



Supplementary Materials: Absolute and Relative Strength, Power and Physiological Characteristics of Indian Junior National-Level Judokas

Dale M Harris *, Kristina Kendall, G. Gregory Haff and Christopher Latella

| Groups | Age (y) ± SD | Bodyweight (kg) ± SD | Height (cm) ± SD |
|---|--|--|---|
| Gold-medal winners (GM) (n = 8; m = 3, f = 5) | Group = 16.4 ± 0.9 m = 16.3 ± 0.5 f = 16.4 ± 1.0 | Group = 63.4 ± 10.1 m = 65.7 ± 1.9 f = 62.0 ± 12.5 | Group = 161.0 ± 8.1 m = 170.3 ± 4.8 f = 155.4 ± 2.7 |
| Gold, silver and bronze medal winners (MW) (n = 13; m = 6, f = 7) | Group = 16.5 ± 1.4 m = 17.0 ± 0.8 f = 16.1 ± 1.6 | Group = 63.2 ± 9.4 m = 67.5 ± 2.4 f = 59.6 ± 11.3 | Group = 162.8 ± 9.9 m = 172.5 ± 5.1 f = 154.4 ± 3.2 |
| Non-medallists (NM) (n = 12; m = 9, f = 3) | Group = 16.6 ± 1.7 m = 16.7 ± 1.3 f = 16.3 ± 1.9 | Group = 70.7 ± 9.9 m = 73.6 ± 5.3 f = 62.0 ± 12.7 | Group = 168.2 ± 10.6 m = 172.8 ± 4.9 f = 154.3 ± 58.4 |
| Silver and bronze medallists, and non-medallists (AO) ($n = 17$; $m = 12$, $f = 5$) | Group = 16.6 ± 1.8 m = 16.9 ± 1.3 f = 16.0 ± 2.5 | Group = 68.4 ± 10.0 m = 72.5 ± 5.0 f = 58.6 ± 12.0 | Group = 167.4 ± 11.1 m = 173.3 ± 4.8 f = 153.4 ± 9.0 |
| Males (all) (<i>n</i> =15) | 16.8 ± 1.2 | 71.1 ± 5.3 | 170.7 ± 5.0 |
| Females (all) (<i>n</i> =10) | 16.2 ± 1.9 | 60.3 ± 12.4 | 154.4 ± 6.7 |

Table S1. Participant demographics for each group. All values are presented as mean ± standard deviation. f, female; m, male.

| Test | Mear | Mean ± SD | | D 1 | |
|--|--------------------|--------------------|----------|---------|---------------------|
| | GM (n=8) | AO (n=17) | - % diff | P-value | Hedge's g (95% CI) |
| Handgrip strength (kg) | 55.9 ± 2.9 | 56.4 ± 5.3 | -0.7 | 0.838 | 0.09 (-0.93, 0.75) |
| Handgrip strength (kg/BW) | 0.9 ± 0.1 | 0.8 ± 0.1 | 1.0 | 0.852 | 0.08 (-0.76, 0.92) |
| 1-RM bench press (kg) | 74.4 ± 16.8 | 71.2 ± 16.6 | 4.5 | 0.669 | 0.18 (-0.66, 1.02) |
| 1-RM bench press (kg/BW) | 1.14 ± 0.34 | 1.06 ± 0.25 | 6.8 | 0.550 | 0.28 (-0.57, 1.12) |
| 1-RM back squat (kg) | 116.1 ± 16.8 | 96.8 ± 23.2 | 20.0 | 0.046* | 0.87 (-0.01, 1.74) |
| 1-RM back squat (kg/BW) | 1.75 ± 0.28 | 1.45 ± 0.36 | 21.0 | 0.047* | 0.87 (-0.01, 1.74) |
| Aerobic power (mlkg min ^{-1}) | 37.4 ± 4.1 | 40.6 ± 6.8 | -7.9 | 0.233 | -0.51 (-1.36, 0.34) |
| Anaerobic power (W) | 784.5 ± 49.7 | 625.8 ± 135.5 | 25.4 | 0.004* | 1.32 (0.40, 2.24) |
| Anaerobic power (W/kg) | 11.9 ± 1.7 | 9.3 ± 2.0 | 27.3 | 0.005* | 1.27 (0.36, 2.18) |
| 5-0-5 left (s) | 1.5 ± 0.4 | 1.6 ± 0.3 | -8.6 | 0.302 | 0.37 (-0.48, 1.22) |
| 5-0-5 right (s) | 1.4 ± 0.2 | 1.5 ± 0.3 | -9.1 | 0.226 | 0.59 (-0.26, 1.45) |
| 30m flying sprint (s) | 3.9 ± 0.3 | 4.4 ± 0.8 | -11.9 | 0.097 | 0.96 (0.08, 1.85) |
| CMJ power (W) | 3049.6 ± 556.1 | 3016.1 ± 689.6 | 1.1 | 0.922 | 0.05 (-0.79, 0.89) |

