

UNIVERSITI TEKNOLOGI MARA

**COMPARISON ON ANTHROPOMETRICS AND
FITNESS LEVEL BETWEEN ELITE AND
UNIVERSITY MALE ROWERS**

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Abstract

The purpose of this study was to compare the differences on anthropometrics and fitness level between Malaysian Elite and University male rowers. It determines the relationship between anthropometrics and fitness level among them. It consisted two hypotheses as there was no significant difference on anthropometrics and fitness level between both groups. Thus, there was no significant relationship on anthropometrics and fitness level among elite and university male rowers. Thirty male rowers (elite = 15, university = 15), aged 20 to 30 years old participated in this study. The design of this study was ex-post facto design. The methods involved quantitative assessment of anthropometrics (height, weight, body fat percentage, body length, breadth and girth) and fitness level test (flexibility, power, relative strength, muscular endurance and aerobic capacity). Findings showed that elite and university rowers were significantly differ ($p < 0.05$) on the 16 variables of anthropometrics (height, body fat percentage, sitting height, arm span, arm length, forearm length, thigh length, leg length, shoulder breadth, A-P chest depth and calf girth) and all fitness level variables. Hence, the results showed significant positive relationship between nine sides of anthropometrics which are height ($r= 0.76$), sitting height ($r= 0.65$), arm span ($r= 0.64$), arm length ($r= 0.73$), forearm length ($r= 0.54$), thigh length ($r= 0.74$), leg length ($r= 0.63$), shoulder breadth ($r= 0.43$) and calf girth ($r= 0.55$) with the all fitness level variables respectively among elite and university male rowers in this study. It concluded that those selection of anthropometrics characteristics and fitness level played important roles that influence overall rowing performance for both groups as the final findings.

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