

Does joint engagement influence the relation between home environmental factors and child vocabulary development?

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Background
Children's language development is shaped by a variety of **environmental factors** such as: family's socio-economic status (SES), quality of caregiver-child interaction, and presence of siblings in the home

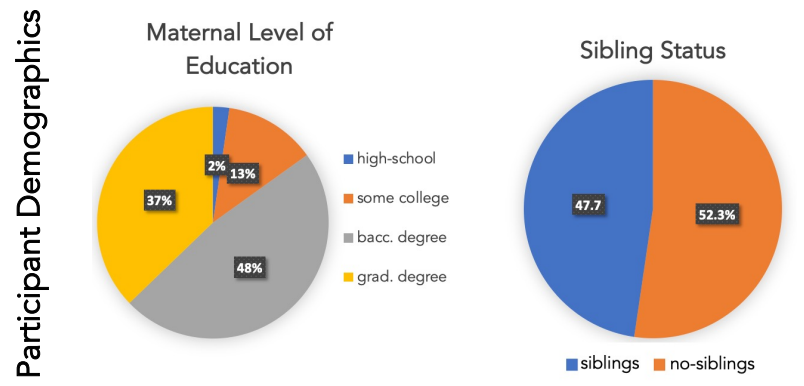
Joint engagement (JE), a type of interaction between a parent, child, and a third referent (Adamson et al., 2004), is positively associated with child vocabulary (Farrant & Zubrick, 2011).

However, **it is not known** how joint engagement relates to language development while considering environmental factors.

Research Question
How does mother-toddler joint engagement relate to child vocabulary, when considering demographics, SES, and sibling status?

Participants

- 86 mother-toddler dyads
- Toddlers age 24-30 months, 45 males/41 females
- Typically developing and late talkers, part of the When to Worry about Language Study



Measures

- Surveys:** Mothers completed the MCDI Words and Sentences long form; M = 367 SD= 206 (range 4-678)
- Demographic info:** Mothers indicated their education (SES metric), child sibling status, and race/ethnicity (14% Black/AA, 70% White, 13% multiracial, 3% no info, 9% Hispanic/Latino).
- Lab visit:** Dyad recorded while playing with puzzles then with books, for 8 mins each (tasks to elicit JE). Video recordings then behaviorally micro-coded with mutually-exclusive dyad state codes (adapted from Adamson et al., 2004). Proportion of total time spent in JE was calculated, M=.84, SD = .17, (range = .33 to 1.00)

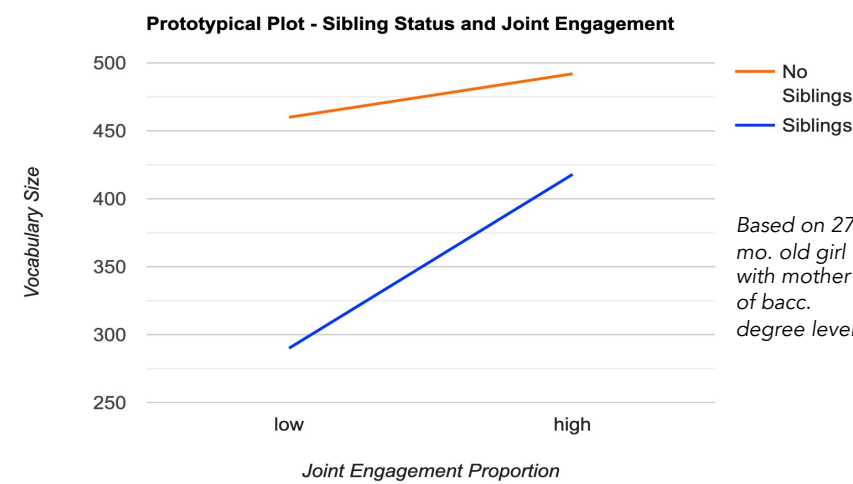
Hierarchical Regression Results: Child Vocabulary Steps/Measures

- Step 1: Child age, sex, sibling status, maternal years of education, and months between MCDI and in-lab visit	$R^2 = .194^{**}$
- Step 2: Add JE proportion	$\Delta R^2 = .103^{***}$
- Step 3: Add interaction of Sibling Status * JE Proportion	$\Delta R^2 = .037^{**}$

Hierarchical Regression Results: Child Vocabulary

Variable	Unstandardized Beta	SE Beta	Standardized Beta
(Constant)	-1239.0	466.4	(n/a)**
Child sex (M=1,F=2)	95.2	40.4	.232*
Child age (months)	32.0	13.4	.313*
Sibling status (0=N, 1=Y)	-507.0	200.4	-1.234*
Mother's education (yrs)	30.6	13.4	.222*
Time between survey and lab visit (months)	24.7	17.1	.183
Joint engagement proportion	158.6	170.7	.128
Sibling status * Joint engagement proportion	482.0	232.9	1.008*

- Significant main effects of demographics, as well as SES, siblings
- Significant interaction between sibling status and joint engagement, such that there is greater positive impact of JE on vocabulary size for kids with siblings than without



Interpreting main effects unstandardized betas, in terms of estimated words on the MCDI:

- Each additional year of maternal education : +31 words
- Increasing proportion of JE by 10%: +16 words

Potential Implications
Findings suggest that developing environmentally sensitive language interventions for families might be especially helpful for multi-child and lower SES households.

Findings suggest that parents can be empowered to positively impact their child's development and growth via engaging in JE.

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