



Child characteristics related to improvement in language performance of preschool children with Developmental Language Disorders


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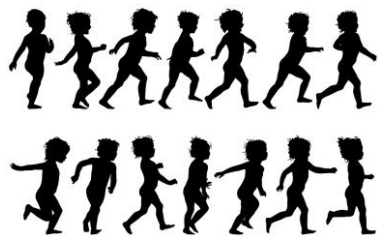
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**RESEARCH CENTRE FOR HEALTHY AND SUSTAINABLE LIVING**

**RESEARCH GROUP SPEECH AND LANGUAGE THERAPY**




### Improvement in language performance in children with DLD




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DLD: child characteristics related to improvement

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### Children with DLD, age 4 and 5 years n = 201




- Severity DLD, DLD in family, gender, non-verbal IQ, temperament, mono- or multilingual
- Parents' educational level, parents' commitment
- Amount of therapy and educational support
- School and classroom characteristics

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### Topics for today


- Improvement in language performance
- Relation with:
  - Severity of DLD
  - Non-verbal IQ
  - Monolingual or multilingual



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### Cohort (N = 201)

Age at start of study		
Mean	Minimum	Maximum
4;11 jaar	3;11 jaar	5;8 jaar

Boys	Girls
141	60

Boy-girl ratio 2.3:1

Schools for special education	Mainstream schools
155	46

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### Special education for children with DLD in the Netherlands

Two possibilities:

- Special schools
- Mainstream schools with extra educational support

Eligibility criteria:


- Scores of  $\geq 1,5$  SD below the mean on at least 2 aspects of language
- Non-verbal IQ  $\geq 70$  and discrepancy between IQ and scores on language tests
- No severe hearing impairment



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### Improvement in language performance




**Mean quotient scores at T0 (begin schoolyear) and T1 (end schoolyear)**

	n	T0 Mean	T1 Mean	Sig.	Effect-size
Language comprehension	147	81.2	84.7***	p < .001	d = .25
Expr. vocabulary	154	81.7	86.4***	p < .001	d = .29
Expr. morphosyntax	152	73.9	76.2***	p < .001	d = .35
Rec. vocabulary	133	92.1	93.7	n.s.	no effect

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### Improvement in language performance




Composite score of standardized tests:

- Schlichting language comprehension (LC)
- Schlichting expressive vocabulary (EV)
- Schlichting expressive morphosyntax (EM)


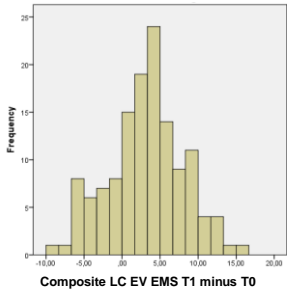
**Mean scores at T0 (begin schoolyear) and T1 (end schoolyear)**

	T0 Mean (SD)	T1 Mean (SD)	Sig.	Effect-size
Composite score LC, EV, EMS (n = 133)	79.2 (10.23)	82.4*** (10.57)	p < .001	d = .31



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### Improvement in language performance


Frequency

Composite LC EV EMS T1 minus T0

n = 133	Difference T1 - T0
Mean	3.2
Std. deviation	4.96

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### Relation with severity of DLD


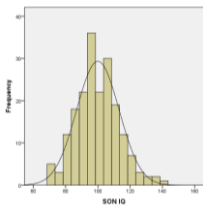


	Composite difference score (T1 - T0)	Significance
Composite score LC, EV, EMS on T0	r = -.173*	p = .023

Explains 3% of variance

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### Relation with non-verbal IQ

Frequency


SON IQ

SON IQ	Mean	SD
Total (n = 194)	100	13.2
Special school (n = 149)	99	12.5
Mainstream school (n = 44)	103	14.9

	Composite score T0	Composite difference score (T1-T0)
SON IQ	r = 0.52*** p < .001	r = 0.01 n.s.

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### Monolingual - multilingual



	Composite score T0	Composite difference score T1 - T0
Monolingual	n = 119      82.4	n = 97      2.6
Multilingual	n = 39      72.0***	n = 35      4.9*
Sign.	p < .001	p = .019

No explained variance added to severity of language disorder

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## Further steps



- Relation between improvement in language performance and other factors
- Prediction model for improvement
- To underpin choices in educational support and speech and language therapy for children with DLD



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## Conclusions



- Progress in language performance is in line with other studies
- Severity of DLD is somewhat related to improvement
- Children with low non-verbal IQ can profit as much from DLD education and SLT as children with mean or high non-verbal IQ



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