A COMPARATIVE STUDY BETWEEN SERVE MODE AND SPEED AND ITS EFFECTIVENESS IN A HIGH-LEVEL VOLLEYBALL TOURNAMENT.

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The present study carries out a comparative analysis between serve mode and speed and its effectiveness at the 2004 Men’s Olympic Qualification Tournament. A total of 377 serves were analysed, 124 of which belonged to Cuba vs Holland, 63 to Spain vs Camerun, 100 to Spain vs Cuba, and 91 to Holland vs Camerun. Speed serves were recorded using a tripod mounted radar gun. The analysis has shown the predominance of jump serve (JUMP, 84.9%) compared with float serve with jump (FLOAT JUMP, 9.5%) and float serve (FLOAT, 5.6%). Only 25.3% of the total jump serves analysed was successfully stricken back making the first tempo attack possible. The respective percentages for FLOAT JUMP and FLOAT were 42.9% and 55.6%. Ball speed in JUMP (23.03 ± 3.94 m · s⁻¹) was markedly higher compared with FLOAT JUMP and FLOAT (12.05 ± 3.44 m · s⁻¹ and 11.47 ± 4.22 m · s⁻¹). While negative outcomes in FLOAT (66.7%) stand out, a better balance between negative and positive outcomes were found in both JUMP (50%) and FLOAT JUMP (42.9%). However, no relationship was found between serve speed and its effectiveness outcome ($R^2 = 0.000$ in the overall sample and $R^2 = 0.005$, when pooling the 5 serve effectiveness categories into negative and positive outcomes. In fact, JUMP is mainly performed in the span of velocities between 23.06 and 28.06 m · s⁻¹ in both error and direct point categories.

In conclusion, we found no significant relationship between serve velocity and a better outcome related to effectiveness. In addition, JUMP and FLOAT JUMP presents a better balance between negative and positive outcomes compared with FLOAT.

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