



“Meow” or “Kitty”? Mothers’ Onomatopoeia, Naming, and Child Language Growth

Christina Royster, Nan Bernstein Ratner, Rochelle Newman, Kerry McColgan, Lisa Tuit
 University of Maryland, College Park
 christina.i.royster@gmail.com



ABSTRACT

Vocabulary input of mothers’ speech to 7-month, 10-month, and 11-month old infants was appraised to see effects on child language outcomes at 24 months. We examined input from 30 mother-child dyads to ascertain whether proportional use of onomatopoeia impacts language abilities at a later age. (Support: NSF)

BACKGROUND

- Our project is a part of a broader NSF-funded study focusing on how parental speech input may influence child language acquisition.
- Mothers’ speech to infants, or infant-directed speech (IDS), can have an effect on children’s later language development (e.g. Bornstein et al., 1998; Snow, 1977).
- Infants pay better attention and become more engaged in social interactions when mothers use IDS (Fernald, 1985), because it:
 - has a higher pitch
 - simplifies vocabulary words (i.e. baba for bottle)
 - has a slower and more repetitive rate of speech
- The frequency of onomatopoeic words is higher in IDS than in adult-directed speech (ADS). Onomatopoeia (“woof”, “buzz”, “boom”) may be used to describe animals or noises, to capture children’s attention, or to indirectly label items in the environment.
- Using a high amount of onomatopoeia rather than naming objects or actions may limit the amount of vocabulary that a child receives, and this might have a negative effect on his/her language learning.

RESEARCH QUESTIONS

- Does mothers’ frequent use of onomatopoeia depress children’s later language outcomes?
- Does mothers’ use of “real words” foster later language outcomes?
- Do other maternal input variables at 7-, 10-, or 11- months predict later language outcomes?
 - Number of different words (NDW): the number of word types used in IDS
 - Mean length of utterance (MLU): typical length of mothers’ utterances in IDS

METHODS

PARTICIPANTS

•Thirty (30) infants and their mothers are participants in this preliminary analysis. All mothers are native speakers of English and infants are learning English as their native language. Infants were born within 3 weeks of their due date and were not diagnosed with any developmental difficulties at the time of study.

METHODS (CONT’D)

DATA COLLECTION

- Unstructured play sessions between mothers and their infants were digitally recorded (audio and video) in a lab setting when infants were 7-months, 10-months, and 11-months of age. Mothers were directed to play with their infants with a set of toys for 15-20 minutes and were informed that researchers were interested in their child’s manner of play; they were not informed of the purpose of this study. A variety of toys were available (see picture).
- At 24 months, children were given the *MacArthur-Bates Communicative Development Inventory* (MCDI), the *Peabody Picture Vocabulary Test* (PPVT), and the *Expressive One Word Vocabulary Test* (EOWVT).
- Student researchers transcribed IDS samples using CHILDES transcription guidelines.



ANALYSIS

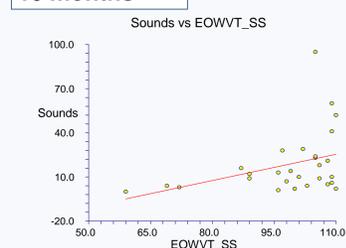
- Using the CLAN FREQ utility, the total number of words and word types in each transcript was obtained.
- Using the CLAN MLU utility, the mothers’ MLU in each transcript was obtained.
- The words from each transcript were separated into categories: real words (words serving a semantic purpose in conversation but not sound effects), sound effects/ non-specific vocalizations, excluded words, and infants’ names (see chart below). Sound effect use and name use was computed over the total number of real words, as well as raw frequency counts.
- Pearson correlations were computed to assess relationships between onomatopoeia, names, and 24-month outcomes.

Word Examples:

Real Words	Sound Effects/ Nonspecific	Names	Excluded
ball	moo	Gabriel	um
ice_cream	cockadoodledoo	Sarah	huh
running	boom	Mattie	haha
baba@m (bottle)	yum		yeah
them	woosh		ah
go	ew		mmm
perfect	quack_quack_quack		

RESULTS

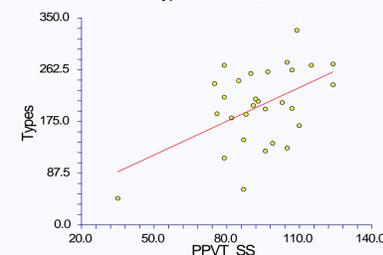
10 months



Sound Effects and Expressive Language

The *proportion* of sound effects at any age did not predict 24-month outcomes; however, *raw frequency counts* of sound effects at 10 months were predictive of children’s expressive language scores at 24 months. (p<.06).

Types vs PPVT_SS

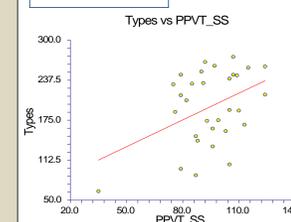


NDW and Receptive Language

The variety of words mothers used at 10 months demonstrated a strong correlation with receptive language scores (p<.02).

RESULTS (CONT’D)

11 months



NDW and Receptive Language

The variety of words mothers’ used at 11 months demonstrated a positive correlation with receptive language scores (p< .02).

Other Findings:

- There were no relationships found at 7 months.
- The number of real words used at 10 and 11 months showed positive correlations with receptive language scores.
- The use of names was shown to be positively correlated with use of sound effects, in particular, at 11 months.

DISCUSSION

- Proportion of sound effects did *not* depress later vocabulary abilities; rather, the sound effect frequency count positively correlated with expressive language at 24 months of age.
- There is a correlation between sound effect use and word name use. Mothers who use a lot of one use a lot of the other. This may be a reflection of mothers attempting to gain the child’s attention.
- The following input patterns were positively correlated with later language abilities:
 - Use of “real words”
 - Vocabulary diversity, or number of different words (NDW)
 - Length of utterances, or mean length of utterance (MLU)
- Contrary to our predictions, use of sound effects was not associated with slower language development.
 - This could be because by using them, mothers are attracting/ keeping the child’s attention, and maximizing word learning potential.

SELECTED REFERENCES

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