

TEN IDEAS FOR IMPROVING EARLY HEAD START— AND WHY THE PROGRAM NEEDS THEM

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Early Head Start is a federal child development program intended to bolster the early learning and eventual school readiness of infants and toddlers from low-income families. The best available evidence, from a national random-assignment evaluation study, indicates that the program is not performing as intended. This paper suggests ten ways to improve the program, such as by placing more emphasis on family stability, parent-child interaction, and cognitive skills that are predictive of later achievement; using technology to help teach parents and children; employing volunteers to make early intervention less costly; and dispersing more funds to communities with greater need for the program.

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Early Head Start (EHS) is a federal program intended to address the same social problem that the larger and better-known Head Start program addresses. That problem is that young children from economically and socially disadvantaged families begin elementary school with knowledge and skill levels that are substantially below those of children from more advantaged families. Furthermore, attempts to create equality of educational opportunity have not produced equal educational results.¹ By the later grades of high school, youth from disadvantaged families typically have lower achievement test scores, more grade repetition, higher dropout rates, and lower college entrance and completion rates than youth from more advantaged families.² Indeed, study after study has found that the family from which a child comes is a better predictor of educational accomplishment than the schools she has attended.³

Like Head Start, EHS is a comprehensive child development program intended for children from low-income families. Comprehensive means that the program provides not only early childhood education services, but also health screening and referral and family support. Whereas local Head Start programs serve preschool children of ages 3 and 4, and 5-year-olds who have not yet started kindergarten, EHS serves infants and toddlers below the age of 3. Whereas local Head Start programs are predominantly center-based, with some providing home-visiting services as well, EHS programs are predominantly home-based, or involve a mixture of home-based and center-based services.

The rationale for having EHS as well as Head Start proper is that the sooner one can provide intellectual stimulation and emotional support to a child who may not be receiving adequate levels of either, the better

for the child. Both small-scale observational research⁴ and large-scale survey studies⁵ have found that young children in low-income, low parent-education families receive significantly less stimulation and support than those growing up in families with higher parent-education and family income levels. According to the Head Start Family and Child Experiences Survey (FACES), at the time children from low-income families enter Head Start, their average vocabulary test scores are one full standard deviation or more below national norms.⁶ That is, the number of words whose meanings they know is thousands of words smaller than the number the typical non-poor child can identify at the same age.⁷ So there is research evidence supporting the need for efforts to enrich the early home environments of children in low-income families. Whether EHS in its current form provides enrichment that makes a meaningful difference in the development of these children is another question, one I will address in a moment.

The available research evidence suggests that EHS as currently constituted and structured is less than a sterling success.

Prior to the passage of the American Recovery and Reinvestment Act, EHS provided funding to some 650 local programs, whereas Head Start itself supported the operation of more than 18,000 centers and 49,000 classrooms around the country. The annual budget for EHS (\$690 million in 2009) was about one-tenth the

size of that for Head Start proper.⁸ The American Recovery and Reinvestment Act provided an additional \$1 billion for EHS per year in 2009 and 2010. This represents almost a doubling of the program's appropriations, at least for those two years.

Is this massive increase in funding justified, given the available evidence on the efficacy of EHS? What recommendations can we make regarding the design of the EHS program, based on available evidence and practical experience? What policies and practices ought the program put into operation that might improve its long-term impacts on children's school performance and behavior? What kinds of research should the program undertake to inform future policy and practice? These are the questions that this paper addresses.

Evidence on Program Efficacy

The best available research evidence on the efficacy of EHS as currently implemented comes from a national random assignment study of the program conducted by Mathematica Policy Research for the U.S. Department of Health and Human Services.⁹ Does the evidence from that study justify the surge in funding that Congress has bestowed upon the program?

The EHS Research and Evaluation Project was conducted beginning in 1996 in seventeen sites representing different regions of the country, program auspices, program models, and racial and ethnic composition of the populations served. Some 3,000 children and families from these sites were randomly assigned either to receive EHS services or be in a control group whose members could utilize any community services except EHS. Children, families, and their child care arrangements were assessed when children were 1, 2, and 3, and 5 years old, prior to kindergarten

entry. There was another follow-up study conducted when most of the students were in the fifth grade of elementary school.

