Children in Early Head Start and Head Start: A Profile of Early Leavers

August 2014

Baby FACES and FACES 2009

Research Brief

OPRE Report 2014-54

This page is left blank for double-sided printing.

Children in Early Head Start and Head Start: A Profile of Early Leavers

OPRE Report 2014-54

August 2014

Submitted to:
Amy Madigan, *Project Officer*
Maria Woolverton, *Project Officer*
Office of Planning, Research and Evaluation
Administration for Children and Families
U.S. Department of Health and Human Services

Submitted by:
Pia Caronongan
Emily Moiduddin
Jerry West
Cheri A. Vogel
Mathematica Policy Research

Project Directors:
Cheri A. Vogel, Jerry West,
Mathematica Policy Research
P.O. Box 2393
Princeton, NJ 08543-2393

Contract Numbers: HHSP2320072914YC, HHSP23320092900YC
Mathematica Reference Numbers: 06432.140, 06573.111

Suggested citation:
Caronongan, P., E. Moiduddin, J. West, and C. A. Vogel (2014). Children in Early Head Start and Head Start: A Profile of Early Leavers. Baby FACES and FACES 2009 Research Brief. OPRE Report 2014-54. Washington, DC. Office of Planning, Research, and Evaluation, Administration for Children and Families, U.S. Department of Health and Human Services.

- MATHEMATICA Policy Research
- baby FACES
- OPRE
- Head Start family and child experiences survey

This page is left blank for double-sided printing.

ABSTRACT

Early Head Start serves pregnant women and children up to age 3, allowing families to enroll a child at any point in this age range. Head Start serves preschool-age children, who can enter the program at age 3 or 4. Engaging and retaining families in the program is a priority for Early Head Start and Head Start. However, some children who enroll in these programs do not stay for the full length of time they are eligible. In this brief, we explore the child- , family- , and program-level factors that may be associated with whether children leave the program early. We used data from the Early Head Start Family and Child Experiences Survey (Baby FACES) and from the 2009 cohort of the Head Start Family and Child Experiences Survey (FACES 2009). Analyses show that most families who enrolled stayed for as long as they were eligible. However, a sizable percentage – 35 percent in Early Head Start and 27 percent in Head Start left early. Early leaving was only related to a few child, family, or program characteristics examined in this brief. The findings suggest that the rate of early leaving was higher among families with several risk factors and who experienced instability, but mainly for Early Head Start families. In Head Start, early leaving was less associated with family risk and more related to program characteristics; children were less likely to leave early if they attended urban programs, if the turnover rates for lead or assistant teachers were high, and if program directors reported there were factors making it more difficult for them to do their jobs. To fully understand the circumstances related to leaving early and what programs can do to keep children enrolled, it will be important to gather additional data about families' needs and what they opt to do in lieu of participating in Early Head Start or Head Start.

This page is left blank for double-sided printing.

INTRODUCTION

The federal Head Start program seeks to promote the school readiness of young children from low-income families by enhancing their social, cognitive, and physical development. The program's two components, Early Head Start and Head Start, focus on children from birth to age 5. Early Head Start serves pregnant women and children up to age 3, allowing families to enroll a child at any point in this age range. Head Start serves preschool-age children, who can enter the program at age 3 or 4. Children who enter Head Start as 3-year-olds are eligible to attend the program for two years, whereas children who enter as 4-year-olds are eligible to attend for one year.

Engaging and retaining families in the program is a priority for Early Head Start and Head Start. While the majority of families who enroll in both programs stay for as long as they are eligible, some families leave early. Children may leave for a variety of reasons, some related to family circumstances (for example, moving to a new home or changing jobs), and others related to experiences with the program (for example, dissatisfaction with their experience) or to the availability of other child care options (for example, state-funded preschool). A program may also terminate a child's enrollment due to low attendance.

Families who leave early reduce their amount of exposure to the program and may not receive the full benefits of program participation compared to those who stay until their eligibility ends. Most of the extant research examining issues of dosage focuses on early enrollment rather than on program attrition.[1]

Very little is known about the characteristics of early leavers and family- and program-level factors that are associated with early leaving. By understanding characteristics of early leavers, programs can employ targeted measures to curb and prevent program attrition, when feasible, and formulate strategies to better serve children and families who are unable to attend for longer periods of time.

About Early Head Start and Head Start

Created in 1965, the federal Head Start program is administered by the Office of Head Start, Administration for Children and Families (ACF), U.S. Department of Health and Human Services. The program gives grants to local public and private agencies in the nonprofit and for-profit sectors to provide comprehensive child development services to low-income children and families.

Early Head Start, launched in 1995, currently serves more than 100,000 children in about 1,000 programs. Through Early Head Start, families receive center- or home-based child development services, parenting education, case management, health care and referrals, and family support.

Head Start currently serves more than 900,000 3- and 4-year-old children in about 1,800 programs. The Office of Head Start places special emphasis on helping children develop the skills they need to be successful in school. The program also seeks to engage parents in their children's learning and to help them reach their own educational, literacy, and employment goals (ACF 2009).

In this brief, we explore the child- , family- , and program-level factors that may be associated with whether children stay for the full time they are eligible ("stayers") or leave the program early ("leavers"). Specifically, we address four research questions:

- What percentage of eligible children leave each program early, and when do they typically leave?
- What are the characteristics of early leavers?
- What program characteristics and experiences are associated with early leaving?
- Are those who leave the program early less satisfied with program services compared with those who stay?

