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Title:
Midwest Child-Parent Center (CPC) PreK-3rd Grade School Reform Model: Impacts on Child and Family Outcomes Over Time

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This presentation reports on the goals and preliminary outcomes of the Child-Parent Centers (CPC) Expansion Project, which is a PreK to 3rd grade school reform model aimed at improving the short- and long-term outcomes of participating children and families. The model provides continuous education and family support services to schools serving a large percentage of low-income children. The model is based on an earlier project implemented in the 1970s and 1980s in a large, Midwestern city which followed participating children into adulthood and demonstrated consistent positive outcomes across a range of domains, including educational achievement. The CPC Expansion Project includes a quasi-experimental design to examine the impact of the current model on kindergarten school readiness and second grade school achievement as well as the impact on parent involvement in children's education and learning.

The presentation will describe the earlier CPC model and the robust long-term impacts found in participating children and their families. We will then describe the current expansion project model and its goals of impacting PreK to 3rd grade achievement through core implementation components. Finally, we will present preliminary findings on the early indicators of success and achievement, including parent involvement. These preliminary findings will be discussed as they relate to the long-term outcomes seen in the earlier model. The presentation will also include data on the feasibility of school-wide reform models and present fidelity of implementation in the first two years of the project corresponding with preschool and kindergarten participation.

Abstract Body

Background / Context:
The CPC Expansion project was established in fall 2012 and has served 4,000 PreK and kindergarten students who will be followed to third grade. Although evidence is growing that the alignment of services between PreK and the early grades can improve learning gains, the impacts of comprehensive PreK to 3rd Grade (PK-3) models are just beginning to be identified. To realize the ambitious long-term gains, PK-3 models must be implemented with fidelity and evaluated within the context of a changing educational landscape. With the increase in funding for preschool programs in the last decade, states and school districts are still struggling with how to implement preschool programs with quality to produce the lasting impacts achieved in earlier preschool intervention studies. The implementation and impacts of the program presented in this session provide important knowledge about the feasibility of the CPC Expansion for broader impact.

Although high quality PreK has been shown to improve achievement, it is not enough to substantially raise later reading proficiency or to close the 3rd grade achievement gap of over one standard deviation among economic groups. The CPC Expansion project implements a comprehensive set of PK-3 services. Originally developed in 1967 in response to low achievement and parent involvement, the CPC program was significantly enhanced in the current project which includes collaboration between a university and four school districts in the Midwest. Previous reports for a 1980s CPC cohort found that participation from PreK to 2nd or 3rd grade was linked to a 7-month gain in 3rd grade reading (Reynolds, 2000; Reynolds, et al., 2007). This gain led to higher rates of school completion and lower remedial education (Reynolds, Temple, Ou, Arteaga, & White, 2011). To strengthen effects in contemporary practice, a comprehensive school model was developed. The significant changes to the earlier project model, including full-day Prek, curriculum alignment, menu-based parent involvement, and professional development provide a comprehensive strategy of school reform that can be sustained and effective.

Purpose / Objective / Research Question / Focus of Study:
We will present on the first set of short-term outcomes in the current study: school readiness at kindergarten entry. Do students who participated in the CPC intervention preschool sites make greater gains in school readiness skills at kindergarten entry (early literacy, mathematics, executive functioning, social skills and behavior) compared to students in the comparison sites? Additionally, preliminary subgroup analyses will be presented that examine whether the current CPC model has a greater impact on school readiness skills at kindergarten entry for students who had received two years of CPC preschool compared to those students who only received one year of CPC preschool prior to kindergarten.

Setting:
The model described in this presentation is currently being implemented in 4 school districts in the Midwest using a collaborative implementation approach to promote sustainability. In 2012-2013, over 2,300 PreK children enrolled in the program across the 26 schools. At the end of kindergarten over 4,000 children were served. These 26 schools receive Title 1 funding and have been implementing the PreK and K components beginning in fall 2012 through spring 2014.

Population / Participants / Subjects:
The sample included 50 sites (26 intervention; 24 comparison). Preliminary outcome analyses will be presented on approximately 1,000 children (n=1054, 72% intervention) with pretest (i.e., when they were 4 year olds in the fall of their CPC preschool year) and posttest data (i.e., kindergarten entry) at the time of submission. We will also present exploratory analyses for an additional approximately 500 children who had two years of CPC preschool prior to kindergarten.

