

In previous sections of this year's *Data Book*, we examined numerous risks faced by children in Memphis and Shelby County – risks that make some children less likely than others to grow into healthy, happy, and productive citizens. The next step is to ask what can be done to reduce these developmental disparities. How can our community level the playing field and ensure that all of our children have a fair chance?

## What is Porter-Leath?

A visit to Porter-Leath should convince even the most jaded Memphian that great things are still happening in Memphis. For more than 150 years, Porter-Leath has been quietly changing the world by improving the lives of disadvantaged children and their families. Originally created as a home for orphans and widows, the Memphis nonprofit agency has evolved into a multi-service organization

Answering this question is one of the greatest challenges facing our community. Fortunately, we can learn a great deal about what works from studies that evaluate intervention efforts and ongoing programs. Each year, the Best Practices chapter of the *Data Book* draws upon this research to highlight programs that have been successful at improving children's lives. This year, the highlighted initiative is Porter-Leath, a Memphis-based nonprofit organization.

offering family counseling, high-quality preschool, food programs, and other services.

In 1998, Porter-Leath became the first Shelby County provider of the federal Early Head Start program. Until recently, Porter-Leath's Early Head Start program, with 95 slots, was the only one in Shelby County, where almost 30 percent of children live in poverty.

## What is Early Head Start?

Early Head Start is a comprehensive, two-generation program created in 1994 to extend the benefits of the Head Start preschool program to children under three. Its goal is to improve infant and toddler development by providing support services for low-income families and quality education for their children. By reaching children during their first three years, when brain development is particularly responsive to positive experiences, Early Head Start has the potential to reduce the effects of disadvantage and increase children's chances for success.

Early Head Start is more than just child care. The support and education services it offers to parents are a key component in the program's ability to improve children's lives. Low-income parents are more likely than middle-class parents to suffer from chronic stress and poor health. Additionally, they face more financial worries, scheduling hassles, transportation problems,

inflexible work environments, and other pressures involved in trying to make ends meet. Difficulties like these drain low-income parents' emotional resources and can lead to less responsiveness, less stimulating home environments, and harsher discipline.<sup>1-3</sup>

Early Head Start programs like the one operated by Porter-Leath help parents use more effective strategies and create more stimulating home environments for their children. Some research shows that up to half of Early Head Start's effect on children's development is due to the positive changes in parenting quality brought about by participation in the program.<sup>4</sup> Compared to other low-income parents, Early Head Start parents are more responsive, more effective at creating a stimulating home environment, and less likely to use corporal punishment.<sup>5</sup> Their children, in turn, have higher cognitive and language scores, stronger emotional and social skills, and better behavior.<sup>5</sup>

## How effective is Early Head Start?

Extensive national research shows that Early Head Start improves children's cognitive scores, language development, and behavior, and has important positive effects on parenting. In a large-scale study of 17 Early Head Start programs across the country, 1,500 children entering Early Head Start were matched to a control group – a second group of 1,500 children with similar parents, families, and

incomes who did not enter an Early Head Start program.<sup>5</sup> When the first group of children finished the program, both groups were tested on a number of cognitive, language, and behavioral measures. Comparing the scores of group 1 (Early Head Start participants) to those of group 2 (non-participants) gives an indication of the effects of Early Head Start participation on children's development.<sup>5</sup>

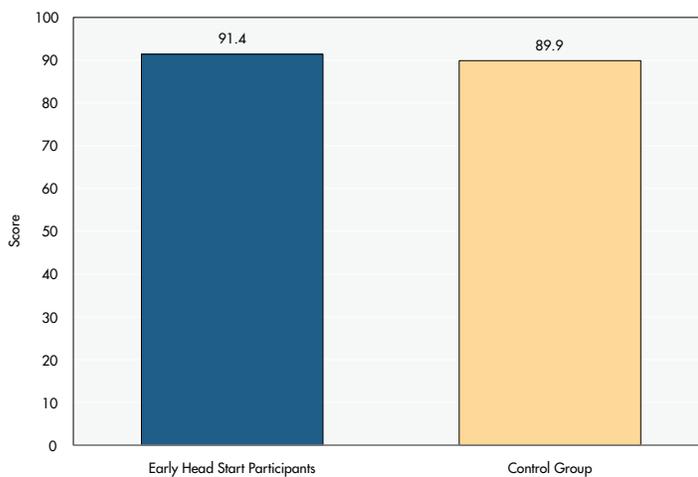
## Early Head Start improves cognitive development.