DATA SOURCES: BABY FACES AND FACES

To answer these questions, we used data from two large-scale descriptive studies of Early Head

Start and Head Start, the Early Head Start Family and Child Experiences Survey (Baby FACES) and the 2009 cohort of the Head Start Family and Child Experiences Survey (FACES 2009). The Baby FACES sample used for the analyses presented in this brief includes 971 children who were participating in Early Head Start either as newborns (n = 193) or as 1-year-olds (n = 778) in spring 2009, when the Baby FACES study began. Because early leaving may be related to the length of time a child has been enrolled in the program, for analysis in this brief, we combine cohorts of children and compare rates of leaving for those who first enrolled in the program prenatally (n = 627) and those who enrolled postnatally (n = 344). We identified leavers through a combination of weekly service reports from program staff, information on exit dates obtained during annual roster checks conducted in preparation for Baby FACES site visits, and parent reports during the annual interviews.[2] Children who exited before turning age 3 for reasons other than a formal transition are defined as leavers. We used data from interviews with parents and program directors conducted during spring 2009 to examine child, family, and program characteristics associated with leaving early. We obtained information on program satisfaction from an exit interview administered to parents as they left the program or from a "matriculation" exit interview administered to parents of 1-year-old cohort children who remained enrolled through age 3 (that is, 1-year-old cohort stayers). In total, we obtained an exit interview for 52 percent of early leavers across cohorts and a matriculation exit interview for 70 percent of 1-year-old cohort stayers. We account for missing program satisfaction data using nonresponse weights.

The FACES 2009 sample used for the analyses presented in this brief is the 3,149 children and families who entered the program in fall 2009 and had a completed parent interview in fall 2009.[3] We identified children who left the program early by asking programs to report on the whereabouts of eligible children in preparation for the spring 2010 and 2011 rounds.[4] Children who enrolled at age 3 are considered leavers if they left before completing one year in the program or if they stayed for one year but left before completing a second year. Children who enrolled at age 4 and left before completing their one year of eligibility in the program are also considered leavers. In this analysis, we used fall 2009 data from interviews with parents, teachers, and program and center directors to examine child, family, and program characteristics associated with leaving early. For children who entered at age 3 and stayed for at least one full year, we also drew on data from spring 2010 interviews. Parents reported their level of satisfaction with program services during the spring 2010 interview.

These two data sources are well suited to describe early leavers across Early Head Start and Head Start. To the extent possible, we used similar measures to examine characteristics associated with early leaving in both programs. In a few cases, we did not use a particular construct in analysis for both groups because it was only measured for participants in one of the studies. Table 1 includes information about the constructs measured across the two studies.

WHAT PERCENTAGE OF CHILDREN LEAVE, AND WHEN DO THEY LEAVE?

Although most families who enroll stay for as long as they are eligible, a sizable percentage of children who enroll in Early Head Start or Head Start leave the program before their eligibility ends. In Early Head Start, 35 percent of children enrolled in spring 2009 left the program early. In Head Start, 28 percent of children who enrolled in fall 2009 left early.

Early Head Start

Rates of leaving Early Head Start did not differ by time of enrollment. Thirty-five percent of families who enrolled during pregnancy left the program early. We found the same percentage of leavers among families who enrolled postnatally. Rates of leaving were higher at certain times of the year. About a third (34 percent) of early program exits occurred in the summer (July to September). Twenty-five percent of exits occurred in the spring (April through June), and 24 percent occurred in the fall (October to December). Only 17 percent of exits occurred in the winter (January through March). The average length of enrollment for leavers was 16 months. Five percent of leavers indicated during exit interviews that they had moved to another Early Head Start program.

Head Start

Of all the children who entered Head Start, 27 percent left the program early. Rates of leaving

differed for the 3-year-old and 4-year-old cohorts. Ten percent of 4-year-olds left during their one program year of eligibility; the remaining 90 percent completed the full program year available to them. Forty-one percent of 3-year-olds left before their eligibility ended—either during their first program year (10 percent of the cohort) or after completing at least one year (31 percent of the cohort). The remaining 59 percent of the 3-year-old cohort completed two full years of Head Start.

WHAT ARE THE CHARACTERISTICS OF EARLY LEAVERS?

We analyzed rates of leaving based on a number of child and family, characteristics. Our analysis showed whether children's demographic characteristics, such as race/ethnicity, gender, and disability status, are associated with leaving.[5]

Family characteristics indicate the risks a family faces and the resources at its disposal, allowing us to examine whether resource needs or instability are associated with leaving early. The family characteristics we examined include home language, family structure, maternal education, household income, parental employment, household mobility, and cumulative maternal demographic risk factors. Appendix Table A.1 provides exit rates associated with each of the child and family characteristics we examined.

Early Head Start

Rates of leaving Early Head Start were not significantly associated with race, ethnicity, or household language. About a third of white[6] (33 percent) and Hispanic (34 percent) children left their programs early. The rate of leaving was slightly lower (27 percent) among African American[7] children, but the difference was not statistically significant. We found similar rates of leaving (30 percent) by household language (children from households where only English was spoken versus those where a language other than English was spoken) (Figure 1).

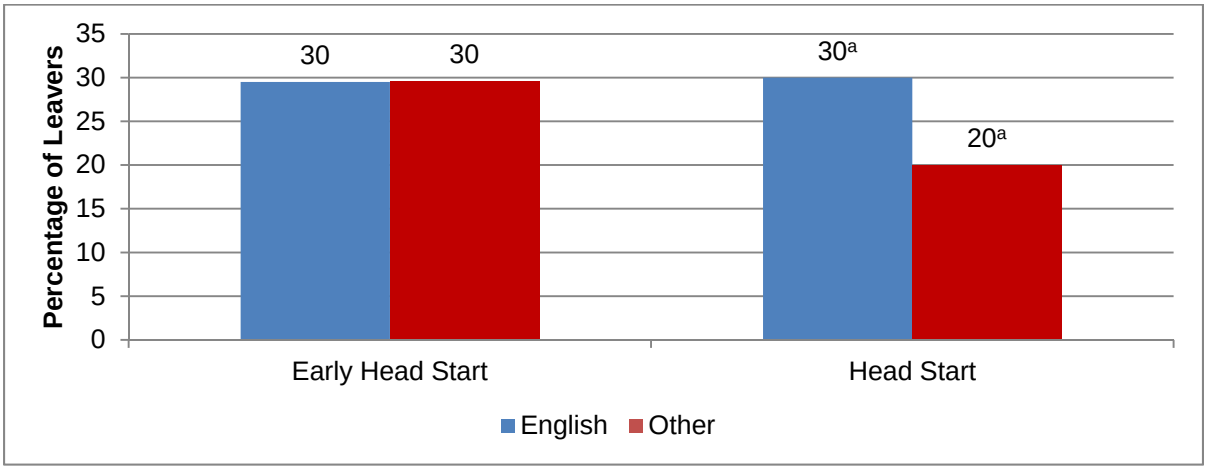
Several family characteristics were significantly associated with higher rates of leaving in Early Head Start. Children living in households with incomes below 50 percent (38 percent) and between 50 and 100 percent (34 percent) of the federal poverty threshold were more likely to leave early as compared to children in households with incomes greater than 130 percent (23 percent) of the poverty threshold. Children whose mothers had a child as a teenager were more likely to leave early (32 percent), compared with children whose mothers did not have a child as a teenager (25 percent). Similarly, children whose families had moved at least once in the year of their initial interview were more likely to leave early (43 percent), compared with those whose families did not move (28 percent). Finally, children facing medium or high levels of maternal demographic risks were more likely to leave (31 and 34 percent, respectively) than were children with low levels of risk (24 percent) (Figure 2).[8]

