

# Association between parent reported concerns and reading and language abilities of second grade children



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## Background

- DLD, a developmental disorder that persists through adulthood, constrains learning, understanding, and using language in approximately 1 in 14 children in kindergarten and has an adverse effect on reading, writing, speaking, listening, and academic performance (National Institute on Deafness and Other Communication Disorders, 2022).
- Although DLD co-occurs frequently with dyslexia, a disorder that involves impaired word reading and spelling skills, DLD is less likely to be identified despite high prevalence rates. Identification disparities may be linked to the established conventions (e.g., universal screeners) for identifying reading difficulties compared to the referral-based formats instituted to identify language-related concerns (Christopoulos & Redmond, 2022).
- Limited awareness of DLD among parents (Adlof, 2020; Bishop, 2010) and general education teachers (Christopoulos & Kean, 2020) may attribute substantially to the lower identification rates than prevalence.
- Findings from several studies (e.g., Calder et al., 2024; Chan et al., 2021; Duff et al., 2023; Hendricks et al., 2019) demonstrate that parent concerns are insufficiently sensitive for identifying children with DLD. However, current research lacks clear guidance on the accuracy of language impairment identification when parents report concerns about language.
- Hence, the purpose of the study was to examine the extent to which parent concerns accurately identified school-aged children with language and reading difficulties.

## Research Questions

- How often do parents of children with average versus below average language and reading skills report concerns about their children's language and literacy skills?
- What types of language and reading concerns do parents report?
- How sensitive are their concerns about language or reading problems for identifying children with language and/or reading difficulties?
- What is the positive prediction value of the concerns in identifying children with language and/or reading difficulties?

## Method

- 604 participants (311 female, 2<sup>nd</sup> grade, monolingual English speaking)
- **Race:** 0.5% Asian, 28.9% Black/African American, 1.4% Multiracial, 3.7% Other, 58.1% White, 7.4% Unreported.
- **Ethnicity:** 2.1% Hispanic/Latino, 60.9% Not Hispanic/Latino, 36.9% Unreported
- Concerns were coded using a developed coding schema by two researchers who also met to resolve disagreements.
- Disagreements were reviewed by a third coder.

Parents were asked the following question:

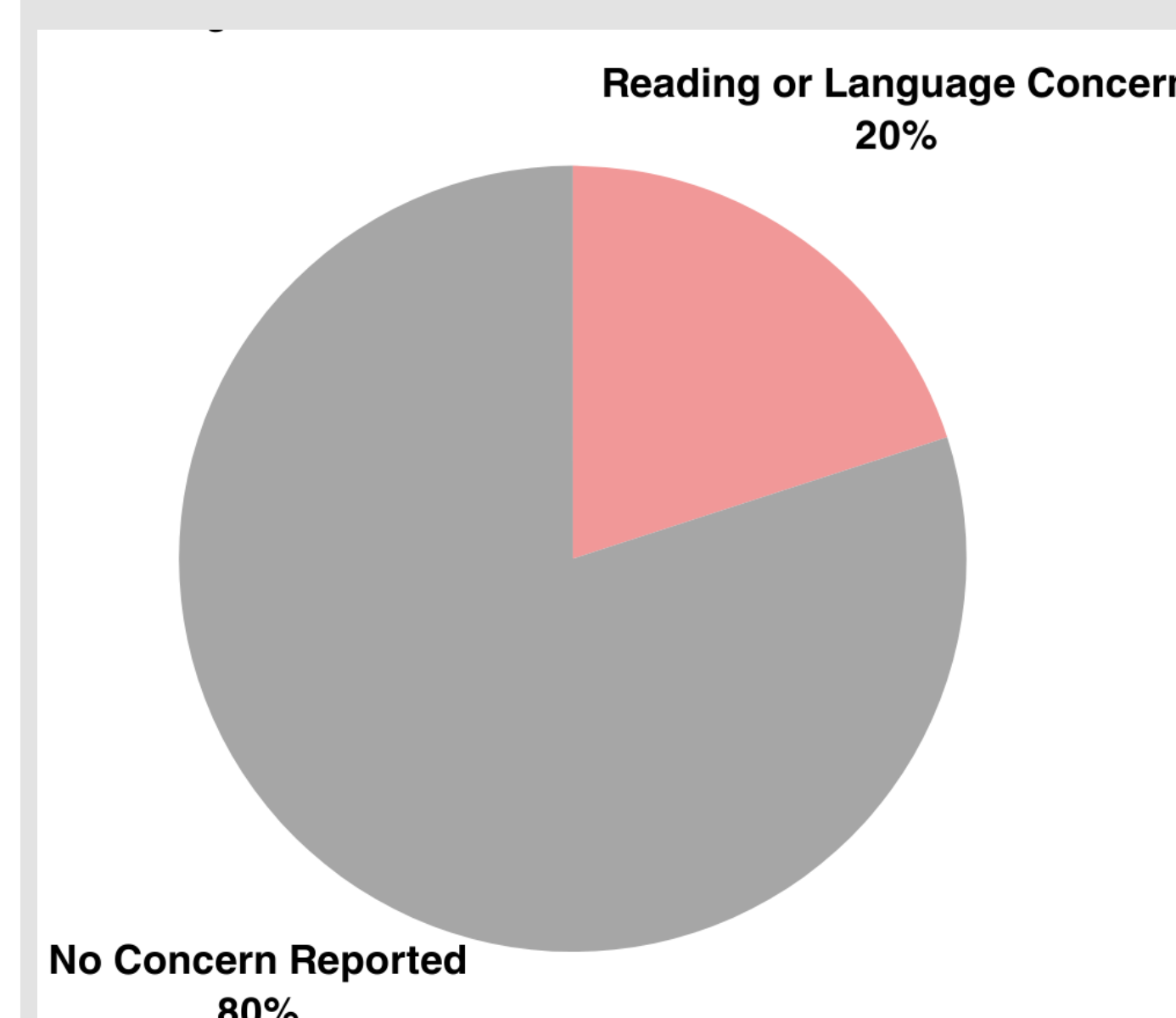
**Do you have any concerns about your child's language or reading abilities? If yes, please describe below.**

