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# Father Input and Child Vocabulary Development: The Importance of *Wh* Questions and Clarification Requests

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## ABSTRACT

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Individual differences in children's language skills have been shown to stem in part from variations in the quantity and quality of parent speech input. However, most research focuses on mothers' input whereas less is known about the effects of variability in father input. In this article, we review the relation between parent input and child language development with a focus on low-income families, and review general findings about similarities and differences in mother and father speech. Within this review, we highlight conversation-eliciting speech, such as *wh* questions and clarification requests, which occur, on average, more frequently in father input than mother input. Conversation-eliciting speech is challenging for 2-year-old children and has been shown in research with mothers to relate to child vocabulary development. We then report a study examining whether fathers' use of conversation-eliciting speech relates to children's developing vocabulary skills at 24 months of age within a sample of low-income African American families. Understanding that speech input varies among fathers, and specific strengths that fathers bring to interactions with their young children can help speech-language pathologists develop and implement more effective interventions.

**KEYWORDS:** Fathers, vocabulary development, conversation-eliciting speech, low-income families

**Learning Outcomes:** As a result of this activity, the reader will be able to (1) describe the ways in which father input is important for children's vocabulary development; (2) identify similarities and differences that, on

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average, exist between mother and father speech; (3) identify two types of speech that are prevalent in father input and that relate to children's developing vocabulary skills.

The social interactionist framework of language development emphasizes the critical role that parent input plays in children's language development.<sup>1,2</sup> From an early age, the quantity and quality of maternal speech input that children are exposed to has a lasting impact on children's rate of language development as well as ultimate language proficiency (see Hoff<sup>3</sup> for review). However, little is known about the contribution of fathers' input to children's language development. The majority of the limited literature on father input involves direct comparisons of mother speech and father speech. Although quantity and diversity of input from both parents is very similar in general, other aspects of the input are found to differ. Specifically, fathers tend to use more conversation-eliciting utterances such as *wh* questions and clarification requests than mothers and as a result are considered more challenging communicative partners.<sup>4-7</sup> However, like mothers, fathers demonstrate wide variability in the input they offer to children on a daily basis.<sup>5</sup> It is therefore important to examine the variability in father speech as a potential source of variation in children's language outcomes.

In this article, we aim to provide practitioners with information regarding the understudied, yet important linguistic role that fathers can play in children's vocabulary development. We start by reviewing the existing literature on the importance of input in language development, especially for children from low-income families and then review the ways in which mother input and father input is similar and different. We highlight similarities and differences in the quantity of input as well as various aspects of input quality, including vocabulary diversity, syntactic sophistication, and importantly, conversation-eliciting speech such as *wh* questions and clarification requests. We then describe a study that highlights the variability in fathers' use of *wh* questions and clarification requests among low-income, minority fathers, and examine how these two speech characteristics relate to children's developing vocabulary skills. Although the study of father input is in its

infancy, we hope to inform practitioners of the importance of including fathers in intervention efforts, as their influence may be an untapped resource, particularly for children who are at risk for developing later language and literacy delays.

## LANGUAGE ENVIRONMENTS OF CHILDREN FROM LOW-INCOME FAMILIES

Examining paternal language input within low-income families is particularly important, as children from these families are at a higher risk for starting school behind in oral language skills and for falling behind in learning to read than their higher-income peers.<sup>8</sup> This income achievement gap has been explained in previous studies as stemming from the quality of the home linguistic environment, and specifically children's exposure to speech input.<sup>9,10</sup> The social interactionist framework suggests that one way in which children develop language, and particularly vocabulary, is through their exposure to communicative input from caregivers and other adults throughout the early childhood period. Children from higher-income homes hear an estimated 30 million more words on average than children from lower-income homes by the time they are 4 years old.<sup>9</sup> These "meaningful differences" in input,<sup>9</sup> in turn, help explain why children from lower-income homes often start kindergarten with lower vocabulary levels, as the quality and quantity of experience with language is lower, on average, than their higher-income peers.<sup>8,11</sup> Although differences between the size of lower- and higher-income children's vocabularies may appear small at first, the gap in achievement grows over time and carries over into developing literacy skills; elementary school reading proficiency can be predicted from vocabulary ability at the start of kindergarten.<sup>12,13</sup>

