

Narrative abilities in children with attention deficit hyperactivity disorder and normally developing children



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FOR LANGUAGE AND
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Introduction

ADHD

- symptoms of inattention and/or hyperactivity, impulsivity
- diagnosed in 2-6% of the Dutch school children
- comorbidity with psychiatric and language disorders

Language in ADHD

- not much research done:
 - * subtle problems in comprehension
 - * more robust problems in production, mainly pragmatics

Narratives in ADHD

- less coherence (and cohesion), but:
 - * measured on-line or during recall → extra cognitive load
 - * what if retelling while looking at pictures?

Hypothesis

- children with ADHD will produce fewer plot elements in their narratives than normally developing children

Method

Participants

- data collected by Blankenstijn & Scheper (2003), Roelofs (1998), Aarssen (1996)

Table 1: number of children by group and age

	7 year	8 year	9 year	Total
ADHD	5	8	13	26
Normals	6	11	15	32

- ratio boys/girls unevenly distributed
- no differences in MLU and MLUL

Procedure

- picture book “frog, where are you?”
- retold while looking at pictures, videotaped and transcribed

Plot analysis

- plot elements (total) further divided in:
 - * setting
 - * initiating events
 - * internal responses
 - * search attempts
 - * higher order goals
- plot elements only correct if:
 - * state of affairs complete
 - * told from perspective boy
 - * in accordance with picture

Example 1

ADHD (9;3): “and the boy took another frog with him”
→ higher order goal (take frog back home) scored

Example 2

ADHD (9;1): “bye, thanks a lot for the frog”
→ higher order goal (take frog back home) not scored

Results

Interreliability

- very good (95% agreement between first and second coder over 10% of data)

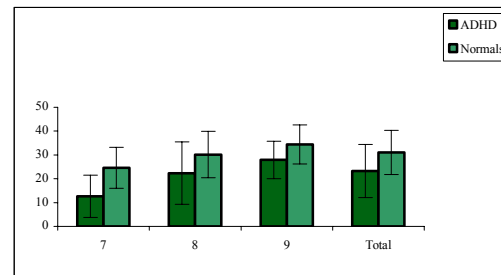
Main effects

Table 2: main effects diagnosis and age

	Diagnosis	Age
Plot elements, total	<.05	<.05
*setting	ns	<.05
*initiating events	<.05	=.07
*internal responses	ns	ns
*search attempts	ns	ns
*higher order goals	=.06	<.05

- significant main effects for diagnosis within search attempts:
 - * actions ($p < .05$)
 - * outcomes ($p = .001$)

Figure 1: percentage of worded plot elements, total



Conclusion

Hypothesis

- children with ADHD indeed produced fewer plot elements in their narratives than normally developing children

Discussion

- language delay but gradually catching up?
 - * bigger difference in 7-year-olds
 - * smaller difference in 9-year-olds
- language problems caused by underlying problems in executive functioning?

Further research

- in preliminary study:
 - * grammaticality
 - * fluency
 - * co-referential cohesion
 - * transitivity of verbs
- in main study:
 - * see below

Language abilities in children with ADHD: a unique profile?

Language data (frog-story, checklist pragmatics and subtests syntax) will be collected and linked to data from cognitive tasks (executive functions and intelligence). The resulting profile for children with ADHD will be compared to profiles for children with specific language impairment and normally developing children. The aim is to describe specific language features of children with ADHD and the relationship of these features to their cognitive abilities.