love and Logic</i> .
Reinforcing Interactions	Positive behavior support, proactive parenting, and verbal interactions.	Early intervention provider observes and comments on successful communication between parent and child.
Positive Role Modeling	Modeling of parent beliefs, attitudes, and behavior.	Audiologist guides parent in monitoring and troubleshooting listening device and providing quality auditory input, such as music, singing, and nursery rhymes.
Health Maintenance and Hygiene	Access to medical services and appropriate hygiene practices, such as appropriate nutrition and sleep habits.	Early intervention provider guides caregiver in making a healthy snack using affordable ingredients to develop communication and provide nutrition information. Audiologist provides family with list of resources for low- or no-cost listening technology and batteries.
Involvement in Positive Activities	Participation in physical activities, music, art, and literacy activities.	Early intervention provider coaches caregiver in dialogic reading to increase positive, communication-based book sharing and recommends a parent-child story time that includes art and music activities at the neighborhood library.
Cumulative Family Risk	Family awareness of, and action to reduce the presence of, risk factors, including maternal depression, household smoking status, interpartner violence, harsh parenting, and substance abuse.	Audiologist refers mother who expresses concerns about depression to mental health services in the community. Early intervention provider consults with social worker regarding concerns about domestic violence in the household.

Figure 5

A Framework of Effective Practices and Strategies to Promote Resilience

Identify Personal Bias

- Reflect on our experiences, values, and attitudes related to poverty.
- Read articles and explore websites about poverty.
- Be present, nonjudgmental, and selfless.
- Find the strengths in each family.
- Recognize priorities may be different than ours.
- Watch, listen, learn.
- Hold high expectations for achievement.

Build Relationships

Parent-Professional

- Use positive statements about the child and family—be specific.
- Instill a sense of confidence and self-worth.
- Provide feedback and authentic affirmation to make families feel comfortable.
- Use language the family understands and explain new terms.
- Talk with caregivers about their lives to know what their tangible and intangible contributions can be.
- Support families in determining what they can and want to contribute.
- Ask meaningful questions and listen, listen, listen.

Parent-Child

- Recognize and acknowledge the positive aspects of child-caregiver interaction.
- Note appropriate attachment between child and caregiver.
- Comment on child's strengths and development.
- Provide resources for caregivers to develop a positive relationship with the child—print, online, and community resources.

Assess Family Needs

- Identify strengths of the family.
- Assess with team members, when appropriate.
- Determine type of poverty experienced by the family—financial, emotional, mental, physical, support systems, role models.
- Consider Maslow's Hierarchy of Needs in recognizing family priorities.
- Determine the best time and place to meet with the family based on the family's needs.
- Observe trends in communication access; keep previous contact information and extended family contacts.
- Use a written agreement that discusses roles and responsibilities of early intervention provider and family.
- Guide families in documenting appointments and sessions.



Photo courtesy of NCHAM

Figure 5 (continued)

Provide Resources & Support

Increase Awareness & Advocate

Listening Technology

- Seek funding to provide free hearing screenings to childcare programs in neighborhoods with limited resources.
- Find pediatric audiology programs that provide services at low or no cost.
- Seek funding to provide hearing aid batteries at low or no cost.

Access to Services

- Obtain gas cards or bus passes from community resources to support transportation needs.
- Assist in arranging medical transportation for audiology services.
- Host an open house for community agencies that provide services for families.
- Meet with the family at the local public library to encourage use of the library for literacy.
- Create a list of medical clinics that provide free or reduced-cost services.

Food, Housing, Health

- Identify community resources for food assistance, such as the “backpack snack” programs or community garden programs found in many communities.
- Explore governmental agencies at the state and local level that may provide support, such as SSI, Medicaid, and DHHS/Regional Centers.
- Develop collaborative relationships with social workers and social service programs in the community.
- Use appropriate snack activities during sessions to encourage the use of healthy snacks.
- Create a list of food pantry locations and contact information.
- Use the Individualized Family Service Plan (IFSP) team social worker to assist in goals related to food, housing, and health.
- Be aware of religious organizations in the community that the families may connect with for support.

Keep Everyone Safe

- Discuss safety concerns as related to scheduling of time and place of family sessions, lead paint poisoning, and access to outdoor play.
- Protect children from child abuse and neglect by providing resources and support and by using Observe, Understand and Respond: The OUR Children’s Safety Project

Agency-Wide

- Participate in activities with colleagues to increase agency-wide, effective practices, such as book study, poverty simulation, and resource simulator.

