STRESS AWARENESS IN ITALIAN CHILDREN WITH DEVELOPMENTAL DYSLEXIA

Pagliarini, E.V., Balsemín, F.
University of Padova, Goethe-University Frankfurt

13 participants with DD (mean age = 11;4).
13 controls (mean age = 11;4).

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INTRODUCTION


• In Italian, stress is related to another phonological characteristic, namely vowel length. As it is well known, in Italian a stressed vowel is long when it sits in an open syllable and that syllable is not the final one (though there is discussion about the antepenultimate position too) (Marotta / Vanelli 2021, Loporcaro 2015, Loporcaro / Bertinetti 2005). This means that stress position and vowel length will always be “connected”, a part from the final syllable of the word (note that here we are referring to the phonological characteristic of Italian long vowels, not to one of the phonetic correlate of stress (together with pitch and intensity), namely duration – a stressed vowel being longer than its unstressed counterpart –).

AIM OF THE PRESENT STUDY

• Investigate the perception of stress position in DD children compared to their TD peers (both in words and pseudowords).
• Investigate possible correlations between those difficulties and different stress position patterns (stress on final, penultimate, antepenultimate syllable).

PARTICIPANTS

13 participants with DD (mean age = 11;4).
13 controls (mean age = 11;4).

MATERIAL

• Spoonerism (metaphonological competency) (Marotta et al. 2008).
• Reading words and non-words (syll/sec) (Sartori et al. 2007).
• Non-words repetition (phonological memory) (Bertinetto / Bilancia 2006).
• Same – different stress perception task.

RESULTS

CONDITIONS AND ANSWERS - SAME

3 = antepenultimate stress; 2 = penultimate stress; 1 = final stress

CONDITIONS AND ANSWERS - DIFFERENT

3 = antepenultimate stress; 2 = penultimate stress; 1 = final stress

SAME – DIFFERENT TASK

Same – different stress perception task

In the same-different task, children listened to word or pseudoword pairs, where two tokens were presented one after the other.

Children were told to make same-different judgments about the position of syllable stress in the pair. E.g. words: bibì – bibìa “drink” [different]; tàvolo – tàvolo “table” [same]; pseudowords: rìsàlì – rìsàlì [different]; bòdèsì – bòdèsì [same].

All tokens were trisyllabic words following a CCVCV pattern (three open syllables), with an equal number of onsets, ontonyotic and paroxytonic words selected. The pairs were presented in a randomized order (making sure the same condition – e.g. a pair of words with the same stress position - did not appear twice in a row).

PRESENTATION ORDER

<sample order>

OTHER TASKS

Spoonerrism
Primary: DD 51,11%; 62% TD 99%; 92,17%
Secondary: DD 62,05%; 53,84% TD 76,92%; 62%

Reading – error scores
Primary: DD 2,27% 2,25% 1,43% TD 5,33% 2,13% 2,19%
Secondary: DD 2,27% 2,25% 1,43% TD 5,33% 2,13% 2,19%

NON WORDS RECOGNITION

Primary: DD 77,62% 77,66% TD 91,67% 92,50%
Secondary: DD 77,62% 77,66% TD 91,67% 92,50%

DISCUSSION

• The results showed that DD children performed more poorly than their peers in all standardised tests (spoonerism; reading words and pseudowords; non words repetition) and in the same-different task (showing more difficulties with pseudowords than with words, where lexical retrieval is not possible).
• In the same-different task, DD showed greater difficulties with the pair that presented the stress on the final vs antepenultimate syllable. This is probably caused by the fact that the stressed syllable in final position is not characterised by a longer duration in Italian (probably together with a frequency effect, oxytones and paroxytones being much less frequent in Italian than paroxytones).
• The presentation order of the stimuli also seems to play a role, with more difficulties arising when the first stimulus is an oxytone. This could be because the first word of a presented pair would function as an anchor for the stress recognition task. Word final stress seems to be the most difficult stress position to recognise.

Contacts: elena.pagliarini@unipd.it; Balsemín@em.uni-frankfurt.de