### Group Classification Based on Test Score

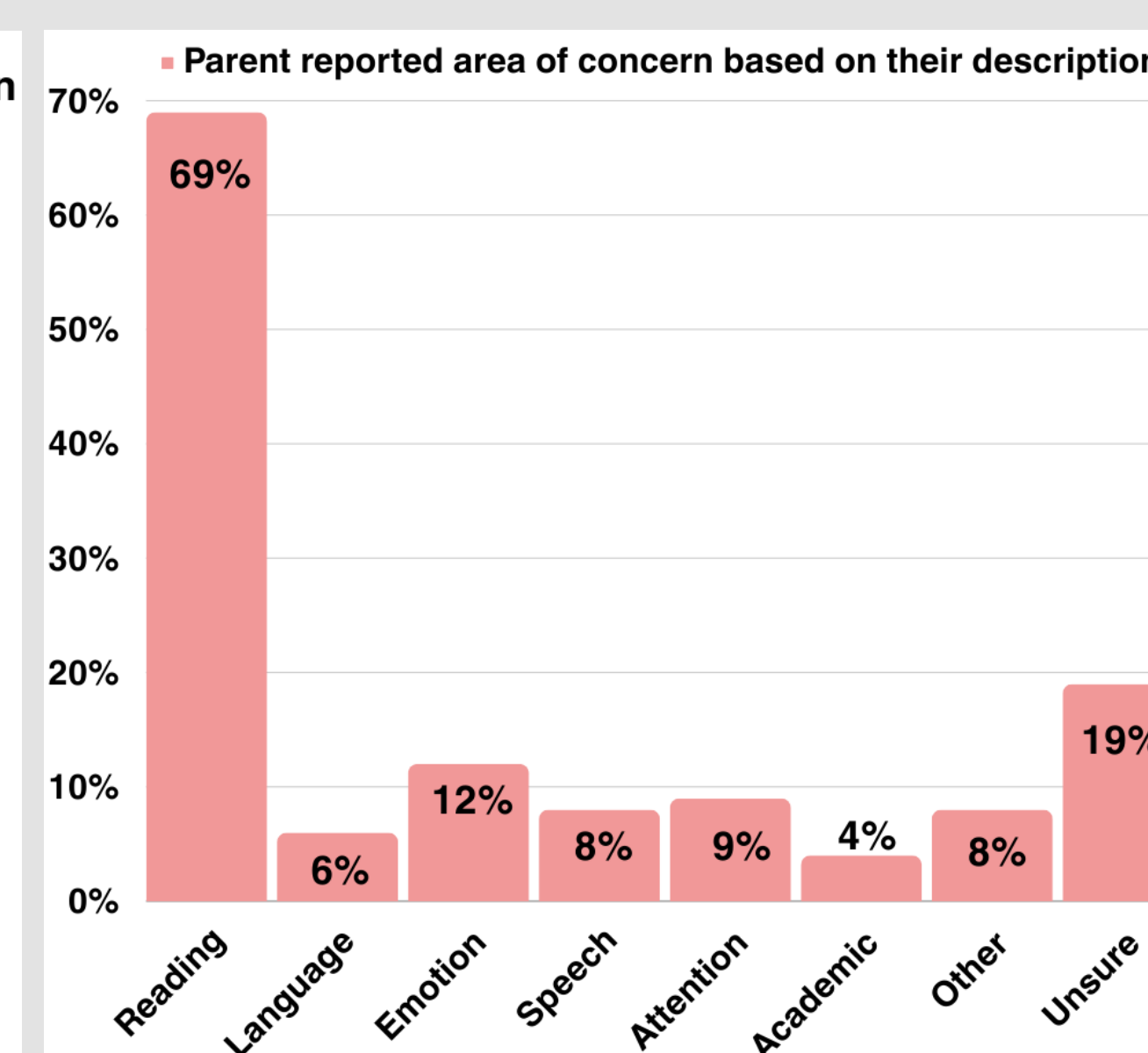
Group	Classification Criteria
TD	WRMT-3 Basic Skills Cluster > 85 CELF-4 Core Language Score >85
At risk for DLD	WRMT-3 Basic Skills Cluster > 85 CELF-4 Core Language Score ≤85
At risk for Dyslexia	WRMT-3 Basic Skills Cluster ≤ 85 CELF-4 Core Language Score >85
At risk for DLD & Dyslexia	WRMT-3 Basic Skills Cluster ≤ 85 CELF-4 Core Language Score ≤85