In general, research focuses on the average differences in input across families from different socioeconomic backgrounds,<sup>9,10,14</sup> yet there is substantial variation within low-income populations.<sup>15,16</sup> Research that looks exclusively at

low-income samples indicates large within-group variability with regard to both the quantity and diversity of words addressed to children by mothers,<sup>17,18</sup> and it shows that many factors including mothers' education, literacy skills, and depression contribute to the input they offer their children on a daily basis.<sup>3,19</sup> Additionally, although the vocabulary skills of children from low-income homes tend, on average, to lag behind those of their peers from more advantaged backgrounds, many studies report substantial variability in these children's skills. For example, some children from lower-income homes score as high as or higher than their peers from higher-income homes on standardized measures of language.<sup>20</sup> Although individual differences in language abilities stem from multiple factors and environmental experiences, examining the associations between father input and child language development within a low-income sample may help inform us of one factor that contributes to variability in children's early language skills within these populations.

### **SIMILARITIES AND DIFFERENCES IN MATERNAL AND PATERNAL SPEECH**

Compared with maternal speech, less is known about paternal input to children. Studies that do measure father speech typically compare paternal and maternal input to one another without considering how father speech relates to child language outcomes. Even less is known about low-income, minority father speech, as the available studies are primarily limited to samples of European American and/or middle-class families (yet see Rowe et al<sup>5</sup> and Pancsofar and Vernon-Feagans<sup>21</sup> for exceptions). Findings from comparison studies indicate that mothers and fathers are similar in some ways and different in others. We provide a short review of three common measures for comparison (quantity, diversity, and complexity), followed by an examination of research on one type of linguistic input that fathers tend to use more often than mothers (conversation-eliciting speech).

#### **Quantity of Speech**

Input quantity, as measured by the number of different words addressed to children, predicts

the rate of children's vocabulary growth as well as vocabulary size in research with mothers.<sup>14</sup> The degree to which mother and father speech quantity differs is not fully understood. Some studies find that fathers talk less to children than mothers do.<sup>22–24</sup> Other studies have found no differences.<sup>5,25</sup> In a meta-analysis, it was found that the magnitude of the difference between mother and father child-directed speech was larger for infants and toddlers than for older children.<sup>26</sup> Specifically, it appears that mothers talk more than fathers when their children are young, and the gap decreases as children grow older.

The context in which child-directed speech occurs appears to make a difference for whether the quantity of father speech differs from mother speech. For example, Golinkoff and Ames found that when parent speech was measured during dyadic interactions (father-child only and mother-child only), the number of word tokens spoken by mothers and fathers was similar.<sup>22</sup> When fathers and mothers interacted with children together, however, the quantity of mothers' word tokens was greater than fathers'.

#### **Diversity of Speech**

The vocabulary diversity of maternal input relates to child vocabulary growth.<sup>15,27</sup> Several studies have also found that the diversity of vocabulary words in mother and father input does not significantly differ,<sup>5,16</sup> whereas other studies found a more nuanced pattern of differences. For example, Ratner found that although there were no differences overall between mothers' and fathers' vocabulary diversity, fathers used more "rare" words (i.e., words not commonly known to fourth graders) but fewer common vocabulary words than mothers.<sup>28–30</sup> Despite some research showing general similarities between mothers' and fathers' diversity of speech, a small body of literature has found that fathers' vocabulary diversity independently and uniquely contributes to children's vocabulary growth. For example, one study found that the number of different word types middle-income Caucasian fathers' used when children were 24 months made a significant contribution to children's expressive language skills at

