Adults with dyslexia demonstrate space-based and object-based covert attention deficits: Shifting attention to the periphery and shifting attention between objects in the left visual field

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Abstract
Performance on a covert visual attention task is compared between a group of adults with developmental dyslexia (specifically phonological difficulties) and a group of age and IQ matched controls. The group with dyslexia were generally slower to detect validly-cued targets. Costs of shifting attention toward the periphery when the target was invalidly cued were significantly higher for the group with dyslexia, while costs associated with shifts toward the fovea tended to be lower. Higher costs were also shown by the group with dyslexia for up-down shifts of attention in the periphery. A visual field processing difference was found, in that the group with dyslexia showed higher costs associated with shifting attention between objects in the LVF. These findings indicate that these adults with dyslexia have difficulty in both the space-based and the object-based components of covert visual attention, and more specifically to stimuli located in the periphery.