Program Outcomes from a Parent-Implemented Emergent Literacy Intervention for at-Risk Prekindergarteners: A Multi-level Analysis

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Introduction

Over one-third of American children enter kindergarten lacking skills needed to become successful readers (Fielding, Kerr, & Rossen, 2007). Considerable focus is placed on effective ways parents can contribute to reducing this achievement gap between at-risk children and their peers. Child literacy interventions including parent involvement produce stronger outcomes than classroom interventions alone (e.g., Lonigan & Whitehurst, 1998), but it is unclear how well parent interventions can improve child outcomes across a variety of key emergent literacy skills. Following 4 years of randomized controlled trials (RCT) conducted on a supplemental emergent literacy classroom intervention (Bailet et al., 2009; 2011), this RCT study evaluated the impact of a parent-administered early literacy intervention program for pre-kindergarten children at-risk for reading failure, with and without supplemental child classroom instruction. Research questions included the evaluation of whether parents could independently improve their child’s reading readiness skills in oral language, print awareness, phonological awareness, letter knowledge, and rhyming ability beyond that found in the control group, in addition to evaluating any contribution of classroom- and school-level differences to child outcomes.

Method

Participants

• 308 4-year-old children in 37 Voluntary Pre-Kindergarten (VPK) programs in northeast Florida screened as at-risk for reading failure and their families were randomly assigned to receive:
  • Control group (n= 84)
  • Child intervention (n= 70)
  • Parent component (n=74)
  • Child intervention & parent component (n= 80)

• Mean qualifying fall pretest Get Ready To Read-Revised (GRTR-R) = 81.4 (SD = 7.41)

• Groups did not significantly differ at pre-test (p > .05)

• Children eligible for intervention are identified
  • These participants are randomly assigned to 1 of 4 groups

Measures

• Get Ready to Read-Revised (GRTR-R) - Screening
• Letter Names/Letter Sounds
• Expressive One Word Picture Vocabulary Test (ECOWPVT)
• Test of Preschool Early Literacy (TOPEL) - Print Knowledge & Phonological Awareness subtests
• Assessment of Literacy and Language – Rhyming subtest
• Early Language and Literacy Classroom Observation (ELLCO)
• Demographic parent questionnaire

Child Intervention

• Explicit, multisensory, research-based, early literacy intervention program designed to build skills in print awareness, phonological awareness, letter knowledge, oral language, and emergent writing

• Twenty-30 min lessons delivered by early literacy specialists to small groups of children, twice a week for 10 weeks; lessons delivered in the fall of pre-K Year

Parent Component

• Parent-administered early literacy activities aligned with the child intervention program
• Sessions overlapped with the 10-week classroom intervention program
• Early literacy specialists met 3 times with parents assigned to those groups: (1) parent component only & (2) child intervention & parent component combined

• Parents received: Guided Activity pages & scripted lessons designed to build early literacy skills; activity demonstration by specialist; tips, troubleshooting, rationales provided

• All materials to do activities, including emerging DVD, children’s books & an alphabet song CD

Results

• Hierarchical linear modeling (HLM); Raudenbush, Bryk, Cheong, Congdon, & duToit, 2011
• Maternal education predicted letter sounds and rhyming and was used in those models (p < .05)

• Null models indicated significant variance to be explained for each outcome (p < .05)

• Level 2 (means as outcomes) model used to determine classroom effects on early literacy outcomes, demonstrating significant level 2 variance (all p’s < .001) Rhyming ICC=.05; 5% of the variance in rhyming outcomes due to classroom factors. Level 3 ICC=.08; 8% of the variance in rhyming outcomes due to site factors

• Control group (reference), treatment subgroups were dummy coded and entered at level 1 with pretest and maternal education; ELLCO scores were entered at level 2 and site at level 3.

• Treatment group differences were found for GRTR-R, rhyming, and letter sounds relative to control group (p < .05), with the strongest effect found for rhyming by the combined group (p <.62):

Conclusions

• This study adds to the literature by demonstrating that parents can contribute to the development of their child’s reading readiness skills while accounting for prekindergarten classroom and site-level differences.

• Treatment group differences were found for GRTR-R screener, letter sounds, rhyming; classroom intervention treatment effects found for letter sounds, and for combined group on GRTR-R and rhyming

• Although all three treatment groups improved their expressive language scores relative to the control group, the effect was not statistically significant (p > .05).

• Parent only intervention group did not significantly increase their scores on any outcome relative to other groups; however, the combined parent and classroom intervention had maximal impact on child outcomes, and nearly all mean scores were highest in this treatment group, supporting previous research (Lonigan et al., 1998)

• ELLCO scores accounted for significant variance in reading outcomes, along with maternal education level.

• Some emergent literacy skills may require more frequent exposure/implementation of activities by parents to improve them relative to others.

• Rhyming instruction appears to be relatively potent in small doses; alternatively, more advanced phonological awareness skills (i.e., elision, blending), shown to improve significantly in the classroom intervention program (Bailet et al., 2009; 2011; Zettler-Greeley et al., under review), may need greater emphasis in the parent workshops.

• Future research will examine the implications of differential dosage/ skill exposure on unique emergent literacy skills, when instruction is provided by parents.

References


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