Community-Wide

- Be aware of legislative initiatives that could provide support for children living in poverty and advocate with governmental leaders for the implementation of such policies.



Photo courtesy of NCHAM

Figure 5 (continued)

Educate Families on Quality Instruction

- Identify quality instruction within the intervention program.
- Use relevant, authentic, and multicultural activities and materials.
- Implement play activities recommended by APA and Play and Learning Strategies.
- Avoid bringing toys and equipment that the family wouldn't typically have in their home.
- Teach families how to create activities out of materials in their home, such as building towers, cards, and puppet theaters from cereal boxes or using towels, sheets, clothespins, toilet paper tubes, etc. for dramatic play.
- Use daily routines, such as mealtime, for listening and language development.
- Bring materials for an art project and leave some materials behind, so that families can use the materials to recreate or extend the activity.
- Sing songs, recite rhymes, and participate in movement and finger plays.
- Encourage caregivers to teach you the songs they use or remember from their childhood.
- Provide written descriptions of activities you use in your session to encourage repetition.
- Establish family support groups for parent-to-parent interaction and learning.
- Support families in selecting quality childcare by using resources such as Childcare Aware, <http://www.naccrra.org/> or www.chilcareaware.org/
- Teach families about the characteristics of quality early childhood education.



Photo courtesy of Centers for Disease Control and Prevention

Appendix D contains three case scenarios depicting children with hearing loss and their families living in poverty. These scenarios may help professionals consider the diverse circumstances experienced by individuals living in poverty. We hope these scenarios provoke thoughtful discussion and connections to real children and families served by EHDI professionals.

Reflect and Take Action

How have you experienced the impact of poverty in your work with children and families? Have you struggled to serve families in poverty? What steps can you take? Review the case scenarios in *Appendix D*.

Using the information presented in this *Issue Brief* and your personal experience serving children and families living in poverty, consider the following:

1. What are each family's resources?
2. Who are the primary supports for this household?
3. What programs or approaches might benefit this family?

4. What strategies might you use from the Effective Practices to increase the chance of success for each of these children?
5. How can you include strategies in your interaction with the child and caregiver?

EHDI professionals have the opportunity to positively impact the development of infants and toddlers who are deaf or hard of hearing. Our knowledge of child development, caregiver-child interaction, and family systems allows us to provide services that enhance successful outcomes. Our skills in family-centered intervention and use of a wide array of evidence-based strategies transform the functioning of families and the achievement of children. By recognizing our responsibility to apply our knowledge of the impact and challenges of poverty to the services we provide to children, we will foster resilience and help buffer children and families from the negative effects of poverty. By building positive relationships with families and guiding caregivers in developing attachment with their children, we will strengthen healthy families. By advocating for resources and connecting families with needed community services, the children in our care will develop optimally.

"If poverty is a complex system of negative feedback loops, then you have to create an equally complex and diverse set of positive feedback loops."
—David Brooks

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Appendix A

Programs and Approaches to Ameliorate the Impact of Poverty on Child Development

Awareness and Advocacy Programs

It's essential that EHDI providers understand the ways in which socioeconomic status may impact the children and families they serve. The following organizations provide current data on poverty and families. This information can raise awareness and provide needed information, so that EHDI professionals can advocate for needed services.

National Center for Children in Poverty

This public policy center is dedicated to promoting the well-being of America's low-income families and children. The center provides research to inform policy and practice with a vision of family economic security; strong, nurturing families; and healthy child development. The center is an excellent resource for current data and position statements on poverty. The website includes a Family Resource Simulator and Basic Needs Budget calculator that can provide experiences to increase understanding for EHDI professionals regarding the challenges of living in poverty.

Children's Defense Fund

This advocacy organization champions "policies and programs that lift children out of poverty." The website includes a research library, fact sheets, and publications, such as the annual *State of America's Children*. The *Policy Priorities* section on Ending Child Poverty includes reports, briefs, and profiles of children.

