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A study of hand manipulation and spatial tasks in which preschool girls perform well.

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Abstract

Image manipulation has been reported in mental rotation (Noda, 2010). The purpose of this study is to examine the development of hand manipulation and gender differences in the placement tasks. Participants included 26 five-year-olds (15 boys, 11 girls), 29 four-year-olds (15 boys, 14 girls), and 29 three-year-olds (14 boys, 15 girls). The task was similar to the WISC picture arrangement. As a procedure, 0 and 180 cards were placed on both sides. Participants were asked the image of inclining in the intermediate states. Then, 45, 90, and 135 cards were placed. The convex and the bird-like picture were used. The results showed that girls performed better than boys. And the method of manipulation has changed with age. Boys manipulated cards more frequently than girls. As performance increased, manipulation frequency decreased in boys while it increased in girls. This may be due to developmental changes in cognitive processing between boys and girls.