

## IMPACTS AND PREDICTION VALIDITY OF MORPHOLOGICAL AND MOTOR SKILLS ON MAWASHI GERI

### **Abstract**

*A system of 24 dependent variables, and 1 criterion variable, were analysed on the sample of 82 karate-practising boys aged 10-14. There were 12 morphological variables, 12 basic motor skills variables, and the remaining one was the single criterion variable: the roundhouse kick (mawashi geri), as a specific situational motion structure. The purpose of this study was, on one hand, to determine the specific impact of each predictor variable on a single criterion variable (the roundhouse kick) with the forward stepwise regression model, and, on the other, to create a battery of instruments for the evaluation and monitoring of all the relevant parameters based on this prediction model, with the aim of planning, programming and monitoring of the effects of an operationalised training process. The results of the regression analysis demonstrated that only an integrated system of morphological variables had a significant impact ( $p=.02$ ) on the roundhouse kick. The stepwise regression method has identified Shoulder breadth as the variable with the greatest individual impact ( $p=.00$ ). As for the motor skills variables, it has been determined that Half-squat with weight ( $p=.04$ ) had the greatest predictor value on the roundhouse kick, while Triple-jump ( $p=.00$ ), Half-squat with weight ( $p=.02$ ), and Long-jump from a standing start ( $p=.04$ ), were shown to have the greatest predictor value by the stepwise regression analysis. Based on these results, we propose the following battery of tests to be used for the diagnostics, evaluation, monitoring and assessment of the roundhouse kick performance: shoulder breadth, triple-jump, long-jump from a standing start, and half-squat with weight.*

**Key words:** *boys, motor behaviour, anthropometry, mawashi geri, predictor value.*

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