Head Start

For Head Start, we focused on all leavers across the 3-year-old and 4-year-old cohorts. Leavers from the 3-year-old cohort left before completing one year in the program or stayed for one year but left before completing a second year. Leavers from the 4-year-old cohort left during their one year in the program. In addition, we looked at the subgroup of 3-year-olds who completed one year but left before completing a second year to see how they differed from the full group of leavers.

For most demographic characteristics and risk factors, we did not find significant differences in the rates of leaving Head Start early. Exceptions include household language, household mobility, and food security. The rate of leaving was higher among households where English is the primary language spoken to the child (30 percent) than in households where it is not (20 percent) (Figure 1). Likewise, the rate of leaving was higher for children whose families had moved at least once in the year prior to beginning Head Start (31 percent), compared with those whose families did not move (25 percent). Finally, rates of leaving were higher among those who were more food secure; children whose families had high or marginal food security had a higher rate of leaving (29 percent) than children with very low food security (20 percent). The rate of leaving among those with low food security (that is, the level of food security falling between high/marginal and very low; 25 percent) did not differ from either of the other two groups.

Figure 1. Percentage of Leavers by Household Language



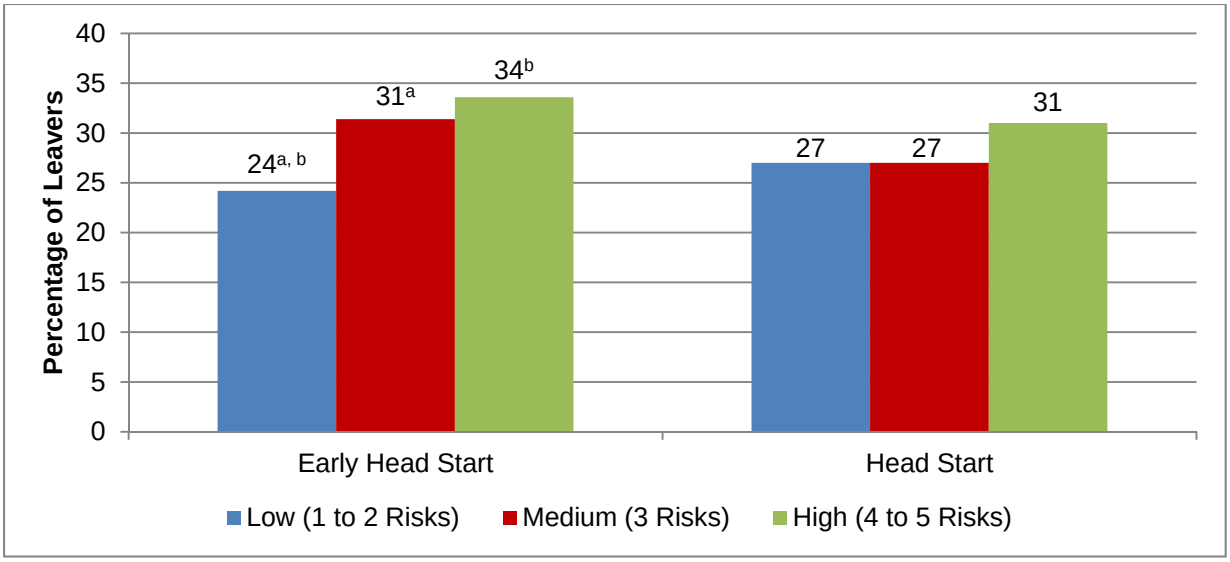
Sources: Spring 2009 Baby FACES Parent Interview, Fall 2009 FACES Parent Interview.

Notes: Early Head Start percentages weighted to represent the population of newborn and 1-year old children enrolled in Early Head Start in spring 2009. Head Start percentages are weighted to represent all children who entered Head Start for the first time in fall 2009.

Baby FACES data differentiate households where only English is spoken to the child and those where a language other than English is spoken to the child when the child was age 1. FACES data differentiate households where English is the primary language spoken to the child and those where a language other than English is the primary language spoken to the child.

[a]The difference in rate of leaving according to household language is statistically significant at the $p \leq .05$ level.

Figure 2. Percentage of Leavers by Maternal Demographic Risks



Sources: Spring 2009 Baby FACES Parent Interview, Fall 2009 FACES Parent Interview.

Note: Early Head Start percentages weighted to represent the population of newborn and 1-year old children enrolled in Early Head Start in spring 2009. Head Start percentages are weighted to represent all children who entered Head Start for the first time in fall 2009.

[a] The difference in rate of leaving between children from households with low maternal demographic risks and children from households with medium demographic risks is statistically significant at the $p \leq .05$ level.

[b] The difference in rate of leaving between children from households with low maternal demographic risks and children from households with high demographic risks is statistically significant at the $p \leq .05$ level.

For Head Start children, there were no differences in rates of leaving by overall levels of maternal risk; rates were 27, 27, and 31 percent for low, medium, and high levels of maternal risk, respectively (Figure 2). There were also no differences by race; 32 percent of white children, 29 percent of African American children, and 21 percent of Hispanic children left before their eligibility ended.