36 months, even after controlling for the diversity of maternal input.<sup>31</sup> Interestingly, these findings also held even after controlling for several demographic variables such as education, income, and quality of childcare, suggesting that replications of this study with more diverse populations would yield similar findings. Indeed, a more recent follow-up study found that, after controlling for certain demographic characteristics, low-income fathers' vocabulary diversity during a book reading interaction related to children's vocabulary both concurrently (child age 15 months) and predictively (child age 36 months).<sup>21</sup>

### Complexity of Speech

The syntactic complexity of the input appears to be predictive of both children's grammatical<sup>32,33</sup> and lexical development.<sup>10,34</sup> An area in which prior research has yet to converge on a common finding is whether mothers and fathers differ in the complexity of input. Input complexity is often measured by calculating the number of morphemes per utterance (mean length of utterance [MLU]). Some studies find no differences between mothers' and fathers' MLU,<sup>5,22,31,35-38</sup> whereas others find that mothers' MLU is longer than fathers'.<sup>6,23,25</sup> Although results are mixed with regard to differences in the length of father and mother MLU, studies typically find that both mothers and fathers are attuned to their children's level of linguistic proficiency, and thus adapt the sophistication of their input based on the age of the child.<sup>23,39</sup>

### Conversation-Eliciting Speech

One domain of language that has shown to vary consistently between mothers and fathers is the use of conversation-eliciting utterances such as requests for clarification and questions. Compared with mothers, fathers tend to use more clarification requests when speaking with young children.<sup>7,23,40,41</sup> These utterances (e.g., "What?" or "Huh?") are challenging as they require the child to repeat his or her previous utterance and make himself or herself understood. Repetition presumably allows the child to practice his or her newly acquired vocabulary

and thus it would be expected that fathers who more frequently request clarification would have children with better vocabularies because this gives children more opportunities to practice language with a challenging speech partner. Clarification requests can be either nonspecific (e.g., "What?" or "Huh?") or specific (e.g., "You want to go where?").<sup>7,42</sup> One study found that fathers used three times as many nonspecific requests as specific requests, whereas mothers used more specific requests than nonspecific.<sup>7</sup>

Fathers have also been shown to ask more questions, and particularly more *wh* questions, compared with mothers.<sup>5,6,26</sup> *Wh* questions are conversation-eliciting in the sense that they require a response from the child, often including more than one word. *Wh* questions are thus thought to be more challenging than yes-or-no questions that can be answered in one word or with a nonverbal gesture (e.g., nodding). One study found that fathers were just as likely to ask informative *wh* questions (e.g., "What would you like to do next?") as prompt questions (e.g., "What color is that?") to children ages 18 to 40 months.<sup>6</sup> Informative questions are likely to elicit a multiword response from a child and thus would be a beneficial context for the child to use his or her vocabulary skills. Prompt *wh* questions may also be an effective strategy in facilitating word learning in toddlers, as these types of questions are requests for names or labels (e.g., "What animal is this?").

Use of *wh* questions in general is associated with language development, in that children who hear more *wh* questions are better able to comprehend and produce these question types.<sup>43</sup> Research with mothers has also shown that exposure to *wh* questions during the second year of life predicted children's growth in use of auxiliaries and production of *wh* questions.<sup>44,45</sup> Book reading styles that include a higher proportion of caregiver questions relate to higher expressive and receptive vocabulary skills among 1.5- to 2.5-year-old children.<sup>46-48</sup> Research using the same population of children as the current study, but a separate subsample, indicates that mothers' use of *wh* questions relates directly to child vocabulary and indirectly to measures of school readiness prior to kindergarten entry.<sup>49</sup> Mothers' *wh* questions when children

were 36 months related to children's concurrent receptive vocabulary ability which, in turn, predicted children's knowledge of print concepts, letter-word identification, and problem solving during the summer before kindergarten.<sup>49</sup> Little is known, however, about whether fathers' use of *wh* questions relates to children's vocabulary. Yet given research that has shown that fathers use proportionately more questions than mothers, it is reasonable to predict that fathers' use of *wh* questions should also be a strong predictor of children's vocabulary.

