



What are the Effects of a Two-Generation Human Capital Program on Children's Outcomes in Head Start?

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EXECUTIVE SUMMARY

- The current brief explores the effect of a two-generation human capital intervention, CareerAdvance®, on child outcomes.
- CareerAdvance®, developed and run by the Community Action Project of Tulsa County (CAP Tulsa), is a healthcare training program designed for parents of children enrolled in CAP's Head Start programs.
- Past evaluations found that CareerAdvance® was associated with improved parent education, employment in the healthcare sector, and psychological well-being after one year. (Chase-Lansdale et al., 2018). The central question of this brief is whether there are positive or negative effects on children as parents advance their own educational goals, in addition to the positive effects of a high quality Head Start program.
- In our overall sample, we did not find significant benefits for children beyond the effects of Head Start. Yet, it is important to note that all children in our sample (both CareerAdvance® and the comparison group) perform well compared to national averages of Head Start children.
- We did find that the CareerAdvance® program was associated with positive short-term effects for two groups of children: children whose parents were more college ready and children who were less school ready.
- In sum, we find that CareerAdvance® maintained and in some cases exceeded the benefits to children of CAP Tulsa's Head Start programs.

CAREERADVANCE®

- CareerAdvance®, developed and run by the Community Action Project of Tulsa County (CAP Tulsa), is a model two-generation intervention that pairs early childhood education for children with career pathway training in the healthcare sector for parents.
- CareerAdvance® recruits parents from high quality Head Start centers and offers career certification programs in the healthcare field at no cost to families. Additional program elements include career coaching, weekly peer learning groups, financial incentives/in-kind assistance, and wraparound child care.



SPOTLIGHT ON CAP TULSA'S HEAD START

CAP Tulsa's Head Start programs are of unusually high quality and have well-documented benefits to child school readiness and academic achievement in middle school. (Gormley, Phillips, & Gayer, 2008; Phillips, Gormley, & Anderson, 2016)

The current study tests the effect of *CareerAdvance*® on child outcomes above and beyond the known positive effects from CAP Tulsa's Head Start programs.

MEASURES/STUDY DESIGN

- The study estimated the effects of parent *CareerAdvance*® participation (healthcare career pathway training for parents combined with Head Start services for children) on child outcomes compared to a matched comparison group that received Head Start services alone. Before the intervention began, the study selected a matched comparison group of parents who were similar to the *CareerAdvance*® participants based on observable characteristics.
- Our sample included 275 children (143 whose parents were in *CareerAdvance*® and 132 whose parents were in the matched comparison group). All study families were low-income (average income per year of \$14,832) with an average household size of four. The sample was ethnically and racially diverse: 39% Black, 18% White, 10% Hispanic, and about 34% other non-Hispanic race (including Native American). Ninety-one percent of families identified English as their primary language. Roughly one-third of the sample were single parents at program entry.
- Child outcomes were measured based on direct assessments which took place either in the home or at school. All children were assessed at three points in time: (i) start of the *CareerAdvance*® program (baseline); (ii) one year after program start, and (iii) two years after program start. We selected a battery of assessments to measure across a range of children's academic, language and self-regulation skills.
- We also created two composites to test whether the effect of the intervention differed based on the parent and child characteristics. Past evidence from Head Start found that the program benefited children the most when they had greater risk (e.g., low levels of parent education) but also when their parents exhibited greater psychological well-being (e.g., lower levels of depression). The composite scores were:
 - ◇ *Parent college readiness*: defined as high or low on an index of parent educational attainment, age, income, and number of adults in the household.
 - ◇ *Child school readiness*: defined as high or low comparing the child's score on a standardized test of basic literacy and numeracy to the national mean (see study description section at the end for further details).

KEY FINDINGS

Overall, there were almost no significant differences on average in child outcomes—including basic numeracy and literacy (Bracken), receptive language (PPVT), math (WJ-Applied Problems) or inhibitory control (Pencil Tap)— between children whose parents were enrolled in CareerAdvance® and those in the matched comparison group one and two years after baseline. We do see a marginally significant difference on Pencil Tap scores after one year, but the magnitude of the coefficient is quite small (0.07).

There were positive effects of CareerAdvance® for children whose parents were more college ready, particularly one year after baseline.

