Reading Comprehension in Children with (presumed) DLD: Contributions of Child and Context Factors

Emma Meier[1,2], Britt Hakvoort[1], Iris Duinmeijer[3], Annette Scheper[4,5], Elise de Bree[2]

[1]Royal Dutch Auris Group; The Netherlands, [2]Research Institute of Child Development and Education, University of Amsterdam, the Netherlands; [3]NSDSK, the Netherlands; [4]Royal Kentalis, the Netherlands; [5]Behavioural Science Institute, Radboud University, Nijmegen, the Netherlands.

Background

- Many children with Developmental Language Disorder (DLD) have problems with reading comprehension.[1,2,3]
- **Simple View of Reading (SVR)[4]** seems to capture child-related abilities of reading comprehension.
- Relatively little is known about reading comprehension outcomes ability of children with (presumed) DLD in relation to context-related factors.

Objectives

1. Evaluate reading comprehension ability for children with (presumed) DLD.
2. Identify associations with context-related factors (education type switch, multilingualism, parental education level).
3. Examine context-related factors + **SVR**.

Method

Participants:

- 199 children with (presumed) DLD in 3rd grade.
- M_{age} = 9.09 years, SD_{age} = 0.55 years.
- 70.2% boys.

Context-related factors	*n*	*%*
Edu type switch		
Reg – Reg	73	58.9%
Spe – Reg	38	30.6%
Spe – Spe	13	10.5%
Multilingualism		
Mono	141	78.3%
Multi	39	21.7%
Parental education		
Low PE	9	5.1%
Medium PE	60	33.7%
High PE	109	61.2%

Table 1. *Descriptives of context-related factors*. Reg = regular education, Spe = special education for language problems; before hyphen = education type in 1st grade, after hyphen = education type in 3rd grade. PE = parental education.

Instruments:

- *Reading comprehension:* Dutch curriculum-based test (CITO).
- *Word reading*: timed word and pseudoword task (EMT & Klepel).
- *Oral language ability*: linguistic concepts, word structure, repeating sentences and formulating sentences (CELF-5-NL).

Results

Reading comprehension

- 21.1% lower test than expected.
- Half of children with (presumed) DLD have reading comprehension problems

	n	*%*
A (25%)	26	13.07 %
B (25%)	30	15.08%
C (25%)	35	17.59%
D (15%)	52	26.12%
E (10%)	56	28.14%

Table 2. *Skill indication levels at halfway 3rd grade level.* (%) = expected proportion.

Child-related factors	*N*	*M*	*SD*
Reading comprehension	199	136.98	29.85
Oral language			
CELF LC	155	9.59	3.40
CELF WS	155	8.05	3.24
CELF RS	156	6.72	3.39
CELF FS	156	7.90	3.38
Word reading			
Timed Word	156	44.94	12.71
Timed Pseudoword	153	47.95	14.25

Table 3. *Standardized scores of reading comprehension, oral language ability, and word reading skills.* LC = linguistic concepts, WS = word structure, RS = repeating sentences, FS = formulating sentences.

Context-related factors and SVR

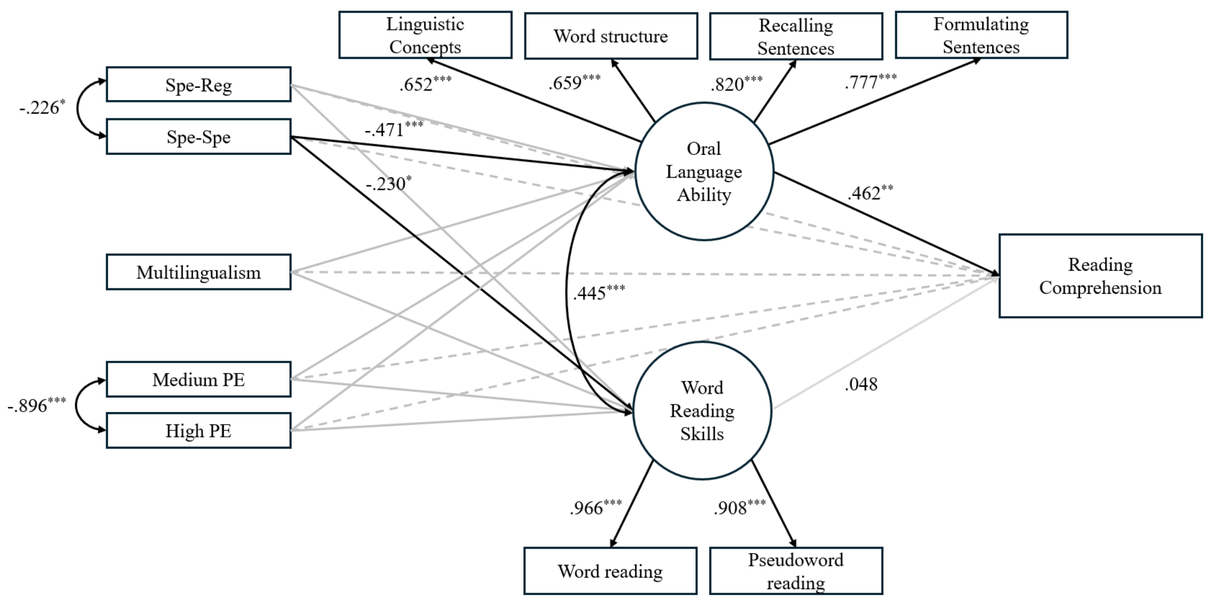

Figure 1. *Standardized coefficient estimates of model including child- and context related factors. N* = 199. *p<.05, **p<.01, ***p<.001. Spe = special education. Reg = regular education. PE = parental education.

- Model explained 32.2% of variance in reading comprehension (+4.5% vs. SVR-only model).

Conclusions

1. Reading comprehension difficulties are **present for about half** of children with (presumed) DLD.
2. **Education type** was the only significant contextual predictor.
3. **SVR** partly supported: only oral language predicted reading comprehension, context did contribute, but **not substantially**

TAKE HOME

For children in 3rd grade with (presumed) DLD, oral language (but not word reading) predicted reading comprehension.

References

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e.meier@auris.nl

www.projecttaalinzicht.nl

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