Center on the Developing Child at Harvard University

The Center on the Developing Child generates, translates, and applies knowledge in the service of improving life outcomes for children. It is committed to "the design, implementation, and evaluation of innovative program and practice models that reduce preventable disparities in well-being." Reports and working papers address topics such as the impact of adversity on brain development and effects of child maltreatment. Frontiers of Innovation (FOI) is an initiative of the center that is "using scientific advances about the effects of early childhood adversity to catalyze innovations in policy and practice that can achieve breakthrough outcomes in the lifelong physical and mental health, learning, and behavior of vulnerable young children."

Additional resources for awareness and advocacy information include:

- The [Carsey Institute at the University of New Hampshire](http://www.carseyinstitute.unh.edu/publication/IB-Same-Day-Child-Poverty-2012). Over 16 Million Children in Poverty in 2011, <http://www.carseyinstitute.unh.edu/publication/IB-Same-Day-Child-Poverty-2012>
- [Future of Children](#). Resources section links to the Center for Research on Child Well-Being and the Center on Children and Families.
- [National Early Childhood Technical Assistance Center](http://www.nectac.org/~pdfs/pubs/factsheet_vulnerable.pdf). Fact Sheet on Vulnerable Children, www.nectac.org/~pdfs/pubs/factsheet_vulnerable.pdf
- [Spotlight on Poverty and Opportunity](#). Sections on education and poverty and family well-being.

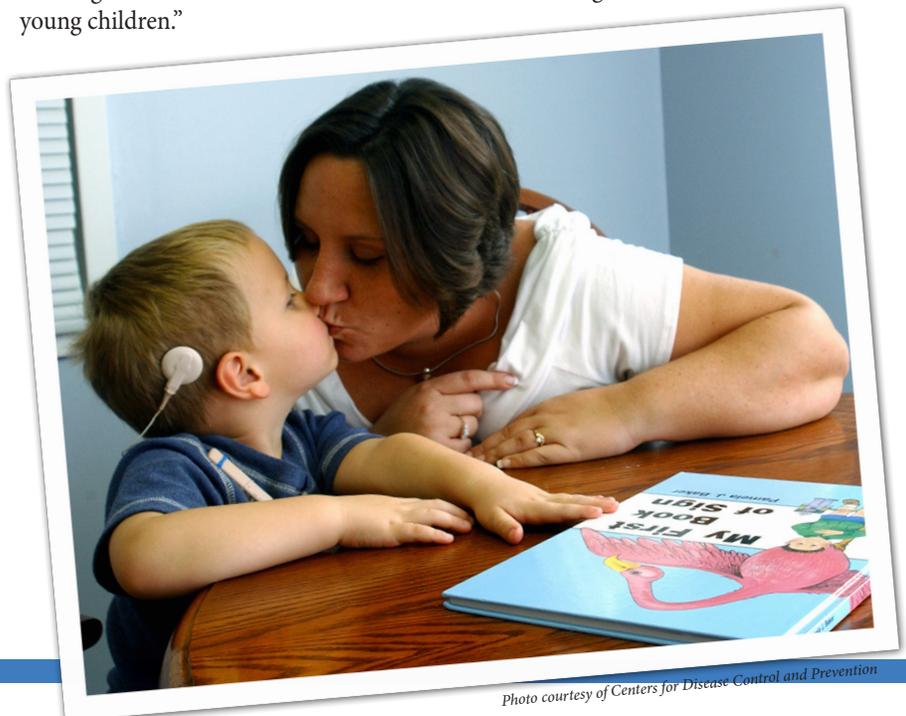


Photo courtesy of Centers for Disease Control and Prevention

Appendix A

(continued)

Community-Based Programs

Programs that use a comprehensive approach within a community often include an emphasis on early education and parenting. The following programs provide models that may be adapted and applied by EHDI programs.

Promise Neighborhoods Creating Nurturing Environments

The Promise Neighborhoods initiative addresses poverty and promotes child educational and health outcomes. Its model—the Harlem Children’s Zone—works to enhance the quality of life for children through a network of programs, including parenting classes and early childhood programs. The Promise Neighborhoods Research Consortium (PNRC) is comprised of researchers from a wide array of disciplines who have “organized

evidence and defined strategies for assisting high-poverty neighborhoods in improving development, health, and well-being among children and adolescents” (Komro et al., 2011). More information about this project and how it may be used by EHDI providers is included in the next section. Author Paul Tough provides additional information about the Harlem Children’s Zone in his book, “Whatever It Takes” (Tough, 2009), and describes a number of projects, including parenting interventions in his latest book, “How Children Succeed” (Tough, 2012).