Cognitive development begins long before a child begins kindergarten. Even before he can understand language, he is developing critical skills that are the framework for later abilities. Deficits in these primary skills can have long-term effects.

Cognitive skills were tested using the Bayley Scales of Infant Development – widely considered the gold standard of cognitive tests for this age

group.<sup>6</sup> Early Head Start children scored an average of 91.4. Children in the control group had an average of 89.9 (Figure 1). (Although these effects, along with the others reported below, seem small, they are statistically significant. For more information, see the Appendix of the Data Book).

A child who scores below 85 on the Bayley Scales is considered to be at risk. Compared to the control group, fewer Early Head Start children scored in the at-risk range (27.3% vs. 32%)(Figure 2).

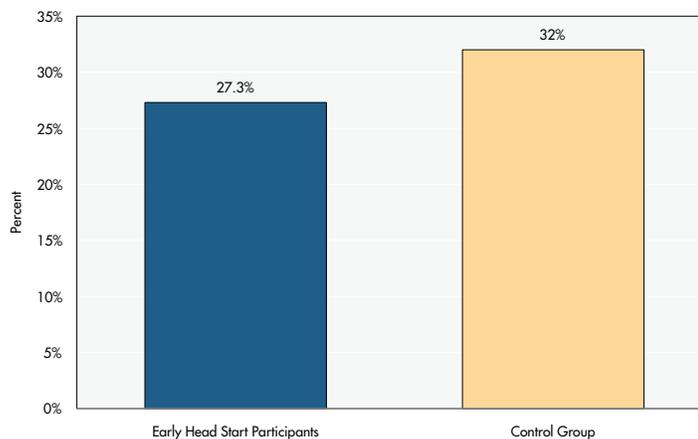


\*Significantly different from zero at the .05 level, two-tailed test.

**FIGURE 1:**  
Average Bayley Mental Development Index Score at Age Three

Source:

Love JM, Kisker EE, Ross C, et al. The effectiveness of Early Head Start for 3-year-old children and their parents: lessons for policy and programs. *Developmental Psychology*. 2005;41(6):885-901.



\*Significantly different from zero at the .10 level, two-tailed test.

**FIGURE 2:**  
Percent of Children With At-Risk Bayley Mental Development Index Scores at Age Three

Source:

Love JM, Kisker EE, Ross C, et al. The effectiveness of Early Head Start for 3-year-old children and their parents: lessons for policy and programs. *Developmental Psychology*. 2005;41(6):885-901.

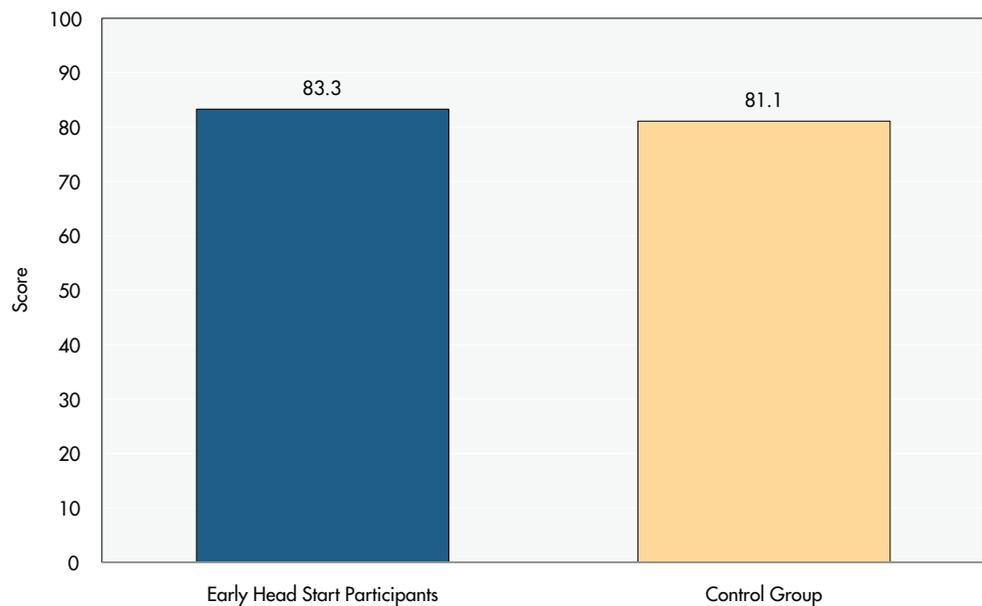
## Early Head Start boosts language skills.

