Parents' Confidence for Fostering Their Preschool Children's Math Development

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Introduction

- The preschool years are a critical time for children to develop a foundation of early reading and mathematics skills (Serpell et al., 2005; Sonnenschein et al., 2016; Watts et al., 2014).
- Research shows the association between what goes on at home and children's reading and math development; however, the relation is stronger for reading (Blevins-Knabe, 2016).
- Research has shown the importance of considering social-affective factors to understand the impact of parents' socialization. Thus, we know that parents' anxiety is negatively associated with children's math skills (Maloney et al., 2015).
- However, we know little about how confident parents feel to assist with their young children's mathematical development nor what information they would like to receive from their children's teachers. Documenting parents' confidence is consistent with Hoover-Dempsey et al.'s (2005) theory about why parents become involved in their children's education.

Purpose of Study

1. How confident do parents of preschoolers feel to assist their children with math and reading and does their confidence differ across domains?
2. What information would they like to receive from their children's teachers?

Method

Table 1. Demographic Characteristics of the Sample (N = 105)

Variable	M(SD) or %
Parent Age (years)	36.87 (4.46)
Relation to Child (%)	
Mother	94
Father	5
Aunt	1
Race / Ethnicity (%)	
Asian	2
African American/ Black	3
Latino/a/x	4
White	92
Other	4
Highest Educational Degree (%)	
HS/GED	2
Some college or Vocational/technical/AA	6
BA/BS	30
Post-Graduate	63

Method, Cont.

Variable	M(SD) or %
Income (%)	
< 25,000	2
25,000 – 49,000	1
50,000 – 74,000	7
75,000 – 99,000	13
100,000 – 124,000	17
125,000+	58
Child Gender (% female)	40
Child Age (years)	4.98 (0.85)
Type of School Child Attends (%)	
Head Start or Judy Center	2
Public Pre-K	13
Private Pre-K	75
Home or informal care	1
Other	9

Measures and Procedures

Parents completed an anonymous, online Qualtrics survey consisting of 38 questions: about parent's demographic background, amount, and type of contact with the school and teacher, child's engagement in reading and mathematics activities, parent's confidence to engage in reading and mathematics activities with the child (see Table 2 for sample questions). We focus here on questions about confidence in assisting with reading/math and what parents wanted from teachers.

Table 2: Sample Questions

Sample Questions	Scale
How confident are you that you know what to do to support your child's learning in [reading/math]?	Likert (1-5)
What would you like to receive more of from your child's teacher to help your child's [reading/math]? • Books • Notes or updates on progress • Instructions for reading/math activities to do at home • Music or songs • Informational newsletters or pamphlets • Toys or games • Reading/math worksheets/homework • Recs for apps, websites, or video games • Links to websites about reading/math	Select up to 3

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RESULTS

How confident do parents of preschoolers feel to assist their children with math and reading and does their confidence differ across domains?

65% were confident/very confident Reading
56% were confident very/confident math

$t\ (125) = 4.45,\ p < .001$

What information would they like to receive from their children's teachers?

Table 3: Information, Materials, and Activities Parents Would Like to Receive More of to Support Learning at Home

Items	Reading (%) (n = 81)	Math (%) (n = 127)
Books	22	17
Informational newsletters or pamphlets	7	6
Instructions for activities to do at home	51	42
Links to websites about reading or math	12	8
Music or songs	20	22
Notes or updates on progress	53	35
Recommendations for apps, websites, or video games	41	19
Toys or games	43	45
Worksheets / homework	24	28
Other	4	2

Note. Participants selected up to 3 choices from list

Conclusions

- Children in the U.S. score lower than those in other countries on various measures of mathematics(e.g., Blevins-Knabe, 2016; National Mathematics Advisory Panel, 2008, Sonnenschein & Dowling, 2019). To narrow or close these differences, something we should be striving to do, young children must engage in more mathematics activities at home so that they start school with stronger mathematics skills.
- Although parents may think that reading is more important than mathematics, the difference in children's reported engagement in such activities may come from parents lacking confidence in how to foster their children's mathematics skills. Twenty percent of the highly educated parents in this study reported lacking confidence about how to facilitate their children's mathematics learning. Another 25% were only moderately confident. This was more than the percentage that lacked confidence in fostering their children's reading skills.
- Parents generally wanted two main sources of information from their children's teachers. (1) More progress notes to inform them of how well their children were doing. (2) Activities and apps that they could do with their children at home that were fun and engaging for the children.