Early Head Start (EHS)

The mission of this federally funded program for low-income families with infants and toddlers includes enhancing the development of very

young children and promoting healthy family functioning. The EHS website includes webinars, tip sheets, and resources for serving low-income families. The program offers a home-based option and several publications profiling the efforts of communities.

Frank Porter Graham Child Development Center Abecedarian Project

This project documents the benefits of high-quality early education for children living in poverty.

Save the Children

In addition to the international efforts of this organization, programs in the U.S. are focused on school readiness, nutrition, literacy, policy, and disaster relief.

Home Visiting Programs

Since many EHDI professionals are providing services in a child’s natural environment, models of home visiting programs designed for low-income families may offer evidence-based strategies that could be effectively used as a component of early intervention services.

Maternal Infant and Early Childhood Home Visiting

This program provides information on 12 evidence-based home visiting service delivery models, including the [Nurse Family Partnership](#) and the [Child FIRST](#) program. While programs such as these are designed for the professional fields of nursing and social

work, respectively, EHDI professionals may be able to collaborate with projects like these or include activities adapted from these programs to improve services for families. A resource for identifying evidence-based social programs such as these is the [Coalition for Evidence-Based Policy](#), which provides a review of studies reporting on the effectiveness of interventions related to a variety of topics.

Appendix A

(continued)

Play- and Communication-Based Programs/Approaches

Early intervention service providers often focus much of their effort on communication development, particularly in listening and language development through developmentally appropriate play. Several resources provide models for the use of communication and play to ameliorate the negative impact of poverty.

Zero to Three

“Informs, trains, and supports professionals, policymakers, and parents in their efforts to improve the lives of infants and toddlers.” The organization provides extensive

resources on infant/toddler development, including resources for play and communication development.

The Children’s Learning Institute

“Combines data and studies from the fields of psychology, neuro-development, education, and child development to provide proven learning solutions derived from, and supported by, documented research . . . and cutting-edge research on techniques to enhance a child’s home and learning environment.” The *Play and Learning Strategies* (PALS) curriculum for home visits is an

evidence-based approach for coaching caregivers of young children to enhance communicative interactions and supporting behaviors during daily routines.

American Academy of Pediatrics

The AAP published a clinical report in 2012 stressing the importance of play in promoting child well-being for children living in poverty (Milteer et al., 2012). The report includes advice for pediatricians on ways to promote the inclusion of play. EHDI providers may also stress these strategies for including play.

School-Based Programs

While EHDI professionals typically focus on infants, toddlers, and their families, school-based programs designed to address the impact of poverty may provide valuable information, particularly in ways of identifying personal bias and considering characteristics of low-income, high-achieving organizations that may be applicable to EHDI agencies.

Comer School Development Program

Creates relationships and a culture in schools that helps children grow on

six developmental pathways: social-interactive, psycho-emotional, ethical, cognitive, linguistic, and physical. These experiences promote executive function and social skills that children need.

Changing the Odds for Children at Risk: Seven Essential Principles of Education Programs That Break the Cycle of Poverty

This text by Susan Neumann (2009) provides a framework to guide programs in breaking the cycle of

poverty and includes an emphasis on beginning early in children’s lives and coordinating services.

The Association for Supervision and Curriculum Development

Published Eric Jensen’s (2009) book and professional development materials, including *Teaching with Poverty in Mind*, that could be used to increase awareness among professionals regarding organization characteristics and potential actions to improve services.

Appendix A

(continued)

Hearing Technology Programs

While several states have legislation mandating hearing aid coverage, and a number of other states provide hearing aids for children birth to age 3, families may need assistance getting hearing aids.

AG Bell Listening and Spoken Language Knowledge Center

Access the site for a document describing [Financial Assistance for Hearing Technology](#). The website also includes information on financial aid for educational programming for young children.