Exit rates for 3-year-olds who stayed one full year but left before completing a second year. When focusing on exit rates among 3-year-olds who stayed for at least one full year, some findings differ relative to the full-sample analysis. As in the full sample, rates of leaving differ by home language: the rate was 37 percent in households where English is the primary language spoken to the child and 27 percent in households where it is not. However, there were no differences in rates of leaving among the 3-year-olds who stayed for a full year based on household mobility or food security. We also found one additional difference. The rate of leaving was higher for children whose mother was a teenager the first time she gave birth (37 percent) than for children with older mothers (32 percent).

WHAT PROGRAM CHARACTERISTICS AND EXPERIENCES ARE ASSOCIATED WITH EARLY LEAVING?

We examined whether families' experiences with the program are associated with leaving. For Early Head Start, we examined whether children enrolled in the center-based, home-based, or combination service option differed in their rates of leaving. For Head Start, we considered whether the family participated in Early Head Start and whether the child had an Individualized Family Services Plan (IFSP) or an Individualized Education Program (IEP). We also considered two types of program characteristics. Structural characteristics include urbanicity (whether the program is in an urban or rural area) and census region (Northeast, Midwest, West, and South). We used process indicators to explore whether the way a program functions is associated with children leaving the program. Factors include staff turnover and, for Head Start only, management climate and issues that make it harder for directors to do their jobs. Appendix Table A.2 provides exit rates associated with each of the program characteristics and experiences we examined.

Early Head Start

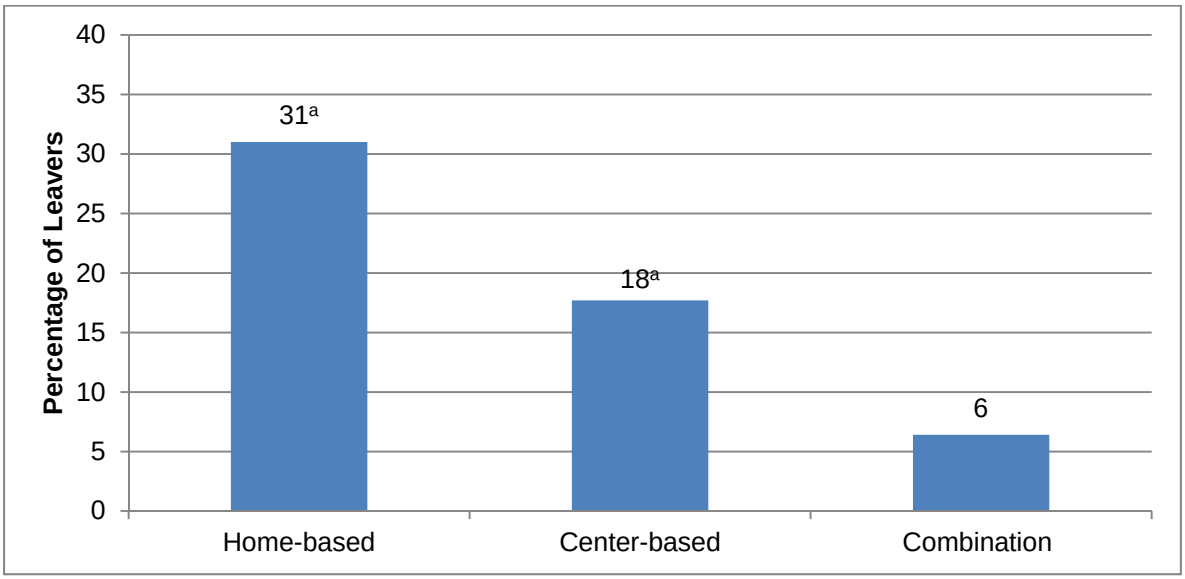
Rates of leaving varied among children in different Early Head Start service options.[9] Thirty-one percent of children in the home-based option left early compared to 18 percent of children in the center-based option (Figure 3).[10]
The percentages of children leaving the program early did not vary by program characteristics. Rates of leaving were similar for children whose programs were in urban (35 percent) and rural areas (33 percent). We also did not find differences based on the levels of staff turnover (we considered 20 percent or higher to be a high level of turnover).[11] The rate of leaving among children in programs with high turnover rates for home visitors was 35 percent, compared with 36 percent among children in programs with low turnover rates. Similarly, the rate of leaving among children in programs with high rates of teacher turnover was 32 percent, compared with 36 percent in programs with low teacher turnover rates. None of these differences is statistically significant.

Head Start

As in the analysis of child and family characteristics, for Head Start, we focused on all leavers across the 3-year-old and 4-year-old cohorts. We compare our findings for this group to the findings for 3-year-olds who completed at least one year of Head Start.

A number of program characteristics were associated with leaving Head Start before eligibility ended. In terms of a program's structural features, rates of leaving were lower among children from urban programs (24 percent) than from rural programs (35 percent). Process features, such as turnover rates, were also associated with rates of leaving. We compared rates of leaving for children enrolled in programs with high and low levels of turnover among lead and assistant teachers (Figure 4). Consistent with our analysis of Early Head Start, we considered turnover rates of 20 percent or more to be high. In programs with high rates of turnover among lead teachers, the rate of leaving was 35 percent, compared with 24 percent when turnover rates were low. Similarly, when turnover rates among assistant teachers were high, the rate of leaving was 34 percent, compared with 26 percent when turnover rates were low.

