

**THE EFFECT OF MUSCLE POWER, ARM POWER AND PERCEPTION
KINESTHETIC OF SPEED CLIMBING WORLD RECORD ON BOGOR ROCK
CLIMBING ATHLETES**

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ABSTRACT. The purpose of this study was to determine whether or not there was an influence between leg muscle power, arm strength, and kinesthetic perception of the speed of the world record speed in Bogor rock climbing athletes. This research uses a quantitative approach with survey methods with measurements and tests, while analytical skills use the path analysis approach. The subjects in this study were Bogor rock climbing athletes. Sampling is done using total sampling technique. Based on the results of the research hypothesis test it can be found that: 1) There is a direct influence between leg muscle power (X_1) on climbing speed world record (Y) rock climbing athletes in Bogor district by 4.80%; 2) There is a direct influence between Arm Strength (X_2) on climbing speed world record (Y) Bogor rock climbing athletes by 3.42%; 3) There is a direct effect between Kinesthetic Perception (X_3) on climbing speed world record (Y) Bogors climbing athletes as much as 3.42%; 4) There is a direct influence between the leg muscle power (X_1) on Kinesthetic Perception (X_3) Bogor rock climbing athletes by 4%; 5) There is a direct influence between Arm Strength (X_2) on Kinesthetic Perception (X_3) of rock climbing athletes in Bogor Regency by 4.41%. Based on the findings of the study, it can be concluded that leg muscle power and arm strength can directly influence the kinesthetic perception of rock climbing athletes in Bogor; and leg muscle power and arm strength can have a direct effect, and kinesthetic perception of the speed of climbing World record speed in Bogor rock climbing athletes.

Keywords: arm strength, kinesthetic perception, leg muscle power, climbing speed

**PENGARUH *POWER* OTOT TUNGKAI, KEKUATAN LENGAN DAN PERSEPSI
KINESTETIK TERHADAP KECEPATAN MEMANJAT *SPEED WORLD RECORD*
PADA ATLET
PANJAT TEBING KABUPATEN BOGOR**

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Abstrak. Tujuan dalam penelitian ini adalah untuk mengetahui ada atau tidaknya pengaruh antara *power* otot tungkai, kekuatan lengan, dan persepsi kinestetik terhadap kecepatan *speed world record* pada atlet panjat tebing kabupaten Bogor. Penelitian ini menggunakan pendekatan kuantitatif dengan metode survei dengan pengukuran dan tes, sedangkan keterampilan analisis menggunakan pendekatan analisis jalur (*path analysis*). Subjek dalam penelitian ini adalah atlet panjat tebing kabupaten Bogor. Pengambilan sampel dilakukan dengan menggunakan Teknik total sampling. Berdasarkan hasil uji hipotesis penelitian dapat ditemukan bahwa: 1) Terdapat pengaruh langsung antara Power otot tungkai (X_1) terhadap kecepatan memanjat *speed world record* (Y) atlet panjat tebing kabupaten Bogor sebesar 4,80%; 2) Terdapat pengaruh langsung antara Kekuatan Lengan (X_2) terhadap kecepatan memanjat *speed world record* (Y) atlet panjat tebing kabupaten Bogor sebesar 3,42%; 3) Terdapat Pengaruh langsung antara Persepsi Kinestetik (X_3) terhadap kecepatan memanjat *speed world record* (Y) atlet panjat tebing kabupaten Bogorsebesar 3,42%; 4) Terdapat pengaruh langsung anantara Power otot tungkai (X_1) terhadap Persepsi Kinestetik (X_3) atlet panjat tebing kabupaten Bogor sebesar 4%; 5) Terdapat pengaruh langsung antara Kekuatan Lengan (X_2) terhadap Persepsi Kinestetik (X_3) atlet panjat tebing kabupaten Bogor sebesar 4,41%. Berdasarkan temuan hasil penelitian, dapat disimpulkan bahwa *power* otot tungkai dan kekuatan lengan dapat berpengaruh langsung terhadap persepsi kinestetik pada atlet panjat tebing kabupaten Bogor; serta *power* otot tungkai dan kekuatan lengan dapat berpengaruh langsung, dan persepsi kinestetik terhadap kecepatan memanjat *speed World record* pada atlet panjat tebing kabupaten Bogor.

Kata Kunci: kekuatan lengan, persepsi kinestetik, *power* otot tungkai, kecepatan memanjat