Project ASPIRE (Achieving Superior Parental Involvement for Rehabilitative Excellence)

This evidence-based early intervention curriculum for children with cochlear implants was built on the belief that within every

parent is the capacity to help his or her child reach their listening and talking potential. The 10-module curriculum incorporates education, behavioral strategies, and the cutting edge technology of the Language Environment Analysis (LENA) word pedometer. Built on a foundation of the science of behavior change, ASPIRE aims to transform knowledge into action through video modeling, “linguistic feedback,” and goal setting. As part of the video modeling component, both the therapist and the parent video themselves implementing newly discussed strategies. The video is then reviewed for immediate and constructive feedback. The “linguistic feedback”

from weekly LENA recordings allows parents to “see” the language environment they provide their child. The resulting data gives concrete feedback and informs future goal setting. Project ASPIRE represents more than 6 years of an iterative process during which extensive formative testing was done, including an exhaustive review by a diverse team of professionals. See also, *Thirty Million Words*®, a related initiative that helps parents of typically hearing children enhance their home language environment to optimize brain development and enhance learning.

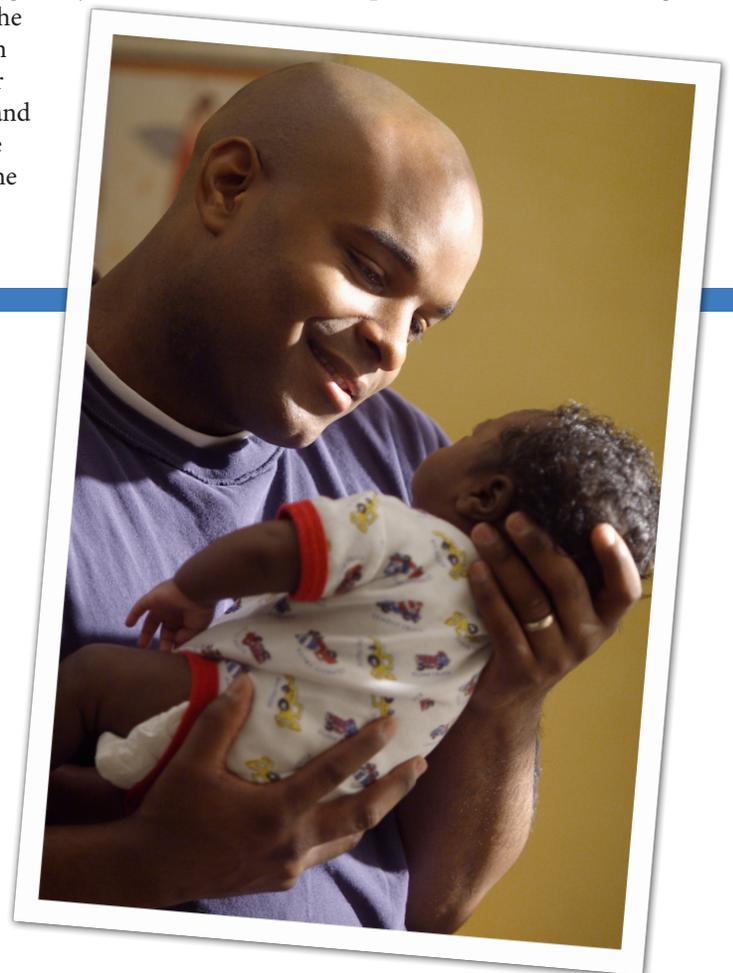


Photo courtesy of NCHAM

Appendix A

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Programs Addressing Issues That May Be Poverty Related

“Early experiences, including attachment, stimulation, and exposure to language, determines whether a child’s developing brain architecture provides a strong or weak foundation for future learning, behavior, and health.”

—Center on the Developing Child, Harvard University

Poverty may be related to a number of specific issues. EHDI professionals may need information and strategies addressing topics, such as food insecurity, homelessness, mental health, domestic violence, and child maltreatment.

Food Research and Action Center (FRAC)

This nonprofit organization works to eradicate hunger and undernutrition in the U.S. FRAC provides coordination, training, technical assistance, and support on nutrition and anti-poverty issues to a nationwide network of advocates, service providers, food banks, program administrators, and participants, as well as policymakers.

Zero To Three

The January 2010 edition of the *Journal of Zero to Three* focuses on homeless families and includes information on child development issues related to homelessness, strategies and approaches to providing services to children and families who are homeless, and coping strategies for families and children after traumatic events.

The Urban Institute

The Urban Institute provides awareness and advocacy information on poverty.

A 2010 Brief (<http://www.urban.org/UploadedPDF/412199-infants-of-depressed.pdf>) addresses the issue of maternal depression and poverty and the impact on infant development.

Early Childhood, Domestic Violence, and Poverty: Helping Young Children and Their Families

This series of papers addressing various aspects of domestic violence and poverty and provides guidance to professionals working with young, low-income children affected by domestic violence.

