

Short-Term Memory in Dyslexia and Narrative Abilities of Greek-Speaking Dyslexic Children in Oral Discourse.

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Abstract

Title: Short-Term Memory in Dyslexia and Narrative Abilities of Greek-Speaking Dyslexic Children in Oral Discourse.

Background: Prompted by widely known observations, such as Gathercol's (2005) mnemonic deficit in dyslexic children (Norbury et al., 2008, pp. 88-113) and Rhyner's (2009) about their difficulty in mastering narrative linguistic structure ("Emergent Literacy and Language Development: Promoting Learning in Early Childhood," 2010), this study aims to confirm or refute the impaired function of short-term memory in dyslexic children, compared to typically developing children, and respectively in controlling their oral narrative ability, especially their ability for structural language organization.

Methodology: Regarding the methodology, the participants were six children, aged 7-8 years, of which only three had dyslexia. They were subjected to two tests. The first one concerned the control of short-term memory and working memory, and during it, the participants were asked, without timing, to repeat after the examiner with the same order (Digit Recall, for short-term memory) and in the reverse order (Reverse Digit Recall, for working memory) some digits. The second test, «The Cat Theory Test», was conducted to check their oral narrative abilities. Specifically, the children were presented with a sequence of six colored pictures and narrated their personal story based on it. In this test, dyslexia was the independent variable, and narrative memory was the dependent variable. Finally, the data were collected over a month, and the examiner met with the participants once.

Results: The results showed a poorer performance of the non-typical population in the short-term memory and working memory test compared to the typical population. Similarly, in the performance of personal narratives, qualitative analysis showed a discrepancy at one level in the memory test between the two groups and a lack of structure in the oral narration (spatiotemporal reference, conclusion).

Conclusions: In conclusion, both short-term memory, working memory, and oral narrative ability are influenced by linguistic proficiency. Dyslexic children indeed exhibit mnemonic deficits compared to children their age, and their inadequacy in the structural organization of language results in difficulty in oral narration.