

The Alma Family Literacy Program: Effects on Chilean Preschoolers' Early Literacy Outcomes, Home Language and Literacy Environment, and Parental Self-Efficacy

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In this presentation

- Introduction and context.
 - The Alma Family Literacy Program
 - Shared reading and early literacy outcomes
- The study.
 - Research questions
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- Discussion, conclusions, and future research.



Introduction and context.



- Alma Foundation:
 - An NGO that promotes parental empowerment to support children's education.
 - Focus on literacy and socioemotional development
 - Focus on effective interactions for 4 to 5-year-olds
 - Focus on shared reading and play
 - Focus on low SES families

Shared reading and early literacy outcomes:

- Research shows that poor language skills have a long-lasting effect on children's learning (Hoff, 2013; Noble et al., 2019).
- Differences in language and vocabulary can be seen as early as 18 months of age (Fernald et al., 2013; McGillion et al., 2017).
 - Vocabulary of low SES children entering school is 16 months behind that of their more affluent peers (Waldfoegel & Washbrook, 2010).
- Shared book reading:
 - Supports early language skills including vocabulary (Elley, 1989, Noble et al., 2019), narrative skills (Morrow, 1988), print knowledge (Justice & Ezell, 2004), grammar development, phonological awareness, and future reading skills (Bus et al., 1995).
 - However, weak study design may alter the effect sizes of studies (Noble et al., 2019; Flack, Field, & Horst, 2018).
 - More evidence for some language skills than for others.
 - SES background differences.
 - Heterogeneity of studies

The study: Research questions

- Do students whose parents attended the Alma Shared Reading Program exhibit higher levels of alphabet knowledge and narrative skills than their peers in a control group?
- Is parental self-efficacy positively and significantly associated with higher levels of alphabet knowledge and narrative skills after the Alma Shared Reading Program?
- Is HLE positively and significantly associated with higher levels of alphabet knowledge?

The study: Design and participants

- Quasi-experimental design: pre-post intervention with matched group (age and sex)
- Participants
 - 240 PK and K students from low SES areas in Santiago.
 - 121 dyads (parent/caregiver and child) were in the treatment group.
 - 51.7% in PK, mean age 5.08, 51.7% female, 89.4% vulnerability index, Spanish spoken at home for 97.5% of participants.

Group	Treatment		Control		Total
N Prekindergarten	66		58		124
Gender	M	F	M	F	
	26	40	26	32	
Mean age	4.6		4.7		
N Kindergarten	55		61		116
Gender	M	F	M	F	
	32	23	32	29	
Mean age	5.6		5.6		
Total	121		119		240

The study: Instruments

- Parents and caregivers
 - Basic sociodemographic information: maternal education, household members, nationality, gender and age.
 - Home Language and Literacy Environment survey (Romero, 2006)
 - Frequency for literacy-related activities at home
 - Compared self-efficacy survey
 - Self-reported, assesses confidence in interacting in literacy related activities:
 - Preparedness
 - Belonging to school community
 - Frequency
- Children
 - Alphabet knowledge task
 - Narrative Comprehension of Picture Books Task (Paris & Paris, 2003, Silva et al., 2014)
 - Picture walk and story retelling
 - Answering literal and inferential comprehension questions.

The study: Alma Intervention

- Parents/caregivers voluntarily enroll in the program via school.
- Parents/caregivers attend 8 workshop sessions on a biweekly basis.
 - 50 minutes, 20 participants per session.
 - Trained educator describes, models, and provides instances for guided practice of shared reading using carefully curated picture books and language games.
- Parent/caregivers take books and games home and use them with children.
- Parents/caregivers report frequency of shared book reading at home.



The study: Analyses and results RQ 1

Table 2.

Descriptives by group. Children's measures.

	Treatment			Control		
	M	SD	Range	M	SD	Range
Alphabet knowledge						
Pre	5.22	5.3	0-25	5.39	5.8	0-25
Post*	11.16	7.3	0-27	8.54	7.6	0-26
Narrative skills						
Pre	8.09	4.1	0-19	8.53	3.9	1-17
Post	11.56	3.5	3-20	10.73	3.4	0-17

*Differences between treatment and control group means were statistically significant ($p < .000$)

Table 3

Descriptives by grade level.

Group	Alphabet Knowledge	Narrative Skills
	Pre	Pre
Treatment (PK)	2.53 (3.2)	6.25 (3.7)
Control (PK)	0-15	0-19
	2.31 (3.1)	6.58 (3.2)
Treatment (PK)	0-15	1-14
	Post*	Post
Control (PK)	7.1 (4.4)	9.82 (3.1)
	0-22	3-17
Treatment (K)	5.08 (5.3)	9.18 (3.2)
	0-25	0-15
Control (K)	Alphabet Knowledge	Narrative Skills
	Pre	Pre
Treatment (K)	8.15 (5.7)	10.09 (3.6)
	0-22	1-17
Control (K)	7.9 (6.3)	10.13 (3.2)
	0-25	4-17
Treatment (K)	Post*	Post*
	15.64 (7.2)	13.45 (2.9)
Control (K)	2-27	7-20
	11.38 (8.1)	11.32 (2.6)
	0-26	4-17

*Differences between treatment and control group means were statistically significant ($p < .000$)

The study: Analyses and results RQ 2

Table 4

Self-efficacy survey (N= 119)

Grade level	Preparedness	Frequency
PK	27.92(1.6)	8.37(1.11)
	24-30	7-10
K	27(2.5)	8.12(1.74)
	23-30	4-10

- Lower parental perceptions of preparedness in K.
- Lower frequency in K.
- No significant correlations between self-efficacy (preparedness and frequency) and alphabet knowledge and/or narrative skills.
- Correlations were low in magnitude (.10-.15)

The study: Analyses and results RQ 3

Table 4.
Home Language and Literacy Environment Survey (HLLE)

Group	Treatment		Control	
	Pre	Post	Pre	Post
Overall*	23.16(4.5) 11-32	26.24(3.9) 15-32	21.53(4.8) 9-32	23.78(4.7) 12-31
Prekinder*	22.98(4.7) 12-32	25.56(4.3) 15-32	21.64(5.0) 9-31	23.19(5.0) 12-31
Kinder*	23.36(5.0) 11-32	27.05(3.3) 15-32	21.43(4.7) 10-32	24.36(4.3) 12-31

- Statistically significant differences favoring parents in the treatment group across grade levels.
- Low but significant correlations between HLLE and children's outcomes:
 - Alphabet knowledge: .352**
 - Narrative skills: .179**

Discussion, conclusions, and future research

- Children whose parents participated in the Alma Shared Reading Program had higher post intervention scores than their peers who didn't.
- Parents' perception of the HLLE significantly increased after participating in Alma.
- HLLE significantly correlated with children's post intervention outcomes but to a low extent.
- Causal mediation analysis showed that HLLE mediation over alphabet knowledge post-test scores was statistically significant.



Discussion, conclusions, and future research

- There may be other variables that mediate or moderate the relation between children's outcomes and participating in the intervention:
 - Maternal education
 - Number of sessions parents attended
 - Parental self-efficacy
 - Other “environmental” elements (Bronfrenbrenner, 2005)
- Regardless of HLLE levels, family literacy intervention programs can impact children's outcomes □ public policy initiatives.
 - Child's motivation for shared reading and parental frequency of engagement in instructional literacy interactions were more closely associated with children's post intervention outcomes.
 - Number of books at home was not relevant.



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