Table S2. Mean and standard deviation (SD), percentage (%) difference and *p*-values for gold-medal winners (GM) compared to podium finishers and non-medallists (AO). * indicates significant difference (p < 0.05). CMJ, countermovement jump; 1-RM, one repetition maximum; BW, bodyweight; W, watts.

| Test | Mean ± SD | | | | |
|--|--------------------|--------------------|--------|---------|---------------------|
| | MW (n=13) | NM (n=12) | % diff | P-value | Hedge's g (95% CI) |
| Handgrip strength (kg) | 57.6 ± 3.9 | 54.8 ± 5.0 | 5.2 | 0.126 | 0.61 (-0.19, 1.42) |
| Handgrip strength (kg/BW) | 0.9 ± 0.1 | 0.8 ± 0.1 | 3.7 | 0.467 | 0.30 (-0.49, 1.09) |
| 1-RM bench press (kg) | 76.2 ± 16.5 | 67.9 ± 15.9 | 12.1 | 0.217 | 0.50 (-0.36, 1.35) |
| 1-RM bench press (kg/BW) | 1.1 ± 0.3 | 1.0 ± 0.2 | 10.9 | 0.316 | 0.42 (-0.43, 1.27) |
| 1-RM back squat (kg) | 110.7 ± 19.7 | 94.6 ± 24.0 | 17.0 | 0.079 | 0.68 (-0.18, 1.55) |
| 1-RM back squat (kg/BW) | 1.7 ± 0.4 | 1.4 ± 0.3 | 16.2 | 0.111 | 0.66 (-0.20, 1.52) |
| Aerobic power (ml·kg·min ⁻¹) | 38.3 ± 6.1 | 40.9 ± 6.3 | -6.4 | 0.302 | -0.41 (-1.25, 0.44) |
| Anaerobic power (W) | 729.7 ± 142.3 | 619.1 ± 108.2 | 17.9 | 0.091 | 0.89 (0.02, 1.77) |
| Anaerobic power (W/kg) | 10.9 ± 2.5 | 9.4 ± 1.7 | 16.3 | 0.091 | 0.75 (-0.12, 1.61) |
| 5-0-5 left (s) | 1.5 ± 0.3 | 1.6 ± 0.3 | -3.6 | 0.645 | 0.17 (-0.66, 1.01) |
| 5-0-5 right (s) | 1.5 ± 0.3 | 1.6 ± 0.3 | -1.8 | 0.816 | 0.09 (-0.78, 0.93) |
| 30m flying sprint (s) | 4.1 ± 0.6 | 4.4 ± 0.8 | -6.7 | 0.324 | -0.37 (-1.22, 0.48) |
| CMJ power (W) | 3082.2 ± 613.6 | 2966.9 ± 686.2 | 3.9 | 0.634 | 0.17 (-0.61, 0.96) |

Table S3. Mean and standard deviation (SD), percentage (%) difference and *p*-values for medal-winners (MW) compared to non-medallists (NM). * indicates significant difference (p < 0.05). CMJ, countermovement jump; 1-RM, one repetition maximum; BW, bodyweight; W, watts.