Intervention / Program / Practice:
The CPC Expansion Program provides continuous education and family support services from Preschool to Third Grade to schools serving large percentages of low-income children and in need of improvement. The program has the following elements: (1) collaborative leadership team of Head Teacher, Parent Resource Teacher, and School-Community Representative under the supervision of the Principal; (2) effective learning experiences (e.g., small classes, intensive learning opportunities); (3) menu-based system of parent involvement and engagement; (4) continuity and stability; (5) aligned curriculum; and (6) professional development system of coaching and on-line modules. The foundation of the program is the leadership team of the Head Teacher, Parent Resource Teacher, and School-Community Representative who partner with the principal to create a shared vision and structure of implementation. Three key areas of alignment are emphasized: (a) menu-based system of parent involvement, (b) curriculum alignment across grades, and (c) professional development. Specifically, a literacy-focused, activity-based, and aligned curriculum with a balance of teacher-directed and child-initiated activities is expected to lead to positive child outcomes across domains. School readiness is defined as the mastery or proficiency in skills, behaviors, and attitudes that promote successful transition to kindergarten and include the domains of language, literacy, math, socio-emotional, arts, and physical health.

Research Design:
Using a quasi-experimental design, we plan to compare child outcomes at kindergarten entry in schools implementing the CPC model to matched-comparison schools in the same district. We applied propensity score matching techniques to find comparable schools for the intervention schools, calculating a propensity score of being an intervention school based on school-level baseline variables: percent of minority students, percent English Language Learners, percent students receiving free or reduced price lunch, and percent of 3rd-grade student exceed proficiency level on state reading achievement test.

Data Collection and Analysis:
We examined the outcomes of the intervention and comparison students on the following standardized measures at kindergarten entry: Woodcock-Johnson-III Applied Problems (WJ-AP) and Letter-Word Identification (WJ-LWI) (Woodcock, McGrew & Mather, 2001), and the Dimensional Change Card Sort (DCCS) task (Carlson, 2005; Zelazo, 2006; NIH Toolbox, n.d.) which measures cognitive flexibility – one domain of executive functioning. We also examined the impact on teacher-reported school readiness skills using a modified version of the Minnesota Work Sampling System (MWSS) (Meisels, Marsden, Jablon, Dorfman, & Dichtelmiller, 2001) and teacher-reported social skills and problem behaviors using the Teacher-Child Rating Scale-version 2 (T-CRS:2) (Hightower & Perkins, 2010).

Multi-level modeling techniques will be used to test the intervention effects, adjusting for important covariates (e.g., pretest scores, and demographic characteristics) and nesting students in schools. To indicate the strength of the intervention effect, SRI will report both Hedges' *g* and HLM-adjusted effect sizes (ES) (What Works Clearinghouse, 2008). We also will examine the impact of one-year vs two years on school readiness outcomes as the data are available.

Implementation fidelity is evaluated using a multi-method approach that includes observations, structured interviews, surveys, and administrative data. Fidelity ratings were given at the school level in both fall and spring of each year of implementation. In Year One, the implementation team rated each school based on the six key elements using a five point scale. In Year Two, to increase transparency and robustness of the fidelity measuring tool, the implementation team developed a rubric based on the thirty program requirements with a five-point scale for each item. Certain items were weighted based on program theory and research literature, and then the weighted ratings were average to create an element-level score.

Findings / Results:
Preliminary findings from district-collected data on school readiness show that PreK is linked to higher mastery across all domains (e.g, literacy, math) compared to a subset of children in the comparison preschool settings. Overall, fidelity of implementation in year one was moderately high (3.9 on a scale from 1 to 5 across six components). Across all districts, the highest rated element was Effective Learning Experiences (4.0). The lowest rated element was Parent Involvement (3.5). When averaging across the six elements, 96 percent of sites met the moderate-to-high fidelity standard defined as an average rating of greater than 3.

Conclusions:
The earlier model and its documented impacts led to a number of changes in school-based PreK across the country. The CPC Expansion Project is unique in that it implements a longitudinal PreK to 3rd grade intervention, the first phase of which provides high-quality early learning experiences that are continuous and aligned to children at-risk for poor school achievement. Establishing the impact of the program compared to business as usual in a contemporary sample is essential to understanding implementation of high-quality educational interventions from Prek to 3rd grade. Findings indicate the model is being implemented well. Fidelity also informs the generalizability of the CPC model across districts.

Appendices

Not included in page count.

Appendix A. References

References are to be in APA version 6 format.

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Appendix B. Tables and Figures

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