

The role of visual-spatial processes in reading difficulties.

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The hypothesis of visual-spatial deficits as a possible cause of reading difficulties was confirmed by a bulk of neurophysiological data, that suggest a strict correlation between perceptual factors and reading difficulties. According to the hypothesis of visual-spatial deficits, a recent research (Valdois et al., 2003) showed differences between good and poor readers in spatial location and visual analysis tasks. Researchers found that poor readers have difficulties in inhibiting peripheral information of the visual field. This is suggestive of a possible attention deficit and an impairment in visual stimuli processing.

Based on the literature, we aimed to confirm whether a) there are significant differences between good and poor readers during visual stimuli processing; b) any deficit in visual information processing differentially affects the manipulation of either single graphic stimuli or clusters of perceptual information.

Sixty children, aged 6-7 years, with medium-to-low SES and educational levels, were assessed at the end of the first year of primary school. The sample was divided into two groups: “good” and “poor” readers.

Each subject received visuo-spatial processing tasks (PEVS) for the purpose of assessing visuo-spatial ability in distinguishing between alphabetical letters that were perceptually similar or specular, between clusters of stimuli, as well as between abstract and concrete figures having the same characteristics.

Research results showed a close correlation between difficulties in reading and visuo-spatial processing. Specifically, it seems that differences in processing visual stimuli – letters and abstract figures – depend on the readers skills (good and poor readers).

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