Observe, Understand, and Respond: The OUR Children’s Safety Project Hands and Voices

This project, directed by Harold Johnson and Janet DesGeorges, has been designed to assist learning and research that serves to prevent or reduce the impact of abuse and neglect.

Child Welfare Information Gateway

This organization “connects child welfare and related professionals to comprehensive information and resources to help protect children and strengthen families.” Resources include a document entitled, *The Risk and Prevention of Maltreatment of Children with Disabilities*.

Appendix B

Resources for Professionals

Text

- Hart, B., & Risley, T. R. (1995). *Meaningful differences in the everyday experience of young American children*. Baltimore: Paul H Brookes.
- Jensen, E. (2009). *Teaching with poverty in mind: What being poor does to kids' brains and what schools can do about it*. Alexandria, VA: ASCD.
- Jensen, E. (2013). *Engaging students with poverty in mind: Practical strategies for raising achievement*. Alexandria, VA: Association for Supervision & Curriculum Development.
- Gorski, P. C. (2013). *Reaching and teaching students in poverty: Strategies for erasing the opportunity gap*. Teachers College Press.
- Neuman, S. (2009). *Changing the odds for children at risk: Seven essential principles of educational programs that break the cycle of poverty*. Westport, CT: Praeger.
- Payne, R. K. (1996). *A framework for understanding poverty*. USA: aha! Process, Inc.
- Shonkoff, J. P., & Phillips, D. A. (Eds.). (2000). *From neurons to neighborhoods: The science of early childhood development*. Washington DC: National Academy Press.
- Suskind, D. (2015). *Thirty million words: Building a child's brain*. New York: Dutton.
- Thomas, T., & Presswood, D. (2008). *Meeting the needs of students and families from poverty: A handbook for school and mental health professionals*. Baltimore: Paul H Brookes.
- Tough, P. (2012). *How children succeed: Grit, curiosity, and the hidden power of character*. New York: Houghton Mifflin Harcourt.

Web Resources

- AG Bell Listening and Spoken Language Knowledge Center, www.agbell.org
- American Academy of Pediatrics, The Importance of Play in Promoting Healthy Child Development and Maintaining Strong Parent-Child Bond: Focus on Children in Poverty, <http://pediatrics.aappublications.org/content/early/2011/12/21/peds.2011-2953.abstract>
- Association for Supervision and Curriculum Development, Teaching with Poverty in Mind, <http://shop.ascd.org/Default.aspx?TabID=55&productid=1090&teaching-with-poverty-in-mind:-what-being-poor-does-to-kids&brains-and-what-schools-can-do-about-it&clid=CKfs3NbJ1LQCFQioPAodPV0Aeg>
- Carsey Institute at the University of New Hampshire, <http://www.carseyinstitute.unh.edu/index.html>
- Center on the Developing Child at Harvard University, <http://developingchild.harvard.edu/>
- Child FIRST, <http://www.childfirst.net/>
- Child Welfare Information Gateway, <https://www.childwelfare.gov/>
- Children's Defense Fund, <http://www.childrensdefense.org/policy-priorities/ending-child-poverty/>
- Children's Learning Institute, <http://www.childrenslearninginstitute.org>
- Coalition for Evidence-Based Policy, <http://evidencebasedprograms.org/>
- The Comer School Development Program, <http://www.schooldevelopmentprogram.org>
- Early Childhood, Domestic Violence, and Poverty: Helping Young Children and Their Families, http://www.ncdsv.org/images/UI-SSW_EarlyChildhoodDVandPoverty_1-2004.pdf

Early Head Start (EHS), <http://www.ehsnrc.org/>
Food Research and Action Center (FRAC), <http://frac.org/>
Future of Children, <http://www.futureofchildren.org>
Hands and Voices - Observe, Understand, and Respond: The OUR Children's Safety Project, <http://www.handsandvoices.org/resources/OUR/index.htm>
Maternal Infant and Early Childhood Home Visiting, <http://mchb.hrsa.gov/programs/homevisiting/models.html>
Missouri Association for Community Action - Poverty Simulations, <http://communityaction.org/>
National Center for Children in Poverty, <http://www.nccp.org>
Family Resource Simulator, <http://www.nccp.org/tools/frs/>
National Early Childhood Technical Assistance Center, <http://www.nectac.org/>
Nurse Family Partnership, <http://www.nursefamilypartnership.org/>
Poor Kids, Frontline Documentary, <http://www.pbs.org/wgbh/pages/frontline/poor-kids/>
Promise Neighborhoods – Creating Nurturing Environments, <http://promiseneighborhoods.org>
Save the Children, <http://www.savethechildren.org/site/c.8rKLIXMGIpI4E/b.6153159/k.C8D5/USA.htm>
Spotlight on Poverty and Opportunity, <http://www.spotlightonpoverty.org>
The Urban Institute, <http://www.urban.org>
Zero To Three, <http://www.zerotothree.org/>