## PRESENT STUDY

The goal of the present study is to provide a detailed examination of two challenging aspects of fathers' speech, *wh* questions and clarification requests, and to examine whether variation in fathers' use of these types of speech relates to children's vocabulary ability within a low-income sample. The specific research questions are:

1. How much variability is there in the frequency of fathers' use of questions and clarification requests with their toddlers?
2. What types of *wh* questions and clarification requests do fathers use with their 2-year-old children?
3. Does the frequency of fathers' *wh* questions and clarification requests relate to children's vocabulary?

## METHODS

### Participants

Forty-one African American fathers and their 24-month-old children (22 girls, 19 boys) participated in the present study. The sample for the current study was drawn from a larger longitudinal study of low-income families who were part of the National Evaluation of Early Head Start. Fathers were included in the current sample if they were African American, they participated in the interaction with their child at 24 months, and their children still remained in the study at the start of kindergarten. Fathers in the current sample were on average 29 years of age (range = 18 to 52;

standard deviation [SD] = 8.96) and had an average of a high-school education (mean [M] years of education = 12.5; range = 10 to 16; SD = 1.47). Sixty-three percent of fathers reported living permanently with their child, and the other 37% reported nonresidential status. Sixty-six percent of the fathers reported that they were their child's biological father; the other 44% of the sample reported that they were the primary father figure in the child's life but not the biological father.

### Procedure

When children were 24 months old, fathers and their children were videotaped in their homes for 10 minutes of semistructured free play using the contents of three bags. The dyads were given Eric Carle's *The Very Busy Spider* in bag 1; a toy pizza and phone in bag 2; and a toy farm with animals, a farmer, and a tractor in bag 3. Fathers were asked to sit with their child on a blanket, ignore the camera, and play with the contents of each bag. They were told that they could divide the 10 minutes as they liked.

When the child was the same age, fathers also participated in an interview with the experimenter in which demographic information was collected. The McArthur-Bates Communicative Development Inventory (CDI) was then filled out by the target child's mother.<sup>50</sup> This instrument provides a measure of the child's productive vocabulary skill (M = 61.07; SD = 18.22).

### Transcription, Coding, and Analysis

Father-child interactions were videotaped and transcribed verbatim by trained research assistants using the conventions of the Child Language Data Exchange System.<sup>51</sup> A second research assistant independently verified each transcript. The unit of transcription was the utterance, defined as talk that ends by transition in speaker, grammatical closure, and/or a pause. Verbatim reading of the text from the picture book was removed and not included in the subsequent analyses. Automated analyses of the transcripts using the CLAN program yielded several measures of father and child talk for descriptive purposes. The number of total words (i.e., word tokens) and the number

of total utterances used by each speaker served as measures of quantity of talk, and the number of different words (i.e., word types) served as a measure of lexical diversity.

From the transcripts, we identified and marked each father utterance that contained a question or clarification request. Questions fell into the following mutually exclusive, exhaustive categories: *wh*, yes-or-no, indirect directive, tag, follow-up, choice, and other. Table 1 defines each question type including examples in further detail. We also coded any requests by the father for the child to clarify his or her previous utterance (e.g., "What did you say?"), distinguishing between nonspecific ("Huh?") and specific requests ("What did you say you wanted to play with?"). As clarification requests often included *wh* words, *wh* question and clarification request categories were mutually exclusive and coded according to intention of the utterance. Two trained research assistants

independently coded 15% of the transcripts to ensure reliability. A third research assistant was consulted when discrepancies occurred. One of the reliable research assistants then coded the remaining transcripts.

## MEASURES

### Father Speech

We report the number of question utterances, different types of *wh* questions, the number of clarification request utterances (including specific and nonspecific requests), as well as the proportion of fathers' talk that was questions or clarification requests, calculated by dividing the number of questions and clarification requests by the total number of fathers' utterances. We also describe the quantity (word tokens and total utterances) and diversity (word types) of father input.

