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Motor Imagery and Tennis Serve Performance: The External Focus Efficacy

Aymeric Guillot[1,2], Simon Desliens[1], Christelle Rouyer[1,3], Isabelle Rogowski[1]

More Information »

[1] Université Lyon 1, Centre de Recherche et d'Innovation sur le Sport, EA 647, Villeurbanne, France
[2] Institut Universitaire de France, Paris, France
[3] Ligue du Lyonnais de Tennis, BRON, France.

Aymeric Guillot
UCB Lyon 1 _ UFRSTAPS, 27-29, boulevard du 11 novembre 1918, 69622 Villeurbanne Cedex _ France
Email: aymeric.guillot@univ-lyon1.fr

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ABSTRACT

There is now ample evidence that motor imagery (MI) contributes to enhance motor performance. Previous research also demonstrated that directing athletes' attention to the effects of their movements on the environment is more effective than focusing on the action per se. The present study aimed therefore at evaluating whether adopting an external focus during MI contributes to enhance tennis serve performance. Twelve high-level young tennis players were included in a test-retest procedure. The effects of regular training were first evaluated. Then, players were subjected to a MI intervention during which they mentally focused on ball trajectory and specifically visualized the space above the net where the serve can be successfully hit. Serve performance was evaluated during both a validated serve test and a real match. The main results showed a significant increase in accuracy and velocity during the ecological serve test after MI practice, as well as a significant improvement in successful first serves and won points during the match. Present data therefore confirmed the efficacy of MI in combination of physical practice to improve tennis serve performance, and further provided evidence that it is feasible to adopt external attentional focus during MI. Practical applications are discussed.

Key words: Movement imagery, motor performance, focus of attention, safety window

Key Points

- Motor imagery contributes to enhance tennis serve performance.
- Data provided evidence of the benefits of adopting an external focus of attention during imagery.
- Results showed significant improvement in successful first serves and won points during a real match.