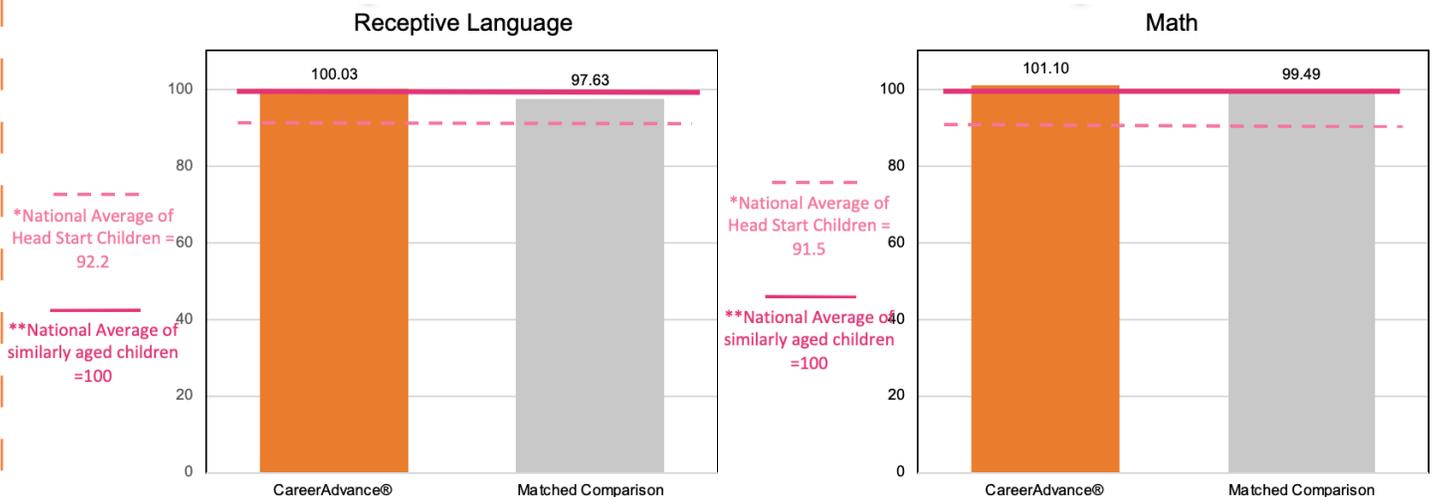
There were also positive effects of CareerAdvance® for children who were less school ready, particularly two years after baseline.

On average CareerAdvance® did not have positive or negative effects above and beyond CAP Tulsa Head Start.

It is important to note that all children in our sample are performing well above national averages of Head Start children and are on par with national averages that include children from a range of socioeconomic backgrounds.

As presented in the figures below, study children are about one half of a standard deviation above Head Start children on receptive language and math skills (represented by the dotted pink line) and nearly at the national averages (represented by the solid pink line).

Figure 1. Effect of CareerAdvance® on Child Receptive Language and Math Skills After One Year, Full Sample



* Head Start averages are from the FACES 2009 data at the end of the preschool year (Spring 2010).

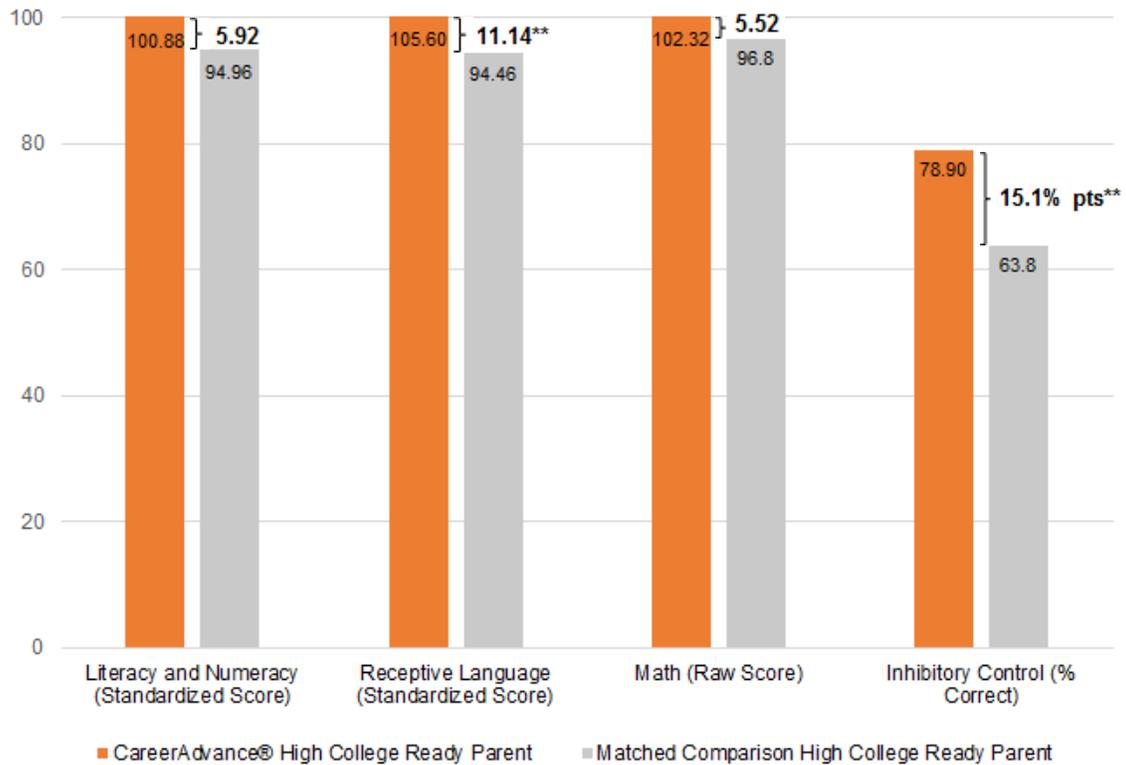
** The PPVT-4 (Receptive Language) and Woodcock Johnson II Applied Problems (Math) assessments are both nationally normed to 100 with a standard deviation of 15.



