

SPOKEN SENTENCE COMPREHENSION IN CHILDREN WITH DEVELOPMENTAL DYSLEXIA

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INTRODUCTION

Children with developmental dyslexia (DD) are generally defined as having a specific deficit in written language abilities. However, some recent data suggest that these children may also experience oral language processing problems. If most authors agree that they experience phonological deficits (Catts, et al., 2006), data concerning their sentence comprehension abilities remain unclear. Some studies suggest that children with DD experience sentence processing deficits (e.g., Rispens et al., 2004), while other failed to observe problems in syntactic processing (e.g., Shankweiler et al., 1995).

AIM

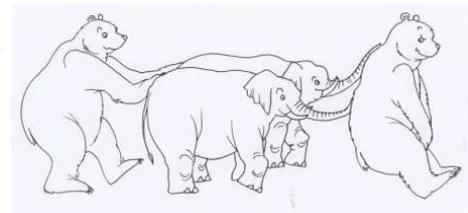
→ This study assesses the processing of complex spoken sentences in French children with or without developmental dyslexia. If children with DD have no specific problem in processing spoken sentences, their performances should not differ from those of their age peers. Conversely, if processing of complex sentences is related to their reading abilities, children with DD should show performances similar to those of younger children matched for reading abilities.

METHODS

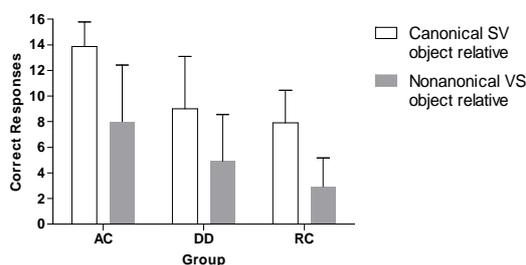
Participants: 15 French-speaking children with DD (7-11 years)
15 IQ-, Vocabulary- and Age-matched controls (AC; 7-11 years)
15 Reading age-matched controls (RC; 6-8 years)

Task: Sentence comprehension for different types of relative clauses

1. Subject relative clauses: 'Montre-moi l'ours qui pousse les éléphants.'
(Show me the bear that is pushing the elephants.)
S V O
2. Canonical SV object relative clauses: 'Montre-moi l'ours que les éléphants poussent.'
(Show me the bear that the elephants are pushing.)
O S V
3. Noncanonical VS object relative clauses: 'Montre-moi l'ours que poussent les éléphants.'
(Show me the bear that are pushing the elephants. [Literally translated])
O V S



RESULTS



ANOVA for object relative clauses:

Main effect of sentence: canonical SV > noncanonical VS
 $F(1, 42)=170.5, p<.001$

Main effect of group: DD < AC, RC < AC, DD = RC
 $F(2,42)=13.19, p<.001$

No significant interaction effect was found

No analyses were performed for subject relative clauses due to ceiling performance in the three groups.

DISCUSSION

Our data confirm that children with DD show a delay in the comprehension of complex spoken sentences, and support the hypothesis of a relationship between oral language development and written language development (Bishop & Snowling, 2004). Future studies should clarify the causal direction of this relationship: the delay in sentence comprehension abilities could potentially be explained by limited reading experience. At the same time, syntactic abilities are likely to influence literacy development by providing contextual cues to help interpret novel words and understand written texts.

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