Child assessments included cognitive, language, and social-emotional measures based either on direct assessment or parent report. Parent assessments were based on observation (videotapes and by interviewers) or a self-report. Families in the program and control groups were demographically comparable at baseline and assessment points. Several research briefs and a journal article have been published based on findings from the study.¹⁰

The latest research brief that is publicly available is based on the findings as of the pre-K follow-up study.¹¹ What that brief tells us is that, by the time of their entry into kindergarten, participation in EHS had no significant impact on children's early reading skills, early math skills, English-language vocabulary knowledge, or ability to pay attention to a repetitive task in a sustained manner.

A landmark review of six longitudinal child development studies compiled by Greg Duncan of the University of California, Irvine, and his collaborators showed that school-entry math, reading, and attention skills were the strongest predictors of later academic achievement.¹² Thus, it is particularly troubling that EHS had no impact on these potent predictors of later achievement. An earlier report of the Mathematica evaluation noted that at age 3, the EHS children scored significantly better than control children on the Bayley Scale of Infant Mental Development (effect size = .10) and the Peabody Picture Vocabulary Test (effect size = .15). The differences were small (in the 10 to 20 percent range) and the scores of the EHS group, though higher than those of the control group, were still well below national norms. However, similar

differences were not apparent by the time of kindergarten entry.

One subgroup did show a difference in language development at kindergarten entry that was linked to EHS participation. There was a significant impact (effect size of .27) on the Spanish-language vocabulary knowledge of Spanish-speaking children. Though this impact was modest, it was actually one of the largest effects found in the pre-K follow-up study. The brief does not discuss why there should be an effect in Spanish but none in English. One may speculate that Hispanic parents were culturally less apt to speak with their children in ways that would stimulate the youngsters' vocabulary development. Participating in EHS may have worked to loosen the parents' reticence in a more pronounced fashion for Hispanic parents than for those of other ethnicities.

The pre-K follow-up found some significant but tiny impacts of EHS on children's problem behavior (effect size = -.10) and approaches to learning (effect size = .12), as reported by parents. But three other measures of socio-emotional behavior and engagement showed no impact. Furthermore, the review paper by Duncan and his colleagues found that measures of socio-emotional behavior in early childhood,

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including internalizing and externalizing problems and social skills, were generally insignificant predictors of later academic performance, even among children with relatively high levels of problem behavior.

The pre-K follow-up study also reports some positive impacts of EHS on parental behavior, namely, more daily reading (effect size = .09) and periodic teaching activities (effect size = .09), more supportive home environment (as measured by the HOME scale; effect size = .13), and less depression (effect size = -.10), all as reported by parents themselves. Again, however, the statistically reliable impacts are miniscule in magnitude (effect sizes ranging from .09 to .13). And balanced against these is a lack of any significant impact when the measures of parental behavior are based on direct observation of parent-child interaction (no significant differences in parental supportiveness or negativity during videotaped play), as opposed to being based on parental report.

In sum, the available research evidence suggests that EHS as currently constituted and implemented is something less than a sterling success. If one focuses on the early effects of the program, the program seems to show promise. Even then, however, positive impacts were quite modest. But if one focuses on differences at pre-kindergarten entry (at the average age of 63 months), even these modest differences had disappeared. The best available evidence is that poor children who attended EHS were no better prepared for school than poor children who did not attend.

Ten Ideas for Improving EHS

The lack of sustained impacts in critical areas of children's cognitive and language development tells us that the program is not succeeding in meeting one of

its major goals. The tiny size of the impacts that have been found are also of concern, given the magnitude of socio-economic gaps in children's skills and behaviors at school entry and beyond.¹³ Although the program is less than ideal, Congress has provided a substantial chunk of additional money for it. Spending the money simply to fund more programs of the same variety would be a mistake. In the section below, I outline ten ideas that would help make the program more effective.

Learn from evaluation findings.

There are a number of findings in the national evaluation study that can provide guidance as to ways in which EHS can be tailored to bolster its longer-term impacts on children and families. Perhaps the most intriguing is the significant impact that was found on the Spanish-language vocabularies of Spanish-speaking children. This finding suggests that the program might do well to expand outreach to and enrollment of not only Hispanic families with young children, but also families of other non-English-speaking immigrant groups. Defenders of EHS have claimed that some subgroups of programs are more effective than others. However, exactly which subgroups are the more effective ones has varied at different data collection points. This suggests that the differences may be due to chance fluctuations. According to the pre-kindergarten follow-up results, home-based program models were more likely to produce sustained impacts through the pre-K period; sustained impacts were more often observed in low- to moderate-risk groups; and full implementation of the Head Start Program Performance Standards was not an important factor in terms of sustained program impacts (though it had been found to be significant in the earlier evaluation).