Figure 3. Percentage of Leavers by Early Head Start Service Option

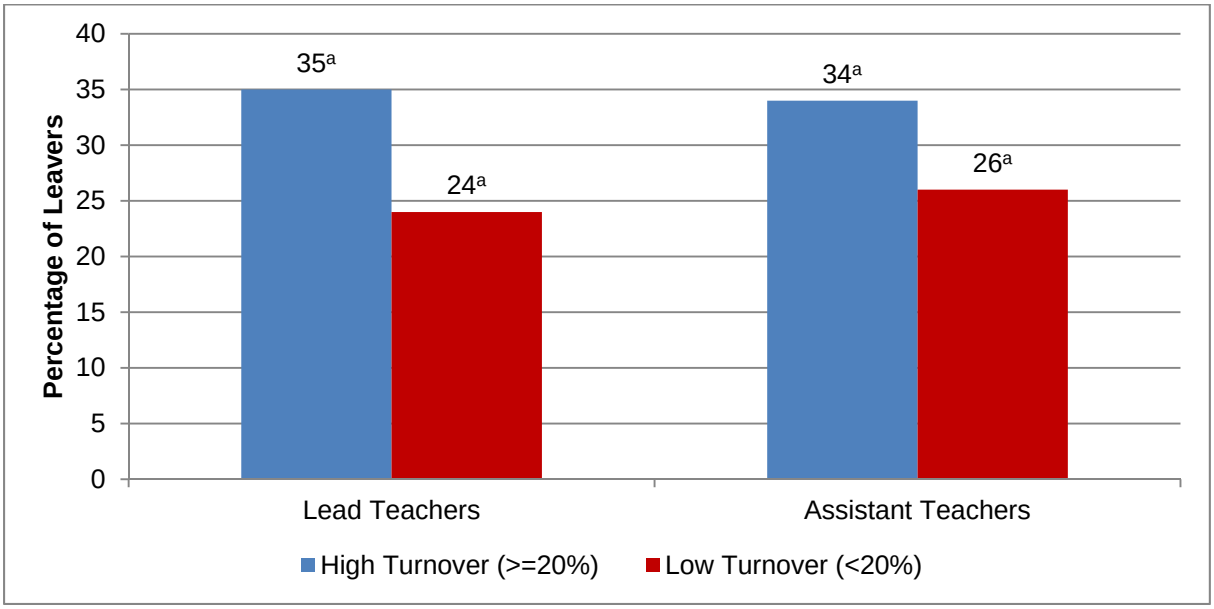


Sources: Baby FACES Sample Management System

Note: Percentages weighted to represent the population of newborn and 1-year old children enrolled in Early Head Start in spring 2009.

[a] The difference in rate of leaving between children in the home-based option and children in the center-based option is statistically significant at the $p \leq .05$ level.

Figure 4. Percentage of Head Start Leavers by Staff Turnover



Sources: Fall 2009 FACES Center Director Interview.

Note: Head Start percentages are weighted to represent all children who entered Head Start for the first time in fall 2009.

[a] The differences in rates of leaving between children in centers with high lead or assistant teacher turnover (20 percent or more) and low lead or assistant teacher turnover (less than 20 percent) are statistically significant at the $p < .05$ level.

Another process feature we examined was factors that make program managers' jobs difficult. In FACES, program directors, center directors, and education coordinators were asked whether certain factors—such as too many conflicting demands, dealing with a challenging population, and staff turnover—made it harder to do their jobs. For each of the 10 factors, staff indicated whether it made it "not at all" (= 1), "somewhat" (= 2), or "a great deal" (= 3) harder to do their jobs. We calculated mean scores based on responses to these items and then compared exit rates for the groups for whom mean scores were 2 and above versus below 2. There was no association between the exit rates and the scores from center directors. However, there were associations between exit rates and the scores from program directors and education coordinators. When program directors had a score of 2 or above (that is, factors made it somewhat or a great deal harder to do their jobs), 33 percent of children left early, compared with 24 percent if these scores were below 2. Exit rates followed an unexpected pattern when categorized based on education coordinator reports: there was a lower rate of children leaving when difficulties reported by the coordinators were higher (23 percent) than when they were lower (28 percent).

Exit rates for 3-year-olds who stayed one full year but left before completing a second year. When focusing on exit rates among 3-year-olds, only one finding differed relative to the full-sample analysis: there were no differences in rates of leaving among the 3-year-olds who stayed for a full year based on education coordinator reports of factors that made it harder to do their jobs.

ARE LEAVERS LESS SATISFIED WITH PROGRAM SERVICES COMPARED WITH STAYERS?

Early Head Start

In Baby FACES, parents were asked to rate their overall satisfaction with Early Head Start on a 4-point scale (1 = very dissatisfied to 4 = very satisfied). Parents rated the program during an interview conducted upon program exit or when stayers were 3.5 years old.[12] We found a small but significant difference in the levels of satisfaction expressed by stayers and leavers. The mean satisfaction rating among leavers was 3.72, whereas the rating among stayers was 3.85. This difference is due to a larger number of leavers who were only "somewhat satisfied" (24 percent) compared with stayers (10 percent) and a smaller number of leavers who were "very satisfied" (75 percent) compared with stayers (88 percent).

Head Start

In spring 2010, FACES researchers measured parents' satisfaction with various aspects of Head Start. Thus, these data are available only for children in the 3-year-old cohort who stayed for at least one full year; parents of children who left during their first (only) year in the program did not respond to these questions. Parents whose children stayed in the program for at least one year rated their satisfaction with the program on a 4-point scale (1 = very dissatisfied to 4 = very satisfied) for child-related factors (for example, helping the child to grow and develop, preparing the child to enter kindergarten) and family-related factors (for example, respecting the family's culture and background, being open to parents' ideas and participation). We found no differences in the satisfaction expressed by parents of the 3-year-olds who left before completing two years versus parents of children who stayed for two full years.

SUMMARY AND NEXT STEPS

The majority of children enrolled in Early Head Start and Head Start stayed in the program until their eligibility ended. About 35 percent of Early Head Start and 27 percent of Head Start children left the program before their eligibility ended.

Early leaving was only related to a few child, family, or program characteristics examined in this brief. The findings suggest that rates of leaving are higher among families with several risk factors and who experience instability, but mainly for Early Head Start families. For example, in Early Head Start, children who were in families that had moved at least once, had household incomes at or below the federal poverty threshold, and faced medium or high levels of demographic risk were more likely to leave early compared to those who were not mobile, had slightly higher incomes (130 percent of the poverty line), and faced low levels of risk.

In Head Start, early leaving was not associated with risk factors such as income or maternal risk. However, it was associated with residential mobility, in that children who moved at least once were more likely to be early leavers compared to children who were stable. Interestingly, Head Start children from English-speaking and food secure homes were more likely to leave than children from non-English speaking homes and homes that were more food insecure.