Appendix C

Professional Learning Plan

Developed by: Jenna Voss & Susan Lenihan

This plan is designed to be used by university instructors and professionals conducting inservice professional development offerings. The plan may be used in conjunction with the content of this *Issue Brief* or on its own. The instructor may adapt the plan to meet the needs of the learners by including more opportunities for discussion or additional information from the local community. We designed the PowerPoint and activities for a 90-minute session with the related activities suggested for additional sessions or workshops of longer length. The PowerPoint is available at the following link: http://www.infanthearing.org/issue_briefs/Fostering_resilience_in_children_living_in_poverty.pptx

Goals

1. To develop an understanding of the impact of living in poverty on child development.
2. To develop strategies to use as an EHDI professional working with families from low-socioeconomic status.

Learner Outcomes

The learners will:

1. Identify facts about socioeconomic status for children and families.
2. Describe the impact of poverty on child development.
3. List programs and approaches to mitigate the negative effects of poverty.
4. Determine effective strategies for fostering resilience.
5. Identify resources for supporting work with families living in poverty.

Procedures Outline

1. Introduction/anticipatory set:
 - a. The first slides of the PowerPoint provide the case study of Isabelle and a set of guiding questions.
 - b. Read the case study of Isabelle and discuss the guiding questions.
 - c. Ask participants to share their knowledge and experience of working with children and families living in poverty.
2. Continue with the content in the PowerPoint. References are included in the slides and in this *Issue Brief* for additional information. The slides cover the following topics:
 - a. Demographic information about childhood poverty primarily from the National Center on Childhood Poverty. This information is updated regularly at the NCCP website.
 - b. The impact of poverty on child development.
 - c. Information on poverty and hearing loss, health disparities, and cochlear implants.
 - d. Programs and approaches for mitigating the negative effects of poverty.
3. Continue with the section on effective practices by first eliciting strategies from the participants related to each of the effective practices (listed below) and then showing the strategies listed on the following slides:
 - a. Identify personal bias.

- b. Build relationships.
- c. Assess family needs.
- d. Document what works.
- e. Keep everyone safe.
- f. Provide resources and support.
- g. Educate families on quality instruction.
- h. Increase awareness and advocate.

Provide a handout with the effective practices and strategies with space for additional strategies from the group and have each participant mark the strategies they've used and the strategies they would like to use.

4. Handout the case studies on Anthony and Michael—half the groups complete the guiding questions for Anthony's case, and half the groups complete the questions for Michael's case. The groups debrief with the whole group.
5. Provide the handout on resources:
 - a. If Internet access is available, small groups explore the websites provided and report to the group what they found most useful.
6. Closure:
 - a. Participants respond to the following questions in writing on an index card and then share with partner or small group. Ask participants to send you new strategies to add to your list.
 - As EHDI professionals, how can we be more effective in the services we provide to children and families living in poverty?
 - List three specific strategies that you will use in the next month to improve the services you provide to children and families living in poverty.

Additional Activities

For additional sessions or longer sessions, the following activities are recommended:

- Missouri Association for Community Action, Poverty Simulations, <http://communityaction.org/> ("Poverty Simulation," 2012)
- Family Resource Simulator, <http://www.nccp.org/tools/frs/> (Family Resource Simulator, 2012).
- Book or chapter discussion from list of texts.
- Guest speakers or resource fair with professionals from community resources.
- Observe, Understand, & Respond: The OUR Children's Safety Project from Hands and Voices, <http://www.handsandvoices.org/resources/OUR/index.htm>
- Creation of "local" resource list by participants to be shared with colleagues.
- Video presentations on poverty, such as *Teaching with Poverty in Mind* (ASCD) or *Frontline* documentary, *Poor Kids*, <http://www.pbs.org/wgbh/pages/frontline/poor-kids/> (Neumann, 2012).