Build on the basic premise underlying EHS. The basic notion behind EHS is that by enriching the early environment of a child from a low-income, low parent-education family, the program will stimulate the child's cognitive and social-emotional development in ways that will have long-term beneficial consequences for his success in school and in life. This implies that a key focus of the program should be on parent-child interaction and other aspects of the home environment. One cannot hope to have a long-lasting impact on the child's development in the relatively few hours during which the child participates directly in a program like EHS. But by changing parent-child interactions in positive ways, the enhanced and enriched interactions will have continuing beneficial effects on the child's development. So EHS must do more to ascertain what parent-child interactions are like at program entrance, and work to improve those interactions or supplement them with other sources of intellectual stimulation and emotional support for the child.

Use modern technology to help assess and modify parent-child interaction.

EHS could benefit from making more extensive use of electronic and computer technology to teach young children basic skills, gain insight into parent-child interaction patterns, and help modify those patterns in beneficial ways. For example, the same videotape of parent and child playing a game together that was used to produce measures of parent and child behavior for the evaluation study could also be used to provide feedback to parents on constructive and not-so-constructive ways in which they are interacting with their child. Other potential applications include use of video games and computer-based teaching programs to help the parent enhance the child's vocabulary, math skills, cognitive flexibility, and executive functioning.

Emphasize skills that are most predictive of later achievement. As described above, longitudinal studies have shown that early math, reading, and attention skills are the strongest predictors of later academic achievement. These skills, or their precursors in the infant and toddler years, are ones that both Head Start and EHS should emphasize. Local programs should assess children's skills objectively at program entrance and exit and evaluate their own performance based on the gains they help children achieve.¹⁴ The skills of infants and toddlers are more challenging to assess reliably than those of preschoolers. That does not mean it should not be done, however, especially when the goal is to evaluate the program's performance, not the individual child. EHS should also seek to incorporate and benefit from ongoing neuropsychological work on the development and improvement of executive functioning in childhood. This concept refers to the set of brain processes or meta-skills involved in selective attention, cognitive flexibility, planning, rule acquisition, and inhibitory control of habitual responses.¹⁵

Emphasize the importance of family stability for young children. A troubling finding of the longitudinal FACES survey is the degree of flux that took place from visit to visit in who was living in the household with young children from low-income families, especially those in which the parents were unmarried.¹⁶ Other studies have shown that young children are at greater risk of neglect or abuse when they are left in the care of a stepfather or boyfriend of the mother who is not the biological father of the child.¹⁷ Young children in families formed by unmarried teen mothers who have not completed high school have five to six times the risk of growing up in poverty as children in families without these risks.¹⁸ EHS should

seek to teach young mothers and fathers about the importance for infants and toddlers of having a stable set of caregivers on whom the mother can rely and with whom the child can develop attachment bonds. EHS might be able to assist parents in achieving this goal by helping to form babysitting cooperatives among program participants. This same principle should guide staffing decisions of Head Start and EHS programs. The programs should strive for continuity of care and try to minimize staff rotation and turnover as far as whom individual children see and interact with on a daily basis.

Emphasize the importance of family-size decisions. Having to deal with a new infant, particularly one by a different father, may make a young woman less able to pay attention to the children she already has. This may, in turn, have a detrimental effect on the cognitive, language, and emotional development of these children.¹⁹ Although the research evidence on this question is mixed, there is little doubt that having a large, closely-spaced group of children has a detrimental impact on a poor family's chances of escaping poverty through the parents' gainful employment.²⁰ EHS programs should seek to inform young mothers and fathers about the importance of this factor as well.

Support the transition from welfare to work. Head Start had its beginnings as part of President Lyndon Johnson's Great Society and War on Poverty. Even if EHS has only modest direct impacts on children's cognitive skills, it can have a lasting impact on children's development and well-being by assisting their parents to make the transition from poverty and dependency to gainful employment and financial independence. The program can do this by coordinating with job training and adult education programs, by helping to arrange or provide quality child care for working

parents, and by offering employment opportunities to parents in local programs.

