



Comparing Morphosyntactic Abilities in a Group of Children with Developmental Dyslexia

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Background: Dyslexia and SLI

- **SLI** and **Dyslexia** are both developmental disorders: the first one affects the acquisition of oral language and it is often characterized in terms of problems with morphosyntax; the second one is a specific impairment in the acquisition of reading and spelling skills despite normal or above-average intelligence (Leonard 1998, International Dyslexia Association 1994).
- Dyslexia seems to be an increasingly widespread disorder, only in Italy there are 30000 new diagnoses of dyslexia every year (Porciani, 2013).

However:

- 55% of children diagnosed with dyslexia could be classified in the SLI spectrum too (McArthur et al. 2000).
- The two disorders are supposed to have the same incidence in the population (3-10%) (Bishop and Snowling, 2004).

➢ Although there is no doubt that phonological processes are quite compromised in children with **Developmental Dyslexia (DD)**, there is also an evidence that other linguistic areas, such as **syntax and morphosyntax**, are affected in children with only diagnosis of **DD** (Guasti, 2013).

Main Questions and Goals

Questions:

- What are the **morphosyntactic abilities** of **DD** children?
- May some **DD** (and not) children show **clinical markers of (undiagnosed) SLI**? If so, what kind of clinical markers do they show?

Goals:

- Discussing data on the production and comprehension (of **DD** children) of a set of particular **syntactic agreement configurations** and **functional items**.
- Comparing morphosyntactic abilities of **DD** with those of their **TD** peers and **First Graders**.

The tests: Materials and Methodology

Participants:

- 1) a **control group (CG)**: 130 third and fourth graders (60 females), between 7;1 to 10;1 (M= 8,8; SD= 7,0).
- 2) A group of children with **developmental dyslexia (S)DD**: 29 children, between suspected and diagnosed dyslexia, of third and fourth grade (17 males), age range 7;1-10;1 (M=8,8; SD= 7,7).
- 3) A group of **First Graders (FG)** : 44 children (21 females and 23 males), between 5;7 - 6;9 (M=6,3; SD= 3,5).

Agreement Test

Two modalities: listening and reading.

Task: grammaticality judgement and sentence's correction.

Materials: 26 sentences, 13 correct and 13 manipulated, through which 5 syntactic agreement configurations were assessed:

- 1) Det.- Noun (i.e. ***Le** mamma ha preparato la torta).
- 2) Subj. - Verb (i.e. ***Il** bambino **hanno** fatto i compiti).
- 3) Verb - Subj. (i.e. ***Esce** le principesse).
- 4) Clitic - PastPart. (i.e. * **La** mamma **li** ha **vestito**).
- 5) Subj. - PastPart. Unaccusative Verb (i.e. ***Le** bambine **sono** **caduta**).

Production of 3rd person clitic pronouns

(based on Prévost 2012, COST bi-SLI)



Results

1) Correct Answers After Listening/Reading mismatch-sentences

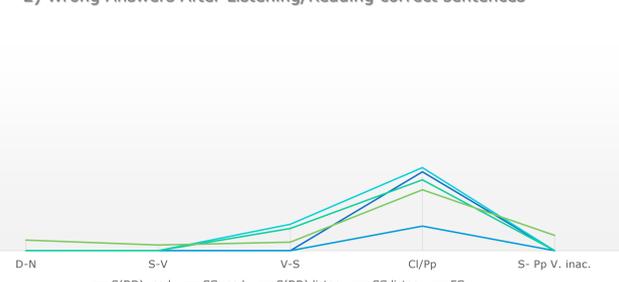


Listening: (S)DD and CG show about the **same results**. FG show surprisingly difficulties with S-V agreement. (i.e.: **Gli abili pittori dipinge un quadro*).

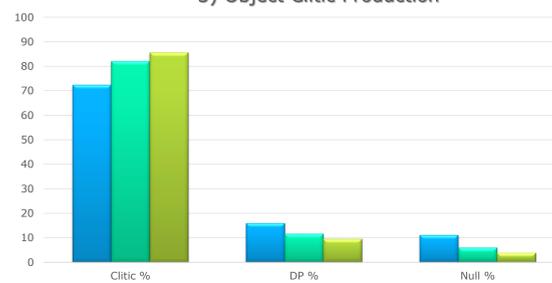
Reading: CG tend to **correct automatically**, while reading, violations on D-N and S-V. (S)DD mistakes are probably due to their attempt to read as accurately as possible to the detriment of the accuracy of grammaticality judgment.

Some children have judged ungrammatical and they have corrected sentences without agreement manipulations, with Cl-Pp. (I.e. A sentence like: "Il ragazzo lo ha raccolto" is mostly corrected by omitting the object clitic: "Il ragazzo ha raccolto").

2) Wrong Answers After Listening/Reading correct sentences



3) Object Clitic Production



I.e.: Guarda! Qui c'è un gatto e qui un pesce. Dimmi: **Che cosa fa il gatto al pesce?** (What does the cat to the fish?)

- **Clitico:** **Lo** mangia. (Eat it)
- **DP:** Mangia **il** pesce. (Eat the fish)
- **Null:** **Mangia.** (Eat)

Discussion: Object Clitic and Individual Analysis

In the light of some unexpected data, an **individual analysis** of each group was made. It has shown:

- a **subgroup (about 30%) in (S)DD** group that shows difficulties with the object clitic both in the agreement test and in the production.
- A **subgroups in CG** that shows more difficulty in Cl-PastP agreement and in object clitic's production than their peers do.

That being so...

- Lack of production of **clitic** is a **clinical marker of SLI** in Italian and in other Romance languages at the age of 5 and, as data shows, it can persist beyond 5 years.
- Even children with only diagnosis of Developmental Dyslexia, in third and fourth school-grade, can show severe problems in the production of clitics.
- A **fine-grained linguistic analysis** can be really useful to **identify possible cases of atypical development**.
- These data might well indicate that some child both in the DD group and in CG presents a **latent SLI syndrome** that can not be diagnosed using conventional tests.

Selected references

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