

## Early Childhood Experiences: Risk, Protection & School Success

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### Understanding Risk and Protective Factors

The purpose of this study was to make visible the impact of biological and social risks on children's school readiness for kindergarten and their school success at the end of 2nd grade, and to examine the protective nature of formal center-based early care experiences for children exposed to these risks.

### Methods

The Kids Integrated Data System (KIDS) was used to integrate administrative records for an entire cohort of 2nd grade children who were born in Philadelphia and attended kindergarten in the public school district. KIDS provided information about early childhood risk factors identified by the City's Department of Public Health, Department of Human Services, and Office of Supportive Housing.

The School District of Philadelphia provided data from the Early Care and Education Interview (ECEI) and 2nd grade outcomes. ECEI is a validated parent-teacher interview about children's early care experiences that is conducted during the first week of kindergarten. This survey identifies the type, timing, and duration of early experiences prior to kindergarten entry.

### Risk Factors and School Competencies

The prevalence of each risk in this cohort was well above national averages (see table below). Furthermore, nearly 35% of these children experienced three or more of these risks before the end of 2nd grade.

Risk	Prevalence (%)
Poverty	53.6
Low maternal education	28.5
Teen mother	13.1
Maltreatment	5.4
Inadequate prenatal care	38.8
Lead exposure	25.6
Homelessness	17.5
Out of home placement	2.1
Preterm birth	13.1

Each risk was negatively associated with at least one kindergarten readiness outcome. Poverty and low maternal education were the most pervasive risk factors associated with all academic and behavioral outcomes in kindergarten and 2nd grade. At the end of 2nd grade, poverty, low maternal education, birth to a teen mother, maltreatment, and inadequate prenatal care were significantly associated with negative academic

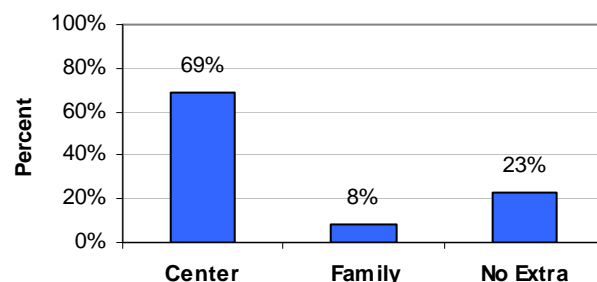
and behavioral outcomes. Furthermore, the negative relationships between lead, homelessness, and preterm birth on academic outcomes *increased* by the end of 2nd grade.

The cumulative number of risk factors was also examined. Regardless of the type of risk, increases in the number of risk experiences were significantly related to poor social skills, work habits, school suspension, low attendance, and reading and mathematics achievement. This incremental difference was most significant for reading outcomes.

### The Protective Nature of Center-Based Care

As seen below, nearly 70% of the cohort attended a formal center-based care program prior to school entry.

Distribution of Early Care Experiences



Center-based care demonstrated protection for all academic outcomes and 2 of 3 behavioral outcomes (attendance and social skills) at kindergarten entry. At the end of 2nd grade, formal care remained a protective factor for all academic outcomes (including nationally standardized achievement tests) as well as 3 of 5 behavioral outcomes (attendance, suspensions, and retention).

### Conclusions

This study demonstrated that early formal care experiences can provide a protective influence against the negative impact of early risk factors associated with living in poverty. Findings underscore the need for a community effort to increase participation in center-based early care and education programs, and to enhance the quality of these programs.

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Fantuzzo has been a pioneer in research pertaining to the education of young children in at-risk urban settings.