A strong foundation in language skills prepares children for school and for life. This foundation is built in infancy, and early delays often mean later difficulties.<sup>7</sup> Language skills were measured

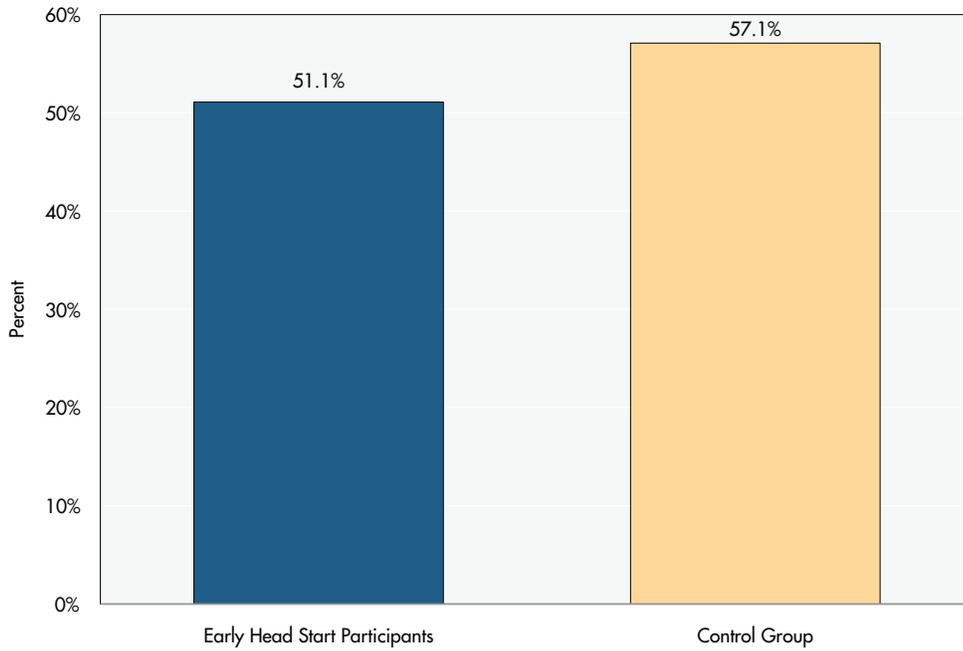
using the Peabody Picture Vocabulary Test (PPVT), which tests vocabulary comprehension. The Early Head Start group scored an average of 83.3, while the control group averaged 81.1 (Figure 3).

**FIGURE 3:**  
Average Peabody Picture  
Vocabulary Test (PPVT)  
Standard Score  
at Age Three

Source:  
Love JM, Kisker EE, Ross C, et al.  
The effectiveness of Early Head  
Start for 3-year-old children and  
their parents: lessons for policy  
and programs. *Developmental  
Psychology*. 2005;41(6):885-901.



\*Significantly different from zero at the .05 level, two-tailed test.



**FIGURE 4:**  
Percent of Children  
With At-Risk PPVT Scores  
at Age Three

Source:  
Love JM, Kisker EE, Ross C, et al.  
The effectiveness of Early Head  
Start for 3-year-old children and  
their parents: lessons for policy  
and programs. *Developmental  
Psychology*. 2005;41(6):885-901.

\*Significantly different from zero at the .05 level, two-tailed test.

Similar to the results for cognitive skills, fewer Early Head Start children than control children scored in the at-risk range for language. As with the Bayley Scales, a score below 85 on the PPVT

indicates developmental risk. 51.1 percent of Early Head Start children scored in the at-risk range, compared to 57.1 percent of the control group children (Figure 4).