CareerAdvance® had a positive effect on children whose parents were more college ready:

- One year after baseline, CareerAdvance® had a positive effect on child receptive language (effect size = .98 SD) and inhibitory control (effect size = 16 percentage points) among children whose parents were more college ready.
- Two years after baseline, CareerAdvance® had a positive effect on child inhibitory control (effect size = 9 percentage points) among children whose parents were more college ready. There were no significant effects on literacy and numeracy, receptive language, or math skills.

Figure 2. Effect of CareerAdvance® on Child Outcomes After One Year Among High College Ready Parents



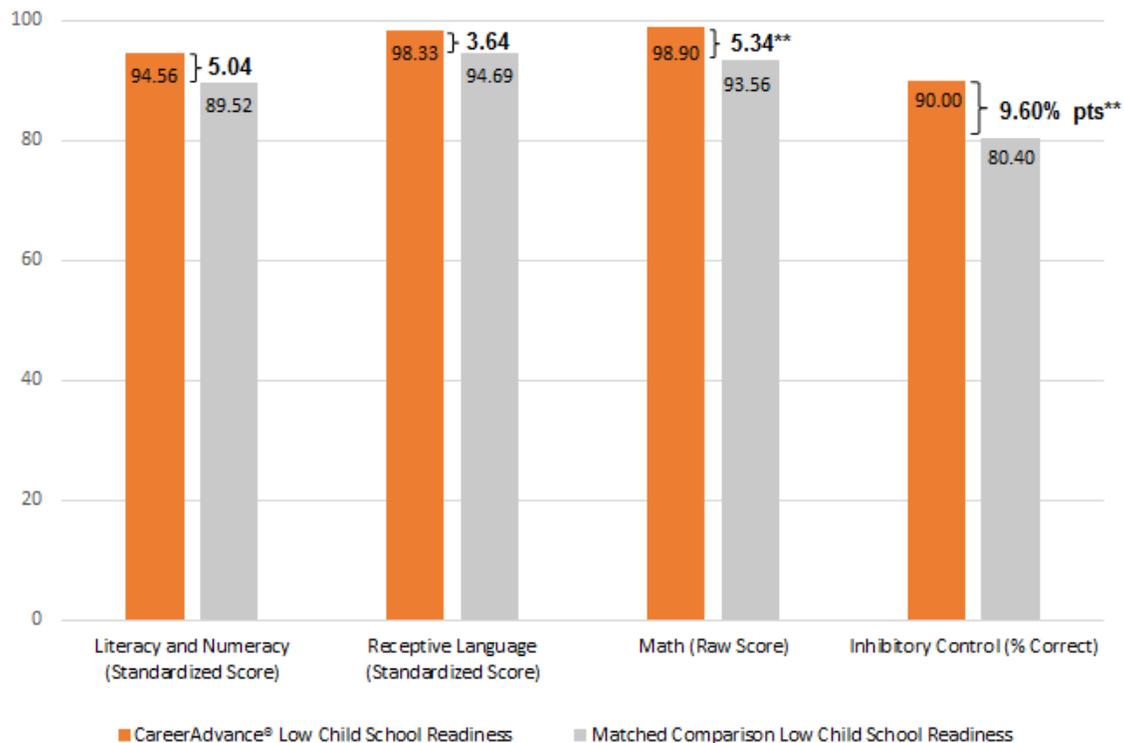
* p<.10, **p<.05, ***p<.01. Effect of CareerAdvance® given by the mean difference between the CareerAdvance® and matched comparison groups among parents with high levels of college readiness.

