

# Reading Outcomes of Children with Delayed Early Vocabulary: A Follow-up from Age 2–16

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This study is a long-term follow-up study to investigate whether early expressive vocabulary delay (late talking) predicts reading development in participants age 16 years and under. The sample consisted of 200 Finnish-speaking children, of whom 108 had family risk for dyslexia (FR) and 92 came from families without reading difficulties. The group with FR and expressive and receptive vocabulary delay had difficulties in reading comprehension, but not in reading fluency.

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This study is a long-term follow-up study to investigate whether early expressive vocabulary delay (late talking) predicts reading development in participants age 16 years and under. Expressive and receptive vocabulary skills were

assessed at the age of 2–2.5 years and reading skills at the age of 8–16 years. The sample consisted of 200 Finnish-speaking children, of whom 108 had family risk for dyslexia (FR) and 92 came from families without reading difficulties. The group with FR and expressive and receptive vocabulary delay had difficulties in reading comprehension, but not in reading fluency.

- The study included five subgroups: 1) FR and no vocabulary delay; 2) FR and late talkers; 3) FR, late talkers, and co-existing receptive vocabulary delay; 4) no FR and late talkers; and 5) no FR and no vocabulary delay.
- A delay in early vocabulary can lead to a persistent deficit whereby expressive vocabulary deficit alone can be alleviated in time, whereas the combined deficit is a stronger risk marker.
- It is important to be able to predict as early as possible which children may be at risk of learning difficulties in their school years.
- Family risk for dyslexia is linked to both vocabulary and reading difficulties and may be the underlying cause for late talkers' problems in reading.



## **The study**

This study investigated the reading development of native Finnish-speaking children with early expressive vocabulary delay to the age of 16 years with respect to both reading fluency and reading comprehension. We examined whether this relationship is different in the presence (or absence) of

other co-occurring risk factors, namely family risk (FR) for dyslexia and early receptive vocabulary delay.

Research questions:

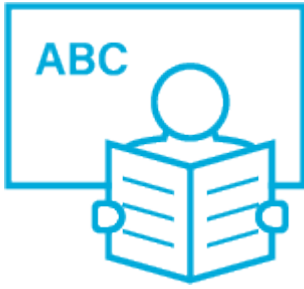
- *Does early expressive vocabulary delay predict difficulties in reading fluency or reading comprehension in children aged 8–16 years?*
- *Is the relationship between early expressive vocabulary delay and reading development different in the presence (and absence) of receptive vocabulary delay and family risk for dyslexia?*

**Participants** were 200 Finnish-speaking children, of whom 108 were placed in the FR dyslexia group and 92 were placed in the no family risk (NR) for dyslexia group.



## Findings

- NR-group children had better reading fluency (they were faster readers) than the FR group children.
- The FR group children who had both expressive and receptive vocabulary delay had lower reading comprehension than other children, especially in the 9<sup>th</sup> grade.
- Both expressive and receptive vocabulary had stronger correlations with reading comprehension than reading fluency.



## Implications

- Early expressive language delay predicts reading comprehension, but not reading fluency development.
- Late talking alone was not a sufficient risk index for reading comprehension difficulties for either children with FR for dyslexia or for children without such risk.
- Only the children with both expressive and receptive vocabulary delays and FR had clear difficulties in reading comprehension.
- The children who had delays in both expressive and receptive vocabulary as toddlers demonstrated persistent weaknesses in comparison to the other groups in reading comprehension measures.
- The children with both receptive and expressive vocabulary delay also had FR for dyslexia. However, because the other FR children (the group who did not have a vocabulary delay and the group who had only an expressive delay) manifested average reading comprehension, it can be assumed that it is the combined vocabulary difficulty, rather than FR per se, that underlies reading comprehension difficulties.
- The link between reading comprehension and early vocabulary could be explained by the simple view of reading model.
- In contrast to reading comprehension, reading fluency was found to be linked with FR for dyslexia and not with the presence of early expressive vocabulary delay.
- The finding of no link from late talking to reading fluency development appears to contradict the lexical restructuring hypothesis, which suggests a link between

early vocabulary and reading fluency mediated via phonological skills. The mediated impact of expressive and/or receptive vocabulary delay via phonological processing to reading skills may thus be broader and may be sustained longer among less transparent orthographies.

- In addition to expressive vocabulary delay, it is critical to recognise a delay in receptive skills as an early risk factor, as a delay only in expressive vocabulary is not informative enough to predict school age reading development.
- Children with expressive vocabulary delay (especially those with FR for dyslexia and receptive vocabulary delay as additional risk factors) should be provided extra support.