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ABSTRACT

Urban Head Start graduates were compared with comparably poor Pre-K graduates in this longitudinal study, in an effort to evaluate the long-term effects of the Head Start program. A sample of 227 children were included in an analysis of third-grade report cards, standardized Comprehensive Test of Basic Skills (CTBS) achievement scores, and a standardized assessment of development (Vineland Adaptive Behavior Scale). The results indicted that although Head Start does not bring children up to the level of average third graders, when contrasted with comparably poor Pre-K graduates, Head Start results have some surprising affects on children about to make the transition to fourth grade. Maladaptive behavior in Head Start graduates is lower, suggesting more adequate mental health in this group of children compared to other very poor children. Although these Head Start graduates had some difficulty with language expression (CTBS) and its functional use, they were generally more successful than other poor children in making the transition to fourth grade and in meeting academic demands of the later childhood grades. In general, results suggest that when Head start is done well, it can have an extended impact on educational transitions in its graduates' lives, even if those graduates are African American children in an urban school system. (AA)

Head Start Graduates: Making the Transition from the Early to the Later Childhood Grades

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Head Start Graduates: Making the Transition from the Early to the Later Childhood Grades

In recent years the efficacy of Project Headstart has been increasingly challenged (e.g., Currie & Thomas, 1995; Holden, 1990; McKey et al., 1985), because significant immediate gains are apparently not maintained as children progress in school, becoming virtually invisible by third grade, especially for African American children. Head Start supporters have questioned such conclusions due to methodological inadequacies (i.e., group selection biases across studies; Gamble & Zigler, 1989) and failure to include findings from similar programs for low-income children in meta-analytic studies (Schweinhart & Weikart, 1986). Assessing the long-term impact of Head Start on educational achievement is complex because effectiveness varies with type of intervention, as well as duration and age when intervention occurred (Cole & Washington, 1986). Lee and Loeb (1995) believed early benefits are undermined if Head Start graduates are subsequently exposed to lower quality schooling. In contrast, a quality suburban school system found Head Start had a positive impact on educational achievement in grades 4, 8, and 12 (Hebbeler, 1985).

The current study is part of on-going longitudinal research in an urban, minority school system providing both Head Start and pre-kindergarten (Pre-K) programs for young children in our nation's capital. Both programs serve children from predominantly low-income African American families, with Head Start families being among the very poorest. This research compared urban Head Start graduates with comparably poor Pre-K graduates at an age when any initial advantages of Head Start participation would be expected to have faded or even disappeared.

Method

A total of 341 children (M age = 107.8 months) from two cohorts ('Classes of 2000 and 2001') were included in the initial analysis of third grade ('Year 5' in school) report cards, standardized Comprehensive Test of Basic Skills (CTBS) achievement scores, and a standardized assessment of development (Vineland Adaptive Behavior Scale). This sample was 55% female and 93% African American. The majority of children (73%) qualified for subsidized lunch based upon low family income, 63% lived in single parent families, and 44% had changed schools at least once prior to third grade. Children had entered school for the first time as 4-year-olds, with 20% enrolled in the district's Head Start program and 80% in a district Pre-K program. Both programs were full-day, 5 days a week, center-based programs meeting September through June. Although all children advanced to a district full-day kindergarten following enrollment in one of these programs, 18% were retained prior to third grade and 13% were retained following third grade.

A subsample of the poorest children (N = 227) was similar in age, sex, retention, and transiency to the overall sample. However, the subsample was almost exclusively African American (99%), with 77% living in single parent families and 100% qualifying for free school lunch. Twenty-five percent of this subsample were Head Start graduates. Report cards from both third ('Year 5') and fourth grades ('Year 6') were available for 77 subsample children in the 'Class of 2000'.

Results

No differences in retention rates were found between Head Start and Pre-K children in either the overall or subsample, although Head Start graduates had moved more often (χ^2 (1, N = 333) = 6.01, $p < .01$).