Early leaving also appears to be related to program characteristics, but primarily among Head Start families. Other than program option, program characteristics were not associated with early leaving in Early Head Start. However, Head Start children in rural programs and in programs with higher levels of staff turnover were more likely to leave compared to children in urban programs and in programs with low levels of turnover. Children were also more likely to leave if program directors cited that there were factors that made their job harder. Interestingly, the opposite was found for educational coordinators. The more challenges reported, the fewer children left the program.

Lastly, the Early Head Start data suggest that leavers were slightly less satisfied than those who stayed. Among Head Start families, leavers and stayers were equally satisfied with the program.

Conducting more research on why children drop out of Early Head Start and Head Start is key to strengthening these important programs. Although we found some evidence to suggest that children with certain characteristics or risk factors are more likely to leave early, and that certain program factors are associated with leaving, this does not mean that these factors caused them to leave. It is also important to note that because the Baby FACES sample did not include a 2-year-old cohort, the findings described here cannot be generalized to that group. To fully understand the circumstances related to early leaving and what programs can do to keep children enrolled, it will be important to gather additional data about families' needs and what they opt to do in lieu of participating in Early Head Start or Head Start. In the meantime, programs may begin to consider bolstering efforts to support staff and engage families who face various risk factors and instability.

REFERENCES

Administration for Children and Families. "About the Office of Head Start." Available at http://www.acf.hhs.gov/programs/ohs/about/Index.html. Accessed July 2009.

Burchinal, M. R., Y. Xue, and A. J. Mashburn. "Testing for threshold in associations between child care quality and child outcomes." Paper presented at the Society for Research in Child Development Biennial Meeting, Montreal, April 2011.

Institute of Medicine and National Research Council. "The Early Childhood Care and Education Workforce: Challenges and Opportunities—A Workshop Report." Washington, DC: The National Academies Press, 2012.

Love, J., E. Eliason Kisker, C. Ross, P. Schochet, J. Brooks-Gunn, et al. "Making a difference in the lives of infants and toddlers and their families: the impacts of Early Head Start." Washington, DC: Department of Health and Human Services, June 2002.

Moiduddin, E., N. Aikens, L. Tarullo, and J. West. "Child Outcomes and Classroom Quality in FACES 2009." OPRE report 2012-37a. Washington, DC: Office of Planning, Research, and Evaluation, Administration for Children and Families, U.S. Department of Health and Human Services, September 2012.

Pianta, R., K. LaParo, and B. Hamre. *The Classroom Assessment Scoring System Pre-K Manual*. Charlottesville, VA: University of Virginia, 2008.

Vogel, C. A., K. Boller, Y. Xue, R. Blair, N. Aikens, A. Burwick, Y. Shrago, B. L. Carlson, L. Kalb, L. Mendenko, J. Cannon, S. Harrington, and J. Stein. "Learning As We Go: A First Snapshot of Early Head Start Programs, Staff, Families, and Children." OPRE report #2011-7. Washington, DC: Office of Planning, Research, and Evaluation, Administration for Children and Families, U.S. Department of Health and Human Services, 2011.

West, J., L. Tarullo, N. Aikens, L. Malone, and B.L. Carlson. "FACES 2009 Study Design." OPRE report 2011-9. Washington, DC: Office

of Planning, Research, and Evaluation, Administration for Children and Families, U.S. Department of Health and Human Services, June 2011.

Xue, Y., M. Burchinal, A. Auger, H. Tien, and L. Tarullo. "Dosage effects in early care and education: evidence from secondary data analysis." Paper presented at the Society for Research in Child Development Biennial Meeting, Montreal, March 2011.

NOTES

[1] Love et al. (2002), Xue et al. (2011).

[2] The Baby FACES research team used multiple sources of information to identify program exit dates. One source was a tracking system through which families' teachers or home visitors filed weekly reports that included whether a family was still enrolled in the program and what services the family received. We also asked parents during annual interviews whether their child was still enrolled in the program. If we learned through either of these sources that a child was no longer enrolled, we contacted the study liaison at that program to verify the information. Finally, in preparation for data collection each spring, we provided programs with a roster of study children and asked them to confirm or update (along with other information) date of exit (if applicable) and whether the exit was a planned transition or not. These rosters helped us to determine whether a study child had exited or returned to the Early Head Start program since the last round of data collection. There were a few cases where a child was reported to have left the program but later returned. We do not consider these children early leavers.

[3] Our analyses of characteristics associated with leaving are based on the sample of 3,149 children who had at least a fall 2009 parent interview. However, our estimates of the percentage of stayers and leavers are based on the 3,349 children who received parental consent, including the 200 children whose parents did not complete a fall 2009 interview.

[4] Prior to each spring data collection, the on-site coordinators for the FACES study were contacted and asked to provide the status for each study child in their program. They were first asked to report whether the child was still enrolled in the program and, if so, to verify the name of the center and provide the teacher's name. These children were still eligible for the study. If the child was no longer enrolled in the program, the coordinator was asked to report whether the child (1) had move to another Head Start classroom or center outside of their program, (2) was enrolled in a state pre-k or another preschool program, (3) was in kindergarten, (4) was not enrolled in school, or (5) had left their program but the program did not know the child's whereabouts. These groups were no longer eligible for the study, except those in kindergarten in spring 2011 or spring 2012. In some instances the child's status changed (eligible or ineligible) based on information learned from the teacher or parent following communication with the on-site coordinator.

[5] To answer questions two through four, we evaluated differences using chi-square tests or *t*-tests. We used chi-square tests for characteristics with multiple categories. In cases where the chi-square test yielded a statistically significant result, we fit logistic regression models with the probability of leaving as the outcome and dummy variables representing each category of the characteristic as predictors. We then conducted follow-up Wald tests to determine which categories were significantly different from each other. Baby FACES data related to characteristics of stayers and leavers were weighted to represent the population of newborns and 1-year-olds enrolled in Early Head Start in spring 2009. Baby FACES data related to program satisfaction were weighted to represent the population of 1-year-olds enrolled in Early Head Start in spring 2009 who (1) left the program before age 3 or (2) stayed in the program until at least age 3. All findings based on the analysis of FACES data were weighted to represent all newly entering Head Start children in the fall of the program year. The results presented here are based on the chi-square tests and *t*-tests and are statistically significant at the $p \leq .05$ level.

