

How children with Developmental Language Disorders learn lexical categories?

Introduction

Word acquisition requires the conceptualization and the generalization of words to new exemplars via categorization.

Children are able to use specific properties to extend new words according to the type of words to which they are confronted, such as shape for object names or texture for non-solid substances (Jones & Smith, 1998; Soja et al., 1991).

Comparison and structural alignment help children abstract conceptual or relational features to extend new words such as relational nouns (Gentner, 2005).

Children with Developmental Language Disorders (DLD):

- have difficulty in word learning and word extension (Collisson et al., 2015; Kan & Windsor, 2010),
- have difficulty in structural alignment and in the processing of relations (Krzemien et al., 2017; Leroy et al., 2014).

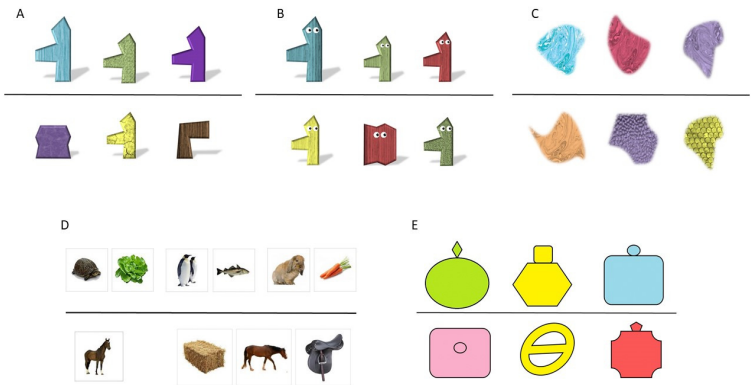
Do children with DLD extend different types of words according to specific properties?



Do they benefit from the comparison of exemplars of a new word to generalize it?

Method

Groups	DLD (N=19)	Age-matched (N=15)	Language-matched (N=15)
Age	10;0 years old	10;1 years old	8;1 years old*
Vocabulary	91 (8;2 years old)	117 (11;4 years old)*	96 (8;8 years old)
Non-verbal IQ	98	97	100



This is the *dufan*.

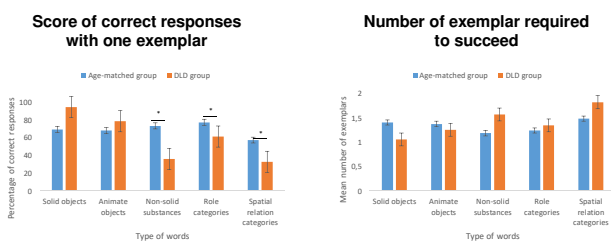
Word extension task composed of new words of different types with increasing number of exemplars (from 1 to 3) if the child fails:

- Solid objects (shape)
- Animate objects (shape and texture)
- Non-solid substances (texture)
- Role categories (relational role)
- Spatial relation categories (spatial relation)

Show me the *dufan*.

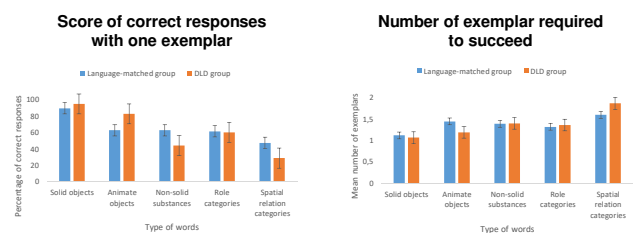
Results

Age-matched groups



- Age-matched children performed similarly for all types of words.
- DLD children performed worse for non-solid substances, and role and spatial relation categories.
- DLD children needed more exemplars to extend spatial relation categories and non-solid substances than the other types of words.

Language-matched groups



- Solid and animate objects were better succeeded by both groups.
- Both groups needed more exemplars for spatial relation categories than for solid objects.
- DLD children needed more exemplars for spatial relation categories than for animate objects, non-solid substances and role categories.

Response analysis

- Control children selected the expected response above chance level for each type of words.
- DLD children selected more the responses based on shape than the expected response for non-solid substances and spatial relation categories.

Discussion

Children with DLD:

- have **more difficulty** than age-matched controls in extending nouns referring to non-solid substances and relational nouns.
- need **more exemplars** to extend non-solid substances and spatial relation categories than other types of words.
- **select more the response based on shape**, even when they should not.

DLD seems to be linked to a strong **focus on shape**. Children with DLD are not as able as their peers to focus on different pertinent properties according to the type of words to which they are confronted.

Children with DLD need **comparison** to extend words for which the feature to use is not as salient as shape.