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Kindergarten Impacts of the Pennsylvania Pre-K Counts Program: A Statewide Evaluation

Pennsylvania Pre-K Counts Program Overview

Pennsylvania Pre-K Counts (PA PKC) is a state-funded prekindergarten program for 3- and 4-year-old children to help them gain school readiness skills. The goal of PA PKC is to help reduce educational disparities by providing high quality prekindergarten for children who lack opportunities or reside in environments that place them at risk of school failure. The PA PKC program guidelines define children at risk as those who are living in households below 300 percent of the federal poverty rate, are English Language Learners (ELL), or who are at risk due to community factors, academic difficulties, or economic disadvantage.

PA PKC spaces are offered in school districts, Head Start, Department of Education privately licensed nursery schools, and high quality child care settings. Children attend 180 days per year, with either half-day or full-day options. The program guidelines include a number of standards consistent with high quality, including teacher qualifications, curriculum and instruction, screening and assessment, classroom self-assessments, and family engagement.

Impact Study Purpose

This Impact Study examined the effects of participation in PA PKC on children's early academic, social, and executive function skills in kindergarten. In particular, the study focused on whether there were differences in performance for children with 1 or 2 years of enrollment in PA PKC compared to children with no ECE experience in the 2 years prior to kindergarten.

Research Questions

Two primary research questions (1 and 2) guided the study to examine the effects of participation in PA PKC. A third research question (3) examined potential moderators, or factors that might have an influence on any effects found for program participation.

1. *Do children who attended PA PKC have higher levels of academic and social skills in kindergarten than children with no prior preschool experience?*
2. *Are kindergarten skills different for children who attended PA PKC for 1 year (enrolling at age 4) or 2 years (enrolling at age 3)?*
3. *Are there differences in the effects of PA PKC based on various program characteristics—percent of 3-year-olds served, region of the state, or level of urbanicity/rurality?*



Summary of Results

- On average, children's outcome scores were similar to population means, with slightly higher scores for measures of letter-word recognition, math problem-solving, and social skills than for other outcomes.
- There were positive effects of PA PKC participation on children's language and math outcomes. In kindergarten, children who attended PA PKC had significantly higher levels of language skills (Picture Vocabulary, $d=.30$) and math skills (Applied Problems $d=.22$, Quantitative Concepts $d=.22$) compared to children who did not attend PA PKC. The results showed no differences on other literacy, executive function, and social skills measures.
- These results also showed meaningful differences in the months of learning gains related to participation in PA PKC for language skills (PV=5.02 months of gain) and math skills (AP=3.88 months of gain, QC=5.14 months of gain).
- These effects of PA PKC were not different for children who attended for 1 year (enrolling at age 4) or 2 years (enrolling at age 3).
- The effects of PA PKC on children's outcomes did not differ based on program characteristics—the percent of 3-year-olds enrolled in PA PKC, geographic region, or urbanicity/rurality.

Conclusions

Overall, there were consistent positive effects of program attendance on children's language and math outcomes, regardless of the initial age of enrollment in PA PKC. These findings are important given that language and math skills have been shown to be the school readiness skills that most strongly predict subsequent academic achievement. For children who participated in PA PKC, these differences were equivalent to an increase of approximately 4–5 months of learning, a substantial difference in terms of skills development, particularly for young children.

These results suggest that early prekindergarten experiences in PA PKC may provide an important buffer, particularly for children from low-income families or who are otherwise at greater risk for school failure. Given that these differences between PA PKC participants and non-participants were evident during the second half of the kindergarten year, these results further suggest that prekindergarten participation could offer a potential strategy to help mitigate summer learning loss.

While acknowledging the challenges when classrooms include children with a range of developmental levels and prior experiences, such as occurs in many PA PKC classrooms, outcomes did not differ based on age of enrollment in PA PKC. Findings from a companion Implementation Study of the PA PKC Program indicated that there was little differentiation in curriculum and instruction based on age group, although most administrators reported that differentiation was broadly based on developmental level. Results from the Implementation Study further found that PA PKC administrators who enrolled higher proportions of 3-year-olds reported

higher levels of implementation challenges, including those related to staffing. Taken together, these findings suggest that greater attention to instructional practices may be warranted to ensure children are benefiting from a second year of program participation.

Further, the general lack of findings for measures of literacy skills, social skills, and executive function suggests additional areas to examine for potential professional development and quality improvement activities. It would be particularly worthwhile to consider instructional practices that are most likely to promote positive outcomes to ensure that PA PKC continues to offer a high-quality program designed to best prepare children for school success. In order to support sustaining these effects into the early elementary years, it may be important to examine the extent of P–3 alignment across grades, while continuing to base prekindergarten practices on developmentally appropriate early learning standards.

In sum, the results of this evaluation demonstrate positive benefits on language and math skills in kindergarten for children who attended PA PKC compared to similar children with no prior ECE experience in the 2 years before kindergarten. Thus, it would appear that PA PKC is well suited to promote key school readiness skills known to predict later reading and academic success.