CareerAdvance® had a positive effect on children who were less school ready.

■ One year after baseline, CareerAdvance® had a positive effect on child inhibitory control (effect size = 15 percentage points) among children who were less school ready.

■ After two years, CareerAdvance® had a positive effect on child math skills (effect size=.38 SD), and inhibitory control (effect size = 9.7 percentage points) among children who were less school ready. There were no significant effects on child literacy and numeracy or receptive language.

Figure 3. Effect of CareerAdvance® on Child Outcomes After Two Years Among Children with Low School Readiness



*p<.10, **p<.05, ***p<.01. Effect of CareerAdvance® given by the mean difference between the CareerAdvance® and matched comparison groups among children who were less school ready.

CONCLUSION

- Our past research found that all parents on average benefited from *CareerAdvance*® in terms of their education, employment in the healthcare sector, and psychological well-being. The current study tested if *CareerAdvance*® also led to improved outcomes for children as parents progressed through the program.
- We did not find significant benefits for children on average, above and beyond the positive effects children already received while in CAP Tulsa's Head Start programs. This was not entirely surprising, given the well-documented effectiveness of CAP Tulsa's Head Start programs.
- We hypothesize that there were no negative effects on child outcomes (as parents balanced work, family and school) because of improvements in parents' self-efficacy and optimism, and no net effects of the program on stress.
- Notably, we found that parent participation in the *CareerAdvance*® program was associated with positive short-term effects for two groups of children: children whose parents were more college ready and children who were less school ready.
- Together, our evaluations of the short-term effects of *CareerAdvance*® on parents and children suggest that parents experience substantial positive benefits from CAP Tulsa's two-generation program. In addition, *CareerAdvance*® maintained and in some cases exceeded the benefits to children of CAP Tulsa's Head Start programs.



STUDY DESCRIPTION

- The evaluation included multiple cohorts of parents who entered the study in either the fall or winter of the child's Head Start year (fall 2011 through fall 2014) and their children.
- To select the matched comparison group, we used propensity score matching, which adjusts for differences between groups in demographics and interest in pursuing educational and career activities. The CareerAdvance® and matched comparison groups were balanced across parent characteristics at program start.
- The parent college readiness composite included 4 characteristics: parent has a high school degree or more, parent age is over the median (28), household income is above the median (\$20,000-\$24,999), and there was more than one adult in the household. Each variable was dummy coded (1=yes) and summed, where a higher composite score indicates that the parent had more college readiness. We then divided the sample into 2 groups: low parent college readiness (meaning the parent had 0 to 3 of the college readiness variables; e.g., only had household income over the median, but nothing else) versus high parent college readiness (parent had all 4 college readiness variables). The low parent college ready group contained 161 children (72%); the high parent college ready group contained 64 children (28%).
- The child school readiness measure included 1 variable: performance at baseline on basic numeracy and literacy skills (measured by the Bracken assessment). A child was deemed to have low school readiness if they scored below the national mean of 100 on the Bracken assessment at baseline. The low school readiness group contained 100 children (60%); the high school readiness group contained 68 children (40%).
- The following assessments were used to assess a range of child academic, language and self-regulation skills:
 - ◇ Bracken: Basic numeracy and literacy. Tests children's knowledge of letters, numbers counting, relational comparisons, and shapes (McGaw, 1998).
 - ◇ PPVT: Receptive language. Children choose (verbally or nonverbally) which of four pictures best represents a stimulus word (Dunn, 2007).
 - ◇ Woodcock Johnson Applied Problems subscale: Math. Measures early math reasoning and problem-solving abilities; requires the child to analyze and solve math problems and perform simple calculations (Woodcock, 1997).
 - ◇ Pencil Tap: Inhibitory control. Measures percent correct when a child is asked to tap a pencil twice if the evaluator tapped once, and to tap once if the evaluator tapped twice; tests a child's ability to resist a dominant response (e.g., tapping once) in favor of a non-dominant response (e.g., tapping twice) (Smith-Donald, 2007).

