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Research article

The Effects of Scaling Tennis Equipment on the Forehand Groundstroke Performance of Children

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ABSTRACT

The modifications that have taken place within youth sports have made games, such as basketball, soccer, or tennis, easier for children to play. The purpose of this study was to determine the effects low compression (LC) tennis balls and scaled tennis courts had on the forehand groundstroke performance of children. The forehand groundstroke performances of eight subjects' (8.10 ± 0.74 yrs) using LC tennis balls were measured on a scaled tennis court and standard compression balls (SC) on a standard court. Forehand groundstroke performance was assessed by the ForeGround test which measures Velocity Precision Success Index (VPS) and Velocity Precision Index (VP). Participants attempted three different forehand rally patterns on two successive days, using LC balls on the 18.3m court one day and SC balls on the 23.8m court the other. When using LC balls, participants' recorded higher overall VPS performance scores ($p < 0.001$) for each non-error stroke as well as higher VP scores ($p = 0.01$). The results of this study confirmed that the use of modified balls and modified court size may increase the control, velocity and overall success rate of the tennis forehand groundstroke of children.

Key words: Performance assessment, velocity, precision, success, compression

Key Points

- This study observed the effects of modified tennis balls and court had on the forehand groundstroke performance in children.
- Modified ball compression and modified court size can increase control, velocity and overall success of tennis performance.

- Children will have more success learning the game of tennis using modified equipment than using standard equipment.

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