**Table 1** Father Question Types

Speech Type	Definition	Example
<i>Wh</i>	<i>Wh</i> questions framed with who, what, when, where, why, or how	
	Who	Who are you calling on the phone?
	What	What kind of animal is that?
	When	When are you gonna let Daddy play with you?
	Where	Where do you put this?
	Why	Why don't you want to play with the truck?
	How	How many pieces do you want?
Yes-or-no	Questions with only yes or no as possible response	Is that the dog?
Indirect directives	Command expressed indirectly as a question or suggestion	Why don't you look in the bag and see?
Tag	Question added to end of declarative sentence with the intention of receiving a response	That's a horse, right?
Follow-up	A question following another question reinforcing that a reply is expected	Where's the pizza? Huh?
Choice	Questions that give child a choice or two or more options	Do you want it open or closed?
Other	Other questions that did not fall into the above categories	You know what?
Clarification requests	Requests for child to clarify or repeat prior utterance	Huh? What did you say?

## Child Speech

We provide measures of child speech both during the father–child interaction, as well as independent from the interaction. Children’s quantity of talk during the interaction was measured by counting the number of word tokens and utterances. Quality of talk was measured using the total number of unique word types. Children’s productive vocabulary was measured using the CDI.

## RESULTS

In alignment with other studies using low-income samples, we observed substantial variability in the speech that fathers used when interacting with their children. Fathers produced between 66 and 378 utterances ( $M = 219.80$ ;  $SD = 67.80$ ) during the 10-minute interaction, with the diversity ( $M$  word types = 155.63;  $SD = 34.41$ ) and quantity ( $M$  word tokens = 650.98;  $SD = 228.23$ ) of speech also varying across fathers. We also observed variability in children’s speech. Children produced between 10 and 174 utterances ( $M = 71.43$ ;  $SD = 36.21$ ), between 2 and 422 word tokens ( $M = 116.62$ ;  $SD = 84.14$ ) and between 1 and 114 word types ( $M = 47.04$ ;  $SD = 26.49$ ).

Our first research aim was to describe the variability in fathers’ use of questions and clarification requests. Fathers asked between 6 and 110 questions ( $M = 49.10$ ;  $SD = 23.34$ ), comprising 22.3% ( $SD = 4.7\%$ ) of fathers’ total utterances, on average. Every father asked at least two different types of questions, with some fathers using every question type of the eight categories coded. Table 2 describes the different types of questions fathers posed to their children, and shows that yes-or-no questions occurred most frequently, followed by *wh* questions. Fathers, on average, posed 17.10 *wh* questions ( $SD = 10.53$ ) to their children, although fathers varied in their *wh* question use (range = 2 to 38). *Wh* questions comprised 8.7% of fathers’ total speech with children. As predicted, fathers also requested their children to clarify their prior utterance ( $M = 3.29$  requests;  $SD = 3.57$ ). Clarification requests made up 1.5% of fathers’ speech.

**Table 2** Descriptive Statistics of Father Question Types

Type of Question	Mean	SD	Range
<i>Wh</i>	17.1	10.53	2–38
Who	1.18	1.56	0–6
What	12.9	8.61	0–32
When	0.05	0.32	0–2
Where	2.28	3.49	0–14
Why	0.22	0.53	0–2
How	0.75	1.43	0–7
Yes-or-no	20.9	12.29	1–54
Choice	0.12	0.33	0–1
Follow-up	2	2.28	0–10
Indirect directives	1.51	2.15	0–9
Tag	1.78	3.38	0–19
Other	0.37	0.83	0–4

SD, standard deviation.

To gain a better sense of the types of challenging language directed to 2-year-old children, our second research question explored the specific types of *wh* questions and clarification requests that fathers used with their children. Fathers most often used *what* questions (i.e., “What kind of animal is that?”), and less often used *how* or *where* questions (Table 2). *What* questions comprised 75% of the *wh* questions posed by fathers. Although fathers used both specific and nonspecific clarification requests, 95.6% of clarification requests were nonspecific.