## Early Head Start positively affects parenting.

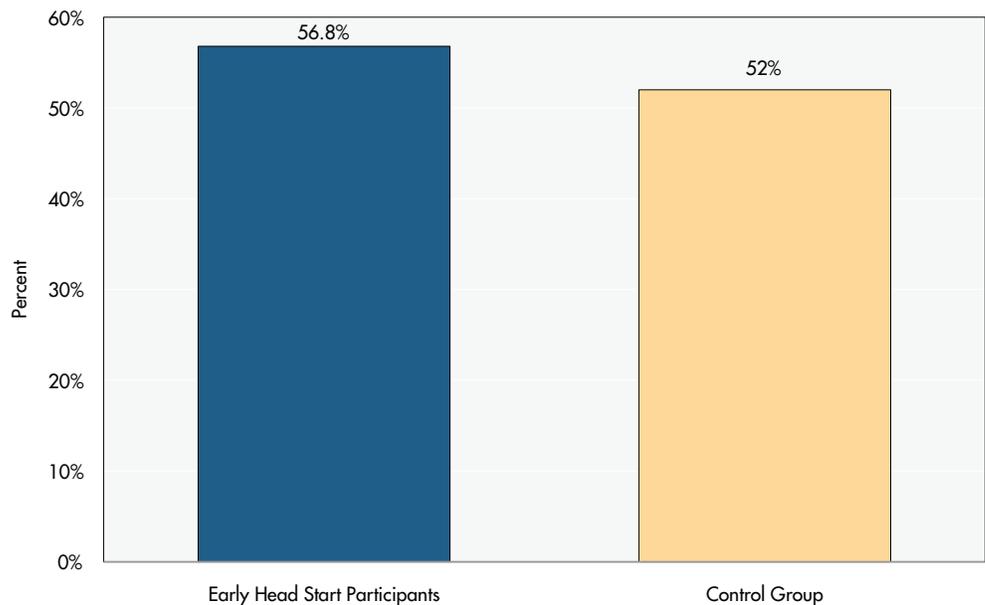
Parents have a substantial influence on children's abilities. The home environments they create, the routines they establish, and the parenting styles they use affect their children's brain development. Supportive, responsive parenting is associated with optimal development. Harsh, punitive strategies can impair development and lead to poor cognitive and behavioral outcomes. Similarly, children whose parents provide a rich language environment through conversation and

book reading are more prepared for kindergarten, while children who are rarely spoken or read to are at a grave disadvantage.<sup>8,9</sup>

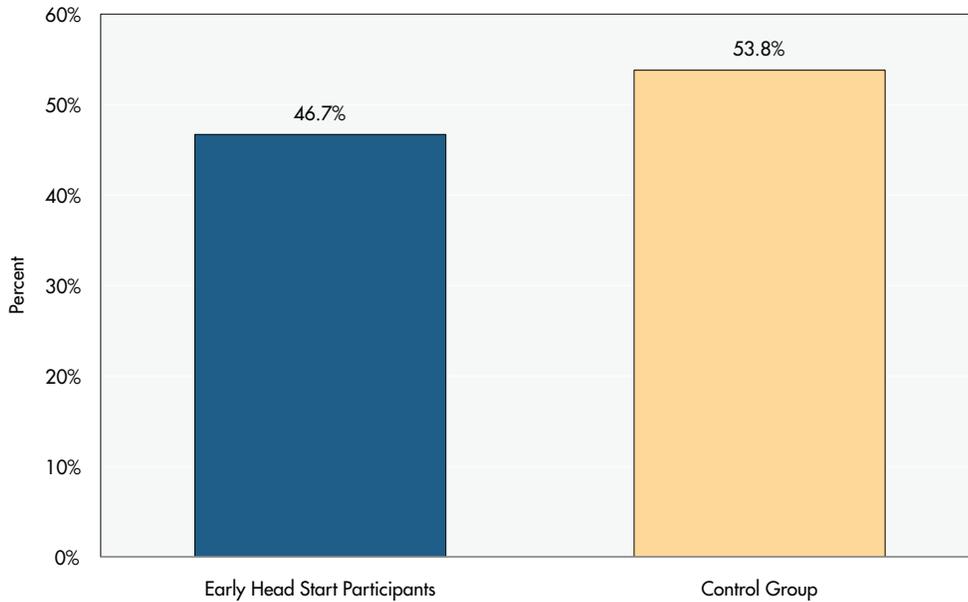
Early Head Start appears to improve children's home learning environments. For instance, 56.8 percent of Early Head Start parents reported reading to their children every day, compared to 52 percent of parents in the control group (Figure 5).