[6] All references to white refer to white, non-Hispanic.

[7] All references to African American refer to African American, non-Hispanic.

[8] The maternal risk index is constructed by summing the number of risk factors that the mother faced: (1) being a teenage mother, (2) having no high school diploma or GED, (3) receiving public assistance, (4) not being employed or in school or training, and (5) being a single mother. Children in the low-risk group have

one or two risk factors, those in the medium-risk group have three risk factors, and those in the high-risk group have four or more risk factors. We also examined differences on the individual characteristics separately.

[9] We compared children based on the service option they were enrolled in when they left their program, rather than their option in spring 2009, because some families change these options during their participation in Early Head Start.

[10] Eleven percent of leavers indicated that the lack of availability of their preferred service option was at least one of the reasons for their leaving the program.

[11] The average turnover rate for the child care workforce is 29 percent, compared to 10 percent among teachers in elementary and middle school (Institute of Medicine and National Research Council 2012).

About Baby FACES and FACES

Baby FACES is a descriptive study sponsored by the Office of Planning, Research, and Evaluation (OPRE) in ACF and conducted by Mathematica Policy Research from 2009 to 2012. Baby FACES is designed to describe the experiences and development of children and families while enrolled in the Early Head Start program. It covers a nationally representative sample of 89 Early Head Start programs and includes two cohorts of children who were enrolled in spring 2009: newborns and 1-year-olds. The newborn cohort consisted of pregnant women and newborns under 9 weeks old, and the 1-year-old cohort included 10- to 15-month-old children. The survey followed children, their parents, teachers, and home visitors annually through their time in the program or until they turned 3.

FACES 2009 is the fifth in a series of national cohort studies (previous cohorts were initiated in 1997, 2000, 2003, and 2006). FACES was first launched in 1997 as a periodic longitudinal study of program performance. Since then, successive nationally representative samples of Head Start children and their families, classrooms, and programs have provided descriptive information on the population served; staff qualifications, credentials, and opinions; classroom practices and quality measures; and child and family outcomes. In 2008, OPRE engaged Mathematica and its partners, Educational Testing Service and Juárez and Associates, to design and conduct FACES 2009. The child sample for this survey was selected to represent 3- and 4-year-olds as they entered their first year of the program, drawing on participants from 60 selected programs and 129 centers across the country.[1] The parents and teachers of study children were interviewed in fall 2009 (baseline), spring 2010, and, for children who participated in a second program year, spring 2011. We completed interviews with the directors of the programs and centers in the sample and with education coordinators in fall 2009, and conducted classroom observations in the spring of each program year.

Appendix A: Exit Rates Associated with Child and Family Characteristics, and Program Characteristics and Experiences

Table A.1. Exit Rates Associated With Various Child and Family Characteristics in Baby FACES and FACES

	Percentage of leavers in category	
	Early Head Start (Baby FACES)	Head Start (FACES)
Race/Ethnicity		
White	32.9	32.0
African American	26.6	28.5
Hispanic	33.9	21.4
Other	34.1	34.2
Gender		
Male	35.5	27.6
Female	33.1	26.8
Household Language		
English only	29.5	29.6[g]
Other language	29.6	20.2[g]
Household Structure		
Single parent household	34.8	27.2
Not a single parent household	31.4	27.2
Maternal Education Level		
Less than high school	34.5	25.5
High school graduate	29.7	26.3
Some college	36.3	32.7
AA or more	24.0	27.7
Maternal Employment Status		
Full-time work	26.2	26.3
Part-time work	27.5	25.5
Looking for work	35.4	27.6
Not in labor force	26.9	28.5
Paternal Employment Status		
Full-time work	31.2	26.2
Part-time work	38.1	29.0
Looking for work	32.3	21.2
Not in labor force	31.0	31.6
Household Welfare Receipt		
Received benefits	34.0	27.5
Does not receive benefits	31.1	26.4
Teenage Pregnancy		
Mother had a child as a teenager	31.9[a]	28.7
Mother did not have a child as a teenager	25.0[a]	26.1
Income-to-Needs Ratio		
0 to 50 percent of the federal poverty level (FPL)	38.3[b]	28.1
50 to 100 percent FPL	33.7[c]	25.4
101 to 130 percent FPL	30.3	27.6
131 percent FPL and above	22.6[b,c]	29.4
Number of Food Security Issues[1]		
Less than two	32.1	n.a.
Two or three	36.4	n.a.
Four or five	32.4	n.a.
Food Security[2]		
High/marginal	n.a.	28.7[h]
Low	n.a.	24.8
Very low	n.a.	19.6[h]
Maternal Demographic Risks		
Low	24.2[d,e]	26.6
Medium	31.4[d]	27.1
High	33.6[e]	30.6
Residential Mobility		
Moved in past year	42.5[f]	30.8[i]
Did not move in past year	28.2[f]	25.1[i]

Table A.1 *(continued)*

Source: Spring 2009 Baby FACES Parent Interview, Fall 2009 FACES Parent Interview.

Notes: Early Head Start percentages weighted to represent the population of newborn and 1-year old children enrolled in Early Head Start in spring 2009. Head Start percentages are weighted to represent all children who entered Head Start for the first time in fall 2009. Data from each study were analyzed separately. Within each study sample, t-tests were conducted for binary variables. Chi-square tests were conducted for multi-category variables within each study sample. In cases where the chi-square test yielded a statistically significant result, we fit logistic regression models with the probability of leaving as the outcome and dummy variables representing each category of the characteristic as predictors. We then conducted follow-up Wald tests to determine which categories were significantly different from each other within each study sample.

*$p < .05$; **$p < .01$; ***$p < .001$.

n.a. = not available

[1] In Baby FACES, parents reported if they encountered any of five different food security difficulties, including not being able to afford balanced meals, relying on low-cost food, and being worried that food would run out.

[2] FACES 2009 used the U.S. Household Food Security Survey Module: Six-Item Short Form. The short form items address the availability of food in the household during the prior 12 months. An additional point is added to the summary score for each response that is consistent with food insecurity, up to a maximum of six points. Scores of 0 or 1 indicate high or marginal food security, scores of 2 to 4 indicate low food security, and scores of 5 or 6 indicate very low food security.

