

Physical and physiological profile of young female taekwondo athletes during simulated combat

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Aim and Method. The purpose of this study was to describe the physical performance (acceleration, number of impacts, distance and maximum speed) and physiological response (heart rate and blood lactate) of young female taekwondo athletes during combat simulations. **Material.** The sample consisted of seven girls (13.1 ± 1.1 years), who participated in a simulated taekwondo competition. **Results.** The main results observed were: post match blood lactate = 4.19 ± 2.03 mmol. L⁻¹; peak heart rate = 201 ± 7 bpm; maximum acceleration = 9.68 ± 0.52 G; number of impacts = 148 ± 42 ; total distance = 203 ± 69 m; and maximum speed = $7.07 [6.7, 8.2]$ km/h. A lower mean heart rate ($P < 0.05$; $F = 8.333$) was found in the first round (163 ± 14 bpm) compared with the second (182 ± 9 bpm) and third rounds (185 ± 10 bpm). **Conclusions.** The main findings of the present study are that young female taekwondo athletes presented with low blood lactate after the match, performed around 150 impacts during the match, which occurred each 1.37 m - given that the total displacement is around 200 m - with high acceleration, and the displacements were performed at moderate speeds. In addition the heart rate was lower in the first round compared to the other two rounds. © Idokan Poland Association.

Athletic performance

Combat sports

Match demands

