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The relationship between visuospatial sketchpad capacity and children's mathematical skills

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Abstract

This study examined the association between visuospatial sketchpad (VSSP) capacity and children's mathematics attainment. The aim of the study was to explore age-related differences in the relationship between the visual and spatial memory subcomponents of the VSSP (Logie, 1995) and a range of mathematical skills. Fifty-one 7- to 8-year-old and fifty-six 9- to 10-year-old primary schoolchildren participated in the study. The Visual Patterns Test and the Block Recall task were employed as VSSP measures. The results revealed a differential pattern of associations between children's visual and spatial working memory abilities and their mathematical skills. In younger children, the Block Recall task predicted mathematics performance, whereas, in the older children, the Visual Patterns Test was a significant predictor of mathematics performance.

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