## Results

**Figure 1:** Do you have any concerns about your child's language or reading skills?



**Figure 2:** Types of concerns reported by parents



**Table 1:** Accuracy of parent reported concerns in identifying children at risk for DLD and Dyslexia

	Concern of any kind		Language Concern		Reading Concern	
	Sensitivity	PPV	Sensitivity	PPV	Sensitivity	PPV
<b>Risk for DLD</b>	29.8%	55.7%	1.5%	50%	21.6%	52.4%
<b>Risk for Dyslexia</b>	47.3%	45.6%	1.1%	25%	34.5%	46.3%

**Table 2:** Types of parent concerns reported in each of the groups

Parent Survey Responses	Typical Reading and Language (n = 267)	Typical Word Reading but Low Language (n= 98)	Low Word Reading but Typical Language (n= 33)	Both Low Word Reading and Low Language (n= 55)
Reports a Concern (of any kind)	10.9%	19.4%	45.8%	50.9%
Mentions Language	1.1%	0	0	1.8%
• Difficulty remembering words.	0.4%	0	0	0
• Comprehension	0.7%	0	0	1.8%
• Expression	0.4%	0	0	0
Mentions Reading	6.7%	15.3%	36.4%	32.7%
• Reading Fluency	0.4%	0	0	1.8%
• Reduced speed of reading	1.1%	0	3%	3.6%
• Reading Comprehension	1.4%	2%	3%	7.2%
• Decoding	1.8%	1%	12.1%	1.8%
Spelling	0.4%	0	3%	0
Emotions	1.4%	3%	6%	7.2%
Speech	0.7%	0	3%	3.6%
Attention	1.8%	1%	3%	1.8%
Academic	0.7%	0	3%	1.8%
Others	0.4%	0	6%	3.6%

## Conclusions

- Overall, parents were less likely to report concerns about their children's oral language than their reading abilities. This was true for TD children as well as those at risk for DLD or dyslexia. Such findings may reflect a lower level of awareness of DLD compared to dyslexia (e.g., Adlof, 2020; Bishop, 2010).
- Although parents rarely reported language concerns, 50% of the children with parent-reported language concerns obtained language test scores than indicated risk for DLD.
- Parent-reported concerns were more sensitive to identifying children with word reading problems vs. language problems. This may be in part explained by the focus of instruction for these children (see also Hendricks et al., 2019). We conclude that reading difficulties tend to be more "visible" to both parents and teachers than language difficulties.

## Implications

- Our use of open-ended questions to query parent concerns highlights a significant vulnerability in current referral-based systems. Children with language impairment will not be identified unless a parent or teacher raises a concern.
- The findings of this study align with others from our lab showing that parents rarely are concerned about children's language skills.
- Parents may be more apt to report concerns about language if they are directed to consider their children's skills in particular areas. We have collected data from a new sample to examine this question, and analyses are in progress.
- Despite the low sensitivity of parent concerns for identifying DLD, the positive predictive value of parent concerns was higher. Parent-reported concerns should be taken seriously, and language skills should be considered when students present with reading difficulties.

## Acknowledgements

We thank the children and families who participated in our research and the schools who supported them in their participation. We also thank the members of the SC Research on Language and Literacy Lab who devoted their time and effort to data collection and scoring for this project. This work was supported by the National Institute of Deafness and Other Communication Disorders under Award R03DC013399 (Principal Investigator: Adlof).