Finally, we explored how fathers’ *wh* questions and clarification requests related to children’s vocabulary. We examined relations between both the raw frequencies and proportions of father speech to control for fathers’ total amount of talk (Table 3). We found that fathers who used more clarification requests had children who used more words ( $r = 0.33$ ;  $p = 0.03$ ) and more diverse speech ( $r = 0.32$ ;  $p = 0.04$ ) during the interaction. These relationships were also present, and stronger, after controlling for fathers’ total utterances by using proportions. Further, the relation between number of father *wh* questions and child vocabulary use was also positive, but marginally significant ( $r = 0.26$ ;  $p = 0.10$ ).



**Table 3 Relationships between Father and Child Speech**

	Child Speech		
	Word Types	Word Tokens	CDI
Father speech			
<i>Wh</i> questions ( <i>n</i> )	0.26*	0.23	0.33 <sup>†</sup>
Proportion <i>wh</i> questions	0.24	0.18	0.47 <sup>†</sup>
Yes-or-no questions	-0.1	-0.06	0.03
Total questions	0.1	0.13	0.08
Clarification requests ( <i>n</i> )	0.33 <sup>†</sup>	0.45 <sup>‡</sup>	-0.09
Proportion clarification requests	0.37	0.47 <sup>‡</sup>	0.09

Pearson correlations between father speech and three measures of child speech: diversity (word types), quantity (word tokens), and productive vocabulary (CDI). CDI, McArthur-Bates communicative development inventory.

\* $p < 0.10$ .

<sup>†</sup> $p < 0.05$ .

<sup>‡</sup> $p < 0.01$ .

Significant associations were also observed between father speech and children's productive vocabularies, as measured by the CDI. Specifically, the number of *wh* questions ( $r = 0.33$ ;  $p = 0.04$ ) as well as the proportion of *wh* questions out of total utterances ( $r = 0.47$ ;  $p = 0.002$ ) both related to children's CDI scores. The relationship between other types of questions and productive vocabulary was not present, suggesting that *wh* questions might provide unique opportunities to foster children's vocabulary development. For example, the number or proportion of yes-or-no questions did not relate to children's CDI, nor did the number of different question types, total number of questions, or total number of clarification requests.

## DISCUSSION

The present study describes variability in father speech among a low-income sample and shows that two types of speech that have been previously shown to be prevalent in fathers' input, *wh* questions and clarification requests, relate to 2-year-old children's vocabulary skills. We based our predictions and analyses on two lines of prior research. Prior literature pointed to the fact that fathers tend to be more challenging communicative partners than mothers, and specifically that they use more conversation-eliciting utterances such as *wh* questions and clarification requests. In a separate literature examining only mothers, these two types of speech have been shown to relate to children's

productive vocabulary; these utterances allow children to practice their developing vocabulary either by labeling an object in response to a *wh* question or repeating their prior utterance to make themselves understood. Our analysis, however, was the first to demonstrate that *fathers'* challenging communicative speech relates to children's developing vocabulary skills as measured both during a father-child interaction and by an independent assessment.

Our descriptive analyses indicated that there was wide variation in the quantity of speech fathers directed toward children, and also in the number of *wh* questions and clarification requests. Although a large body of literature suggests that increases in a family's socioeconomic status relates to increases in the quantity and quality of input, our results also indicate that within a socioeconomically homogenous sample there still remains large variability in fathers' communicative styles. For instance, we found that the number of utterances directed toward children ranged from 66 to 378. In contrast, some aspects of father speech were not as variable. Fathers mainly used *what* questions and more rarely used *who*, *where*, *when*, *why*, and *how* questions. For 2-year-old children, *what* questions are appropriately challenging in the sense that they elicit object labels and serve as important opportunities to learn and reinforce new vocabulary words. Fathers also asked more nonspecific clarification requests than specific requests, which is in line with prior literature.<sup>7,41</sup>

