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Improving Perceptual Reasoning in School Children through Chess Training

Authors : Ebenezer Joseph, Veena Easvaradoss, S. Sundar Manoharan, David Chandran, Sumathi Chandrasekaran, T. R. Uma

Abstract : Perceptual reasoning is the ability that incorporates fluid reasoning, spatial processing, and visual motor integration. Several theories of cognitive functioning emphasize the importance of fluid reasoning. The ability to manipulate abstractions and rules and to generalize is required for reasoning tasks. This study, funded by the Cognitive Science Research Initiative, Department of Science and Technology, Government of India, analyzed the effect of 1-year chess training on the perceptual reasoning of children. A pretest–posttest with control group design was used, with 43 (28 boys, 15 girls) children in the experimental group and 42 (26 boys, 16 girls) children in the control group. The sample was selected from children studying in two private schools from South India (grades 3 to 9), which included both the genders. The experimental group underwent weekly 1-hour chess training for 1 year. Perceptual reasoning was measured by three subtests of WISC-IV INDIA. Pre-equivalence of means was established. Further statistical analyses revealed that the experimental group had shown statistically significant improvement in perceptual reasoning compared to the control group. The present study clearly establishes a correlation between chess learning and perceptual reasoning. If perceptual reasoning can be enhanced in children, it could possibly result in the improvement of executive functions as well as the scholastic performance of the child.

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