Involve fathers. All of the initiatives with parents outlined above should apply to fathers as well as mothers. This should be the case even when the parents are unmarried, separated, or divorced, so long as there is no issue about abuse of the ex-spouse or child. Having the father involved in regular, positive interactions with the child not only provides another source of intellectual stimulation and emotional support for the child, it also increases the chances that the father will continue to contribute to the family's financial well-being. Given their relatively low educational attainment levels, the only way in which many low-income families can earn their way out of poverty is by having both parents employed and helping to support the child.

Early math, reading, and attention skills are the strongest predictors of academic achievement. These are the skills that both Head Start and EHS should emphasize.

Early intervention is costly: find ways to make it less so. Because EHS often involves home visiting, one-on-one counseling, and small group situations with lower child-staff ratios, it tends to be more costly per child served than regular Head Start. In order to serve more children and families, it is desirable for EHS to find and employ ways of delivering quality services

in a cost-effective manner. Two potential methods of reducing costs were mentioned above: use of computer technology and employing EHS parents as staff members. Two additional ways of reducing costs have been used successfully by local early intervention programs: the use of Teach for America recruits and Volunteers in Service to America (VISTA) as instructors or home visitors, after a suitable training period and with careful mentoring and supervision.²¹ This tactic can actually increase the proportion of program staff who have college degrees and are highly intelligent and motivated, while keeping operating costs down.²²

Improve funding formulas. Both EHS and Head Start would benefit from the development and application of a revised formula for dispersing Head Start monies across geopolitical areas. The goal is to have more of the funds go to communities where there are programs with waiting lists and less go to areas where programs have to reach up to near-poor or non-poor families in order to fill slots.

Research Program

Efforts to improve EHS should be accompanied and guided by a vigorous research program. Because the key goals of EHS are long-term ones, it takes time and a sustained commitment to learn if new methods and approaches really produce their intended effects. Nonetheless, a coordinated research program is essential, given that what is being done now is not working. Furthermore, prescriptions for fixing the program—such as those offered above—are at this point just informed guesses. Here are several suggestions for design principles that should guide such a research program:

Independence from program operation. Research to inform EHS should be separate and independent from the operation of the program itself. Researchers should not feel obligated to be program boosters and should be free to discover and report negative findings regarding program effectiveness.

Commitment to experimental design. Research to inform EHS should make use of true experimental designs and random assignment of children and families to experimental and control conditions wherever possible. Correlational studies have their uses, but experimental studies produce definitive answers.

Using genetically-informed designs. Because genetic differences play an important role in children's academic achievement and behavioral adjustment,²³ research to inform EHS should make use of methods that take genetic factors into account. Examples are studies using twins and adopted children as experimental subjects.

Encouraging secondary analysis. To maximize benefits from data collected in EHS-related studies, those data should be

made available for secondary analysis by researchers other than those who conducted the study. This should be done soon after the data are collected. Of course, data files should incorporate masking of personal identifiers and other adjustments needed to protect the privacy of study participants.

Keeping track of program participants. In order to have more and better data on longer-term sequelae of EHS participation, the Administration for Children and Families should develop and implement a method whereby children who received program services may be identified and studied many years later. The same should be possible for children who served as controls in experimental studies.

At least half of the new funds being provided by Congress to EHS and Head Start should be used to improve program quality, to make needed changes in the program outlined above and to support a vigorous program of related research. If this were done, the benefits would be manifold. Not only would the program eventually do a better job of serving children and parents, it would also contribute to our knowledge about how to improve the life chances of young children in general.

Notes

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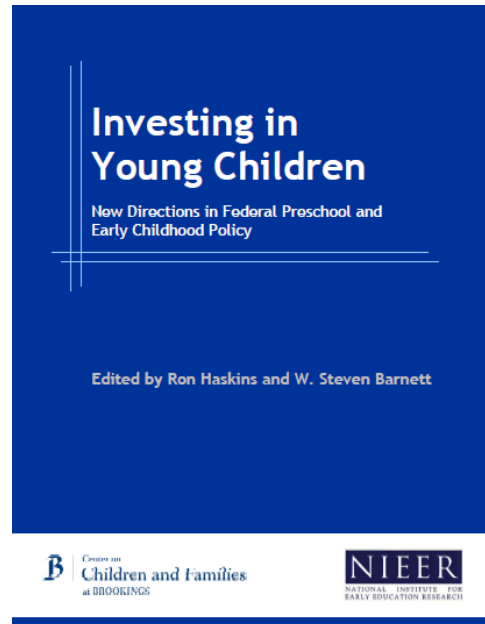
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