

A Longitudinal Investigation of the Role of Quantity and Quality of Child-Directed Speech in Vocabulary Development

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This study examined the quantity and quality of caregiver input longitudinally with a sample of 50 parent-child dyads. The aim was to determine which aspects of input for children aged 18, 30, and 42 months contribute most to vocabulary skill throughout early development when measured at ages 30, 42, and 54 months. Results show that additional variation in later vocabulary ability can be explained by controlling for socioeconomic status, input quantity, and children's previous vocabulary skill, by using a diverse and sophisticated vocabulary with toddlers, and by using decontextualised language (such as narrative) with pre-school-age children.

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- One of the most powerful predictors of a child's ability to learn to read and succeed in school is vocabulary size at the start of kindergarten.
- Children's vocabulary size and rate of development vary widely. While it is acknowledged that some of this variability is likely due to genetics, environmental factors also play an integral role.
- One important environmental factor that contributes to individual differences in early vocabulary development is the linguistic input to which children are exposed.
- Linguistic input may be quantitative (the amount of talking) or qualitative (specific types of speech or diversity of input).
- It is possible that diversity of vocabulary input plays a more significant role in vocabulary growth when children get older, and quantity plays a more important role when children are in the earlier stages of vocabulary acquisition.
- The amount of input (quantity) and specific types of input (quality), although strongly related, may be confounded by socioeconomic status (SES).
- Research to date on parental use of sophisticated vocabulary and decontextualised language has shown positive findings in relation to children's vocabulary skill; however, the work is scarce and limited to studies of low-income families and to parents talking to

children age 3 years or older.



The study

The goal of the present study was to examine parents' use of sophisticated vocabulary and decontextualised language with their children to determine whether these input quality measures can explain children's subsequent vocabulary skill over and above the quantity of input to which children are exposed.

Research questions:

1. How much variation is there across families in terms of quantity and quality of parental talk to children aged 18, 30, and 42 months, and does this variation relate to SES?
2. Does variation in child vocabulary skill at 30, 42, and 54 months relate to quantity and quality of parent input?
3. Do measures of input quality also explain variation in later vocabulary skill when controlling for SES, previous vocabulary skill, and quantity of input?

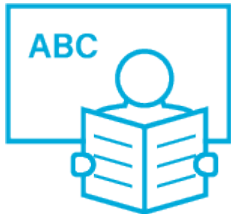
Participants were 50 children and their primary caregivers. One of the primary caregivers is a father and the rest are mothers. The average education level of the primary caregivers is 15.8 years. The home visits used in this study were conducted at 18, 30, 42, and 54 months of age.



Findings

- There was significant variety among parents in terms of the quantity and quality of their child-directed speech.
- The proportion of words used that were rare and the proportion of total utterances that were decontextualised increased over time.
- Primary caregiver education was positively related to both quantity and quality measures; more highly-educated parents used more word tokens and more diverse vocabulary than parents with fewer years of education.
- Education was positively related to rare word use and to decontextualised utterances, and also to children's scores on the Peabody Picture Vocabulary Test (PPVT), a measure of vocabulary comprehension.
- There were positive relations between PPVT scores and both input quantity and vocabulary diversity.
- At 42 and 54 months, PPVT scores were found to relate to vocabulary sophistication at the previous age (30 and 42 months, respectively).
- The number of narrative utterances and explanations were significantly related to PPVT at the final age.
- In addition to prior vocabulary skill and parent education, the quantity of parent input at 18 months was found to be a positive predictor of child vocabulary at 30 months.
- Children whose parents used a wider range of vocabulary with their child at 30 months demonstrated higher PPVT scores 1 year later, controlling for children's vocabulary knowledge at the time of the interaction, parent education, and amount of parental talk.
- Children whose parents used more decontextualised

language with their child at 42 months demonstrated greater vocabulary skills 1 year later, controlling for children's vocabulary skill at the time of the interaction, parent education, and quantity of parental talk. This model explains 79% of the variation in PPVT scores at 54 months.



Summary

- The present study demonstrates that specific measures of input quality relate to child vocabulary skill at different points in development, even when controlling for SES and quantity of input.
- The results are consistent with a developmental scenario in which quantity of input is most important during the 2nd year of life, the diversity or sophistication of the vocabulary in the input is most important during the 3rd year of life, and the use of decontextualised language (such as narrative and explanations in the input) is most beneficial during the 4th year of life.
- It would be helpful for parents to concentrate on the quality of their talk, incorporating a diverse and sophisticated vocabulary with toddlers and engaging their preschool children in conversations about past or future events.