**FIGURE 5:**  
Percent of Parents  
Who Read to Their Three  
Year Old Every Day

Source:  
Love JM, Kisker EE, Ross C, et al.  
The effectiveness of Early Head  
Start for 3-year-old children and  
their parents: lessons for policy  
and programs. *Developmental  
Psychology*. 2005;41(6):885-901.



\*Significantly different from zero at the .05 level, two-tailed test.



**FIGURE 6:**  
Percent of Parents  
Who Spanked Their Three  
Year Old in the Previous  
Week

Source:  
Love JM, Kisker EE, Ross C, et al.  
The effectiveness of Early Head  
Start for 3-year-old children and  
their parents: lessons for policy  
and programs. *Developmental  
Psychology*. 2005;41(6):885-901.

\*Significantly different from zero at the .01 level, two-tailed test.

Early Head Start participation also seems to encourage parents to use more effective parenting strategies. Fewer Early Head Start

parents than control parents reported having spanked their children within the past week: 46.7 percent vs. 53.8 percent (Figure 6).

## Early interventions make a difference.

A child's first three years are a period of rapid brain development, and experiences during this time help establish the networks that support thinking and learning. Positive, stimulating experiences lead to strong and efficient connections.<sup>10</sup> In addition to providing such

experiences directly, Porter-Leath and other Early Head Start help disadvantaged parents create home environments that promote early learning and optimal development. Porter-Leath serves as an example and an inspiration to everyone who cares about improving the lives of children in Memphis and Shelby County.

## References

1. Arnold DH, Doctoroff GL. The early education of socioeconomically disadvantaged children. *Annual Review of Psychology*. 2003;54:517-545.
2. Conger RD, McLoyd VC, Wallace LE, et al. Economic pressure in African American families: a replication and extension of the family stress model. *Developmental Psychology*. 2002;38(2):179-193.
3. Evans GW. The environment of childhood poverty. *American Psychologist*. 2004;59(2):77-92.
4. Keels M. Ethnic group differences in early head start parents' parenting beliefs and practices and links to children's early cognitive development. *Early Childhood Research Quarterly*. 2009;24:381-397.
5. Love JM, Kisker EE, Ross C, et al. The effectiveness of Early Head Start for 3-year-old children and their parents: lessons for policy and programs. *Developmental Psychology*. 2005;41(6):885-901.
6. National Institute of Child Health and Human Development. Early Childhood Education and School Readiness: Conceptual Models, Constructs, and Measures. Available at: [http://www.nichd.nih.gov/publications/pubs/upload/school\\_readiness.pdf](http://www.nichd.nih.gov/publications/pubs/upload/school_readiness.pdf) Accessed May 30, 2010.
7. Espy KA, Molfese DL, Molfese VI, et al. Development of auditory event-related potentials in young children and relations to word-level reading at age 8 years. *Annals of Dyslexia*. 2004;54(1):9-38.
8. Parsons CE, Young KS, Murray L. The functional neuroanatomy of the evolving parent-infant relationship. *Progress in Neurobiology*. 2010;91:220-241.
9. Ayoub C, O'Connor E, Rappolt-Schlichtmann G, et al. Cognitive skill performance among young children living in poverty: risk, change, and the promotive effects of Early Head Start. *Early Childhood Research Quarterly*. 2009;24:289-305.
10. Nelson CA, Bloom FE. Child development and neuroscience. *Child Development*. 1997;68:5, 970-987.

## Data References

Love JM, Kisker EE, Ross C, et al. The effectiveness of Early Head Start for 3-year-old children and their parents: lessons for policy and programs. *Developmental Psychology*. 2005; 41(6): 885-901.