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Validity of CAMRY Hand Dynamometers among Young Adults

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Introduction: Hand grip strength (HGS) is widely used as an outcome. The Jamar dynamometer is an extensively used tool for measuring HGS. The CAMRY dynamometer is proposed as a valid and reliable tool to evaluate HGS among older adults. However, there is scarcity of evidence about its validity in young adults.

Aim: To assess the validity of the CAMRY EH101 dynamometer among young-aged adults.

Materials and Methods: Young adults (n=50) aged 18-40 years were enrolled by purposive sampling for this cross-sectional study. Hand dominance was measured using Edinburgh Handedness Inventory. HGS was measured using the Jamar Plus + Hand dynamometer and CAMRY EH101 dynamometer.

Results: The demographic characteristics are presented as the mean and standard deviation (SD). The data followed normal distribution and parametric and thus, parametric tests were used. The mean age of the participants was 25.20+4.84 years. The average HGS as measured by CAMRY EH101 dynamometer was 28.72±11.45 kg and Jamar Plus + Hand dynamometer was 30.74±9.5 kg but the difference in the values of HGS measured by the two tools was insignificant (p=0.098) with no systematic bias.

Conclusion: The CAMRY EH101 dynamometer is valid as an outcome tool for hand grip assessment. The CAMRY EH101 dynamometer might be used as an economical device to measure grip strength among young adults.

Keywords: Muscle Strength, Validity