[a] In Baby FACES the rate of leaving of mothers who had a child as a teenager is significantly different from the rate of leaving of mothers who did not have a child as a teenager ($p < .05$).

[b] In Baby FACES, the rate of leaving of families with income-to-needs ratios 0 to 50 percent of the federal poverty level (FPL) is significantly different from the rate of leaving of families with income-to-needs ratios of 131 percent or higher ($p < .01$).

[c] In Baby FACES, the rate of leaving of families with income-to-needs ratios 50 to 100 percent of the federal poverty level (FPL) is significantly different from the rate of leaving of families with income-to-needs ratios of 131 percent or higher ($p < .05$).

[d] In Baby FACES, the rate of leaving of families with low maternal demographic risks is significantly different from the rate of leaving of families with medium levels of risks ($p <. 05$).

[e] In Baby FACES, the rate of leaving of families with low maternal demographic risks is significantly different from the rate of leaving of families with high levels of risks ($p < .05$).

[f] In Baby FACES the rate of leaving of families who moved in the past year is significantly different from the rate of leaving of families who did not move in the past year ($p < .001$).

[g] In FACES, the rate of leaving of families from English only households is significantly different from the rate of leaving of families from households that speak languages other than English ($p < .001$).

[h] In FACES, the rate of leaving of families with high/marginal food security is significantly different from the rate of leaving of families with very low food security ($p <.01$).

[i] In FACES, the rate of leaving of families with who moved in the past year is significantly different from the rate of leaving of families who did not move in the past year ($p <.01$).

Table A.2. Exit Rates Associated With Various Program Characteristics and Experiences in Baby FACES and FACES

	Percentage of leavers in category	
	Early Head Start (Baby FACES)	Head Start (FACES)
Service Option at Exit		
Home-based	31.0[a]	n.a.
Center-based	17.7[a]	n.a.
Combination	6.4	n.a.
Child has IFSP/IEP in Fall 2009 (Parent Report)		
Yes	n.a.	27.5
No	n.a.	27.0
If Child Has IFSP/IEP, Head Start helped (Parent Report)		
Yes	n.a.	30.6
No	n.a.	21.2
Family Participated in Early Head Start		
Participant	n.a.	31.4
Non-participant	n.a.	26.5
Urbanicity of program		
Urban	35.4	24.0[b]
Rural	32.9	35.3[b]
Census Region of program		
Midwest	36.4	27.8
Northeast	25.1	22.7
South	31.5	29.8
West	37.9	25.0
Staff Turnover Rate of Program[1]		
Home visitors		
High	34.9	n.a.
Low	35.8	n.a.
Teachers		
High	32.2	n.a.
Low	35.7	n.a.
Lead teachers		
High	n.a.	35.4[c]
Low	n.a.	24.1[c]
Assistant teachers		
High	n.a.	34.0[d]
Low	n.a.	25.5[d]
Factors Make it Harder for Management to do Their Job[2]		
Program directors		
Yes, factors make job harder	n.a.	33.3[e]
No, factors do not make job harder	n.a.	23.9[e]
Center directors		
Yes, factors make job harder	n.a.	27.6
No, factors do not make job harder	n.a.	27.1
Education coordinators		
Yes, factors make job harder	n.a.	23.3[f]
No, factors do not make job harder	n.a.	28.3[f]

Source: Baby FACES Sample Management System, Fall 2009 FACES Program Director, Education Coordinator, Center Director, and Parent Interviews, 2007-2009 Program Information Report (PIR), an annual report of grantee-level data, and linked Census data.

Table A.2 *(continued)*

Note: Early Head Start percentages weighted to represent the population of newborn and 1-year old children enrolled in Early Head Start in spring 2009. Head Start percentages are weighted to represent all children who entered Head Start for the first time in fall 2009. Data from each study were analyzed separately. Within each study sample, t-tests were conducted for binary variables. Chi-square tests were conducted for multi-category variables within each study sample. In cases where the chi-square test yielded a statistically significant result, we fit logistic regression models with the probability of leaving as the outcome and dummy variables representing each category of the characteristic as predictors. We then conducted follow-up Wald tests to determine which categories were significantly different from each other within each study sample.

*p < .05; **p < .01; ***p < .001.

n.a. = not available

[1] We considered 20 percent or higher to be a high level of turnover.

[2] In FACES, program directors, center directors, and education coordinators were asked whether certain factors, such as too many conflicting demands, dealing with a challenging population, and staff turnover, made it harder to do their jobs. For each of the 10 factors, staff indicated whether it made it "not at all" (= 1), "somewhat" (= 2), or "a great deal" (= 3) harder to do their jobs. We calculated mean scores based on responses to these items and then compared exit rates for the groups for whom mean scores were 2 and above versus below 2.

[a] In Baby FACES, the rate of leaving of families in the home-based option is significantly different from the rate of leaving of families in the center-based option (p < .01).

[b] In FACES, the rate of leaving of families in urban areas is significantly different from the rate of leaving of families in rural areas (p < .001).

[c] In FACES, the rate of leaving of families in programs with high lead teacher turnover is significantly different from the rate of leaving of families in programs with low lead teacher turnover (p < .001).

[d] In FACES, the rate of leaving of families in programs with high assistant teacher turnover is significantly different from the rate of leaving of families in programs with low assistant teacher turnover (p < .001).

[e] In FACES, the rate of leaving of families in programs in which directors report that there are factors that make it harder to do their job is significantly different from the rate of leaving of families in programs in which directors report that there are not factors that make it harder to do their job (p < .001).

[f] In FACES, the rate of leaving of families in programs in which education coordinators report that there are factors that make it harder to do their job is significantly different from the rate of leaving of families in programs in which education coordinators report that there are not factors that make it harder to do their job (p < .05).

This page is left blank for double-sided printing.

www.mathematica-mpr.com

Improving public well-being by conducting high quality, objective research and data collection

PRINCETON, NJ ■ ANN ARBOR, MI ■ CAMBRIDGE, MA ■ CHICAGO, IL ■ OAKLAND, CA ■ WASHINGTON, DC

MATHEMATICA Policy Research