Grades. Analysis of data from the combined sample (without control for

economic differences between groups) indicated Head Start children earned significantly lower grades during 'Year 5' in school (third grade if not retained). Their overall grade point average (GPA) was lower [F (1, 330) = 4.93, $p < .05$], including lower grades in reading [F (1, 331) = 3.33, $p = .06$], language [F (1, 330) = 6.08, $p < .01$], handwriting [F (1, 329) = 4.37, $p < .05$], science [F (1, 328) = 3.85, $p < .05$], and citizenship [F (1, 324) = 4.66, $p < .05$]. These differences vanished when a covariate controlling for economic differences was used or when subsample grades from only the poorest children were analyzed.

CTBS scores. Again, data analysis without a covariate indicated lower third grade standardized achievement scores for Head Start children in total language [F (1, 259) = 8.37, $p < .01$], spelling [F (1, 257) = 4.77, $p < .05$], language expression [F (1, 260) = 8.63, $p < .01$], math concepts [F (1, 260) = 2.97, $p = .08$], science [F (1, 243) = 5.94, $p < .01$], social studies [F (1, 243) = 4.17, $p < .05$], and total battery [F (1, 256) = 3.06, $p = .08$]. Language, science and social studies differences remained when a covariate analysis was used. This was also true for an analysis of data from only the poorest children.

Vineland developmental scores. Data analysis without a covariate indicated lower overall adaptive behavior among Head Start children [F (1, 286) = 3.80, $p < .05$], as well as lower communicative development [F (1, 286) = 3.54, $p = .06$] and social development [F (1, 284) = 3.36, $p = .06$]. No differences were found in daily living skills. However, the incidence of maladaptive behavior was notably higher among Pre-K children (χ^2 (2, N = 200) = 4.71, $p = .09$). With the exception of maladaptive behavior, these developmental differences vanished when a covariate controlling for economic differences was used or when subsample scores from

only the poorest children were analyzed. Among the poorest children, maladaptive behavior remained notably higher among Pre-K students (χ^2 (2, N = 118) = 5.71, p < .05). While 67% of the Head Start graduates showed insignificant levels of maladaptation, this was true for only 42% of the Pre-K graduates. More Pre-K graduates (38%) than expected were classified as significantly maladapted.

Transition from third to fourth grade. The transition from third to fourth grade is cognitively difficult because of increased expectations for independent thought and mastery of more difficult skills and ideas. Subsample analysis of report card data for 'Class of 2000' children (see Table 1),

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Insert Table 1 about here

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indicated Head Start graduates were more successful in making this transition. Most notable were intervention (Head Start or Pre-K) by year interactions in which grades of Head Start graduates generally increased, while those of Pre-K graduates generally decreased or remained virtually the same. Among children who had not been retained ("on schedule"), this pattern was evident for overall GPA and all subject areas except music and citizenship. GPA increased 13% from third to fourth grade for Head Start graduates, while GPA dropped 4% for the Pre-K group. Comparisons of 'Year 5' to 'Year 6' grades of all children (including those retained prior to third grade) revealed the same pattern for GPA and all subject areas except music. Math and reading grades increased 42% and 36% respectively for Head Start graduates, while Pre-K graduates experienced only a 2% increase in math and a 4% decrease in reading grades from 'Years 5 to 6'.

Discussion

Does Head Start make a difference? It depends. Clearly Head Start does not bring children up to the level of all third graders. However, when contrasted with comparably poor Pre-K graduates in an urban school system, Head Start has some surprising affects on children who are about to make the transition to fourth grade. Maladaptive behavior in Head Start graduates is lower, suggesting more adequate mental health in this group of children compared to other very poor children. Although these Head Start graduates have some difficulty with language expression (CTBS) and its functional use (Vineland), they are generally more successful than other poor children in making the transition and meeting academic demands of the later childhood grades. This may be partially explained by the child-initiated model of early childhood education prevalent in district Head Start classrooms. Overly academically-directed early learning experiences have an especially negative impact on achievement and development of children as they make the transition from third to fourth grade (Marcon, 1995). No Head Start classroom in this study was classified as academically-directed, and graduates of the district's Head Start program typically received a more developmentally appropriate educational intervention. Head Start parents in this study were also significantly more likely than Pre-K parents to be involved in their children's preschool experience (Marcon, 1993). When Head Start is done well, it can have an extended impact on educational transitions in its graduates' lives, even if those graduates are African American children in an urban school system.