Appendix D

Case Scenarios

How have you experienced the impact of poverty in your work with children and families? Have you struggled to serve families in poverty? What steps can you take?

Review the following three case scenarios depicting children with hearing loss and their families living in poverty. While these scenarios differ, all three describe families and children at risk resulting from the deleterious circumstance of poverty. Whether the family comes from generational poverty or is vulnerable as a

result from recent economic crises, these children are at risk. We are charged with serving all young children with hearing loss and their families, including families like these who strive to do right by their children despite their serious financial vulnerability.

These scenarios may help you consider the diverse circumstances experienced by individuals living in poverty. We hope they provoke thoughtful discussion and connections to real children and families served by EHDI professionals.

Scenario 1 . . .

Anthony was a child who referred on his newborn hearing screening, did not receive timely follow-up, and now at age 5, referred on his kindergarten school screening. He has a history of persistent ear infection, drainage, missed pediatrician and ENT appointments, four older siblings, and a large extended family, including grandparents who are regularly involved in his life. When audiologists inquired about any family suspicions of hearing loss, his grandmother firmly stated, "All the other kids hear fine. We were not worried about it. Maybe he's just slow." Anthony doesn't have a strong medical home, as his family receives care from the free community-based resident's clinic. Anthony has been seen by a different physician on nearly every visit, so the health care providers have not consistently conveyed the importance of timely follow-up and management of his hearing health. Anthony's family lives near public transportation, so they are able to make it to businesses and resources around their community. His attendance at school and appointments seems to decrease when the weather is harsh, as his caregivers tend not to navigate the bus and train lines as consistently during these times, and he often arrives late for appointments. This large extended family often takes in friends and their families, which means the basic resources at home sometimes spread thin. Anthony enjoys going to school and seems to thrive on the routine of the school day. Anthony eats breakfast and lunch at school as part of the meal program. It is unclear how often he gets a balanced evening meal. Perhaps his family's financial insecurity has led to food insecurity. Financial restraints and family knowledge of nutrition certainly influence the type of food he eats. His teachers have concern about the nutritional value of his at-home meals. Anthony's classroom teacher has some concern about how the family disciplines the children. Although the teacher hasn't seen evidence of child maltreatment, she remains concerned for this family, given the numerous home and family stressors.

Scenario 2 . . .

Tasha is an 18-year-old single mother of a 13-month-old baby girl, Isabelle. Tasha and Isabelle currently reside with Tasha's mother and her boyfriend in a modest two-bedroom home while Tasha saves money in order to afford a rental of her own. Isabelle referred on her newborn hearing screening and has been enrolled in early intervention services since she was just 3 months old. Tasha has tried her best to balance her part-time job as a waitress while still managing to bring Isabelle to numerous audiology appointments. She's working to understand her daughter's hearing loss and what impact this will have on Isabelle's education and future. Tasha has decided that she'd like Isabelle to receive a cochlear implant (CI), but the team of professionals she works with is concerned about her ability to maintain the appointment schedule, as she has missed two sessions and an audiology visit in the past 3 months. They are also concerned about Tasha's ability to manage the CI technology with her limited family support. Isabelle's father is not regularly involved in her life, but Tasha is hoping he might become more involved given the pending implant surgery.

Scenario 3 . . .

Michael, age 2, is the youngest of three children. His parents have filed for bankruptcy and have closed their once profitable construction business. His father, who once had the next two or three jobs lined up as he finished one project, was hit hard when a large employer in his community closed their business, eliminating jobs for many of their neighbors. The dramatic loss of jobs in the community has impacted small business owners across town with potential home purchasers and remodelers lacking the funds to do so. Without the family business to support them, the family was unable to maintain mortgage payments and is currently living in a temporary shelter until they are able to save enough for a renter's deposit. His dad has taken a factory job in a town 1 hour away, so much of their income is spent on fuel costs. His mother is looking for work but worries how they would afford childcare for Michael and his siblings when they are not in school. She has maintained participation in their weekly early intervention home visits, despite their housing insecurity. She values the time with the early interventionist and doesn't want to forgo these sessions should she find work outside the home. She's also concerned how he'll do in a group childcare setting, as he is a relatively new hearing aid wearer, given his progressive hearing loss.