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題目 (Title):

活躍年輕人髖及膝關節力量及動作速度測量之信度

(Reliability of Measuring Hip and Knee Power and Movement Velocity in Active Youth)

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目的 (Purpose):

本研究目的是探討以等速肌力測試儀測量生活型態活躍之年輕人髖及膝關節的神經肌肉力量和移動速率之信度。

(The purpose of this study was to determine the reliability of measuring neuromuscular power and movement velocity of the hip and knee in young, active individuals using an isokinetic dynamometer.)

方法 (Methods):

本研究記錄了 52 名年齡介於 10-14 歲的年輕人站姿時的髖關節及坐姿時的膝關節之功率峰值、平均功率和速度峰值的資料。共測量兩次，兩次約間隔一週。

(Peak power, average power, and peak velocity (PV) data were recorded for the hip in the standing position and the knee in the sitting position in 52 youth aged 10 to 14 years on 2 occasions approximately 1 week apart.)

結果 (Results):

相較於其他量測變數，速度峰值的測量具有最佳的信度（變異係數典型誤差 [CVTE] = 5.0%-8.5%、標準誤差 = 18.1–21.1%/s）。髖關節屈曲和伸展膝關節功率峰值和平均功率(CVTE = 8.7%-10.8%)相較其他等速測試法(CVTE=16.9%-32.8%)具有可接受之信度。

(The PV measures demonstrated the best absolute reliability of all variables tested (coefficients of variation of the typical error [CVTE] = 5.0%-8.5%; standard errors of measurement = 18.1–21.1%/s). Hip flexion and knee extension peak power and average power exhibited acceptable reliability (CVTE = 8.7%-10.8%) compared with the other isokinetic tests (CVTE = 16.9%-32.8%).)

結論 (Conclusions):

對間接測量活躍年輕人之神經肌肉的力量而言，速度峰值是一種具有信度的測量方法；然而對於某些特定動作來說，唯有直接測量才具信度。

(Peak velocity appears to be a reliable means of indirectly measuring neuromuscular power in active youth, whereas direct measurement of power is only reliable for certain movements.)

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