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Table 1

Impact of Head Start vs Pre-K on Transition from 3rd to 4th Grade (Free Lunch Only)

	"On Schedule" Children			All Children ('Year 5' to 'Year 6')		
	Head Start	Pre-K	ANOVA (Intervention x Year)	Head Start	Pre-K	ANOVA (Intervention x Year)
Overall G.P.A.						
3rd grade	2.38 (.84)	2.51 (.70)	F (1, 47) = 4.05, $p < .05$	2.04 (.80)	2.26 (.83)	F (1, 75) = 2.96, $p = .08$
4th grade	2.70 (.90)	2.41 (.74)		2.36 (.82)	2.21 (.79)	
Subareas						
Math						
3rd grade	2.09 (1.45)	2.16 (1.07)	F (1, 46) = 2.36, $p = .13$	1.63 (1.38)	1.86 (1.21)	F (1, 73) = 6.24, $p < .01$
4th grade	2.54 (1.29)	2.05 (1.13)		2.32 (1.11)	1.89 (1.20)	
Reading						
3rd grade	2.36 (1.21)	2.40 (.96)	ns	1.63 (1.42)	2.00 (1.14)	F (1, 73) = 3.32, $p = .07$
4th grade	2.46 (1.13)	2.24 (1.19)		2.21 (.98)	1.93 (1.26)	
Language						
3rd grade	2.18 (1.17)	2.47 (.98)	F (1, 47) = 2.28, $p = .13$	1.79 (1.13)	2.16 (1.10)	F (1, 75) = 4.46, $p < .05$
4th grade	2.27 (1.27)	2.16 (.94)		2.05 (1.13)	1.95 (.98)	
Spelling						
3rd grade	2.54 (1.21)	2.50 (1.22)	ns	1.95 (1.35)	2.16 (1.44)	ns
4th grade	2.73 (1.10)	2.40 (1.22)		2.21 (1.18)	2.17 (1.26)	
Handwriting						
3rd grade	2.09 (.94)	2.55 (.80)	F (1, 47) = 4.65, $p < .05$	2.10 (.81)	2.24 (1.03)	F (1, 75) = 3.72, $p < .05$
4th grade	2.73 (.79)	2.42 (.92)		2.58 (.96)	2.19 (.96)	
Social Studies						
3rd grade	2.46 (.93)	2.45 (1.00)	ns	2.22 (1.00)	2.21 (.94)	ns
4th grade	2.54 (1.51)	2.21 (1.09)		2.28 (1.23)	2.23 (1.02)	
Science						
3rd grade	2.46 (1.21)	2.43 (.80)	ns	2.22 (1.06)	2.21 (.94)	ns
4th grade	2.54 (1.13)	2.40 (.98)		2.28 (.96)	2.23 (1.02)	
Art						
3rd grade	2.70 (.48)	2.74 (.82)	ns	2.59 (.51)	2.65 (.86)	ns
4th grade	3.00 (.67)	2.77 (.76)		2.76 (.66)	2.57 (.76)	
Music						
3rd grade	2.33 (.82)	2.88 (.79)	F (1, 36) = 2.48, $p = .12$	2.29 (.73)	2.62 (.82)	ns
4th grade	3.00 (.63)	2.97 (.70)		2.50 (.65)	2.75 (.79)	
Health/P.E.						
3rd grade	3.14 (.90)	2.94 (.79)	ns	2.46 (1.13)	2.82 (.83)	F (1, 65) = 4.26, $p < .05$
4th grade	3.29 (.76)	2.78 (.68)		2.85 (.80)	2.65 (.78)	
Citizenship						
3rd grade	2.56 (.53)	2.32 (1.33)	F (1, 38) = 2.59, $p = .11$	2.00 (.97)	2.12 (1.36)	ns
4th grade	3.00 (.87)	2.45 (1.23)		2.25 (1.24)	2.10 (1.30)	