We also found evidence that fathers' use of *wh* questions and clarification requests related to various measures of child vocabulary. Based on past research demonstrating that fathers used more clarification requests than mothers, and that children talked more and used more diverse vocabulary with fathers,<sup>5</sup> we predicted that clarification requests would relate to these measures of child speech. Indeed, we found that fathers who used more clarification requests had children who talked more and used more diverse vocabulary during the same 10-minute interaction. We also found that fathers' use of *wh* questions related to children's productive vocabulary measured via the CDI that was not dependent on father speech during the same interaction. This is important to emphasize because although prior work shows that *wh* questions elicit an immediate, more complex response from children,<sup>5</sup> the current study suggests that these utterances also seem to foster general productive vocabulary skills among 24-month-old children. It is also important to note that the number or proportion of yes-or-no questions did not relate to children's vocabulary. Compared with yes-or-no questions, *wh* questions require children to respond in a more sophisticated manner; thus, conversations including *wh* questions might be a unique opportunity to develop 2-year-old children's vocabulary skills. It is yet to be determined how fathers' *wh* question use might continue to relate to children's vocabulary development beyond 24 months of age, and is something that should be pursued in future work.

## IMPLICATIONS AND RECOMMENDATIONS

From our analyses, we offer two broad recommendations for clinicians. First, our findings indicate that father input matters for children's language development. It is important to emphasize that the linguistic role that fathers play in children's vocabulary development may be slightly different from the roles that mothers play, but still important. Although the input that both mothers and fathers offer may differ in certain respects, neither source should be ignored when studying how children's language is influenced by experience and social interaction. In general, previous research has shown that compared with fathers, mothers provide

greater quantities of input, and in some cases more complex input. Quantity and complexity of speech have both been shown in prior work to be associated with children's rate and size of vocabulary. Our analyses highlight the importance of fathers by showing how their challenging communicative style compared with mothers facilitates children's vocabulary development as well.

Rather than just including mothers in intervention efforts, fathers may have the potential to play a powerful role for children who have language delays or are at risk for later language or literacy deficits. Conversations with fathers may serve as an opportunity to facilitate 2-year-old children's vocabulary skills by requiring them to restate utterances in more intelligible ways or answer questions using multiword responses. Clinicians and practitioners should be aware of the strengths that each parent brings to social interactions with children and use these strengths when developing family-based interventions. Although our conclusion is that fathers, on average, tend to be more challenging communicative partners than mothers based on their use of conversation-eliciting utterances, there still exists wide variation in fathers' communicative styles. An important recommendation for clinicians should be to educate fathers on strategies to become more challenging and effective communicative partners with young children, by using more *wh* questions and clarification requests, for example. Clinicians can then capitalize on a potentially influential, and already available, source of language for young children who may be at risk for later language and literacy delays.

Second, although our analyses indicated that fathers spontaneously produce challenging conversation-eliciting utterances, it is important to note that research has also shown that mothers' use of these utterances positively relate to child language.<sup>44-49</sup> Thus, regardless of the speaker, conversation-eliciting utterances seem to be particularly helpful for 2-year-old children's vocabulary development. With this in mind, clinicians and practitioners themselves should consider incorporating challenging speech such as *wh* questions and clarification requests into their own clinical interventions with young children.

## CONCLUSIONS

Research is in the initial stages of understanding the important role that father input plays in children's language development. Our findings add to the limited body of research suggesting that fathers' challenging communicative style influences children's quantity and diversity of speech, and provides the first piece of evidence that this style also relates to children's productive vocabulary. Future research should continue to extend this research question by examining how conversation-eliciting speech influences vocabulary beyond age 2. Further, our analyses did not consider factors that have been shown to influence the quality of the interaction, such as father educational attainment, depression, or the context in which the interaction takes place (e.g., semistructured toy play, book reading, mealtime, etc.). In sum, the current study brings attention to the important role that social interactions between children and both parents is for young children's vocabulary development, especially for children who are at an elevated risk for later language and literacy delays.

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