

Social-Emotional Learning, Special Education Referral, and Grade Retention  
from Kindergarten Through Fifth Grade:  
Long-Term Effects of Early Intervention on Policy-Relevant Outcomes

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**Background.** Social-Emotional Learning (SEL) programs are school-based preventive interventions that aim to improve children’s social-emotional skills and behavioral development (Jones & Doolittle, 2017). Meta-analytic research has shown that SEL programs implemented in early elementary school achieve these aims in the short-term (Durlak et al., 2011). However, there is less evidence on the benefits of SEL programs for reducing special education (SPED) referral and grade retention, two outcomes that are particularly policy-relevant given the high cost of providing services to children requiring individualized education plans (IEPs), and of having children repeat full grades of schooling. Examination of these outcomes may be limited in past work because it often takes many years of follow-up to observe significant changes in grade retention and SPED referral. To date, there have been few studies of SEL programs examining impacts more than 1 to 2 years after the end of program services. A recent meta-analysis by Taylor et al. (2017) found that of 82 studies with at least 6 months of follow-up data, only 6 studies considered effects four or more years past the end of the intervention. Even so, these few studies have found promising effects of SEL programs on grade retention and SPED referral (e.g., Bradshaw et al., 2009; Hawkins et al., 1999). Impacts of intervention may be most likely observed for lower-income students, as early behavioral issues can be confused with the need for special services and/or grade repetition for these students (Xia & Kirby, 2009). With growing availability of administrative data, work examining the long-term effects of SEL programs on policy-relevant outcomes that have the capacity to save costs at-scale is more feasible and warranted than ever.

**Objective.** The current paper examines impacts of the SEL program *INSIGHTS into Children’s Temperament* (O’Connor, Cappella, McCormick, & McClowry, 2014), implemented in kindergarten and first grade classrooms, on children’s SPED referral and grade retention through fifth grade. The study further considers variation in impacts for children eligible for free or reduced price lunch (FRPL).

**Setting, Participants, and Research Design.** Between 2008 and 2012, 22 elementary schools serving primarily lower-income racial/ethnic minority students in three New York City school districts were randomly assigned to participate in the *INSIGHTS* program or to a control condition.

**Intervention.** In brief, *INSIGHTS* helps teachers and parents recognize a child’s temperament and respond with warmth and discipline strategies that support adaptive social-emotional and behavioral outcomes (McClowry et al., 2010). Children enrolled in *INSIGHTS* schools participated in two consecutive years of intervention, consisting of ten 45-minute in-classroom sessions per year with a facilitator during kindergarten and first grade. Their kindergarten and first grade teachers received intervention (10 2-hour training sessions on the *INSIGHTS* curriculum and homework) during the year when target students were enrolled in their grade. A parent program consisting of 10 total sessions was also offered to parents at *INSIGHTS* schools.

**Data.** Administrative data from the NYC DOE were accessed through the Research Alliance for New York City Schools. All children ( $N = 1,634$ ) who were enrolled in kindergarten or first grade in one of the study schools during the years when the intervention was being implemented were included, providing a comprehensive dataset for intent-to-treat impact analyses. These data included school assignments for kindergarten and first grade, SPED referral in each year from kindergarten through fifth grade, and five or six years of information on the child's current grade beginning with entrance into the public school system. Grade retention was coded as two dummy variables using current grade information (ever retained through fifth grade, retained in kindergarten). We wanted to consider retention in kindergarten separately from ever retained in order to compare differences in shorter-term versus longer-term program impacts. Demographic information at entrance to public school was accessed to create dummy variables used as covariates in models (racial/ethnic categories, gender, FRPL status, immigrant status, dual language learner).

**Analysis.** Two sets of multi-level logistic regressions were run to answer the research questions. First, we regressed SPED referral (1 = referral; 0 = not referred) through fifth grade on a dummy for treatment, adjusting for the covariates listed above and including random intercepts for study school. We then tested whether treatment effects varied for children from poorer families by interacting FRPL and treatment and including it in the analytic model. Next, we regressed a dummy for retained in kindergarten on the same set of predictors as listed above, and considered the FRPL by treatment interaction. Finally, we ran regressions predicting ever retained through fifth grade from those same independent variables, and the interaction of FRPL and treatment.

**Findings.** Results revealed no statistically significant impact of assignment to *INSIGHTS* on SPED referral for the full sample of students ( $\log(\text{odds}) = .24, SE = .18, p = .78$ ). In the second regression, we found that the interaction of FRPL and treatment was statistically significant and negative, demonstrating an impact of *INSIGHTS* on reduction in SPED referral for FRPL children ( $\log(\text{odds}) = -1.26, SE = .62, p < .05$ ). The magnitude of the impact translates into a 34% reduction in the probability of SPED referral. Results of grade retention models revealed a significant negative impact of *INSIGHTS* on retention in kindergarten ( $\log(\text{odds}) = -.35, SE = .16, p < .05$ ), but no significant effect once we considered retention through fifth grade ( $\log(\text{odds}) = -.06, SE = .12, p = .44$ ). The magnitude of the impact on kindergarten retention translates into a 41% reduction in the probability of kindergarten grade retention. Impacts on grade retention did not vary by eligibility for FRPL.

**Conclusions.** Findings suggest there are some lasting effects of *INSIGHTS* on SPED referral, and shorter-term reductions in grade retention that may still have implications for cost savings at the school and district-level. The paper will discuss the implications of this study for understanding how SEL programs may reduce long-term costs by reducing early behavior problems, particularly among poor children who are at higher risk for being identified as exhibiting disruptive behaviors in early school settings (Wade et al., 2014).

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