Longitudinal Lagged Associations between Head Start Children’s Social-Emotional Skills and Academic Performance

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Introduction
Promoting positive early social-emotional (S-E) behaviors has been highlighted by researchers and teachers as a way to facilitate children’s learning in the early childhood classroom (Lin et al., 2003; National Scientific Council on the Developing Child, 2004). Findings from recent longitudinal studies, however, suggest that early S-E behaviors may not be unique predictors of subsequent academic achievement (Duncan et al., 2007; see Thompson & Raikes, 2007). For example, Duncan et al.’s meta-analysis of six longitudinal datasets showed that most S-E behaviors at school entry were not significantly related to academic skills in later years, controlling for early cognitive/academic-related skills.

It remains unanswered, however, whether those results are generalizeable to children living in poverty, who tend to display lower S-E competence than more affluent peers (Brophy-Herbert et al., 2007).

Additionally, available studies using longitudinal datasets mainly examined S-E behaviors measured only at one time point, overlooking potential changes in early S-E behaviors over time. Given the research evidence suggesting systematic changes in early S-E behaviors over time (Bub, McCartney, & Willett, 2007; Peisner-Feinberg et al., 2001), S-E behaviors measured only at one time point may insufficiently explain subsequent academic trajectories. Accordingly, the link between S-E behaviors and academic competence may be more precisely described, if both capacities are considered as time-varying variables.

Research Question
The purpose of this study is to examine lagged association between prior S-E behaviors (i.e., behavioral problems and social skills) and subsequent academic achievement (i.e., math, vocabulary, reading, and pre-writing) from Head Start (HS) entry to Kindergarten.

Methods
- This study comprised secondary analyses using nationally representative data from the Head Start Family and Child Experiences Survey 2006 Cohort (FACES; Nchild = 3,005; Nfamily = 402).
- Multiple imputation was used to handle missing data. Three-level growth curve modeling (GCM) was employed due to the nested structure of the dataset (time-child-classroom).
- A series of child/family characteristics were included as control variables (e.g., child ethnicity, child gender, mother education, home language, and income-to-poverty ratio).

Results
1. Growth trajectories of S-E behaviors from HS entry to kindergarten

   ![](image1.png)

   Note. Behavior problems were collected using 13 items drawn from an abbreviated adaptation of the Personal/Maturity Scale (Alexander, Embry, BHb, & McKee, 1989) and the Behavior Problems Index (BPI; Peterson & Zill, 1986). Social skills were collected using 12 items, which derived from the Personal Maturity Scale (Alexander et al., 1986) and the Social Skills Rating System (SRRS; Elliott, Gresham, Foreman, & McCloskey, 1988; Gresham & Elliott, 1990).

   HS children exhibited decreased behavioral problems and increased social skills over time. These results justify the appropriateness of using lagged analyses to identify the link between S-E behaviors and subsequent learning.

2. Intercept-as-outcome models

   ![](image2.png)

   Results showed
   (1) negative lagged association between behavioral problems and academic achievement and
   (2) positive lagged association between social skills and academic achievement.

   The findings suggest potential benefits of possessing positive S-E behaviors for subsequent learning, when longitudinal changes in both S-E behaviors and academic skills are considered in analyses.

Discussion
Given the evolution in the HS curriculum to emphasize academic skills more, some researchers have been concerned that de-emphasizing other important skills in the curriculum (e.g., S-E competence), could place poor children at greater risk for failing academically in the future (Raver & Zigler, 2004). The current findings indicate the importance of S-E behaviors in learning, and imply that continuous support for positive S-E behaviors in HS curriculums could be advantageous for facilitating early academic achievement for children living in poverty.

References


Policy Implications
Continuous support for positive S-E behaviors in HS curriculums could be advantageous for facilitating early academic achievement for children living in poverty.