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Establishing Reference Value of Seated Medicine Ball Throw Test among Collegiate Squash Players: A Feasibility Study

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Introduction: The Seated Medicine Ball Throw (SMBT) test assesses upper-body muscular power by determining the furthest distance an individual can throw a medicine ball from a seated, isolated position. Widely used across various groups, the SMBT validates other upper-body power measures such as the bench press power test and plyometric push-ups. Due to its cost-effectiveness and simplicity, it is preferred over other upper-body power assessments. Though the SMBT is recognised as a reliable and valid test for upper-body power, there are no established reference standards for most populations, including college going squash players aged 18-25 years.

Aim: This study is to validate the practicality and limitations of the methodology and procedures for large-scale studies aimed at establishing normative reference scoresof seated medicine ball throw for squash player aged 18-25 years.

Materials and Methods: A feasibility trial of total 50 male and female squash player aged 18-25 years performed the SMBT test three times in one day. After recording their height, body mass, Body Mass Index (BMI) and athletic identity measurement scale score participants threw a 1, 2, and 3 kg medicine ball seated at a 90° angle. Each will throw three times and average of the three trials will be recorded.

Results: The age, weight, height, and BMI of the players were 20.38±1.8 years, 63.39±10.48 kg, 168.79±9.0 cm, and 22.24±2.17 kg/m^2, respectively. The reference data of the average trials for 1 kg was 4.87±.64, 2 kg was 4±.58 and 3 kg was 3.2±.49. Pearson correlation coefficients for between age and average score of 1, 2 and 3 kg were r=.294, r=.248, and r=.286, respectively and full stop

Conclusion: The results suggest that it is practical to carry out a more extensive study with a larger sample size to enable broader generalisation of the findings. The collected data offers an initial set of benchmark standards for coaches and students to assess upper-body muscular power using SMBT.

Keywords: Cost benefit, Feasibility, Reference standards, Squash.