

**UNIVERSITI TEKNOLOGI MARA**

**COMPARISON OF BODY FAT PERCENTAGE AND  
PHYSICAL PERFORMANCE OF MALE NATIONAL  
SENIOR AND JUNIOR KARATE ATHLETES**

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Dissertation submitted in partial fulfillment of the requirements for the degree of  
**Master of Sports Science**

**Faculty of Sports Science & Recreation**

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**Author's Declaration**

I declare that the work in this dissertation was carried out in accordance with the regulations of Universiti Teknologi MARA. It is original and is the result of my own work, unless otherwise indicated or acknowledged as referenced work. This dissertation has not been submitted to any other academic institution or non-academic institution for any degree or qualification.

I, hereby, acknowledgement that I have been supplied with the Academic Rules and Regulations for Post Graduate, Universiti Teknologi MARA, regulating the conduct of my study and research.

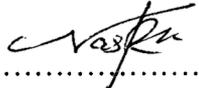
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### **Abstract**

The purpose of the present study was to compare the body fat percentage and physical performance of male national senior and junior karate athletes. It is hypothesized that the senior and junior athletes could differ regarding their body fat percentage and physical performance profiles. Sixteen male karate kumite competitors of the national karate team (senior  $n = 8$ ; junior  $n = 8$ ) participated in this study. The tests applied included both the assessment of selected anthropometric variables (body height, weight and body fat percentage) and the following physical performance measurements: strength (hand grip test), power of lower extremity (vertical jump test), agility (T-test), flexibility (sit and reach test) and maximal oxygen consumption (20-m shuttle run test). The senior athletes revealed a lower body fat percentage ( $p < 0.05$ ) and the differences in body fat percentage were significant. The senior athletes also demonstrated greater strength ( $p < 0.001$ ) and leg power (vertical jump;  $p < 0.001$ ). The findings in agility presented that senior performed better than the junior team ( $p < 0.001$ ). There was no significant difference in flexibility of both groups ( $p > 0.05$ ). Senior athletes revealed higher in oxygen consumption ( $p < 0.001$ ). It can be concluded that senior karate athletes' physical performance are superior compared to the junior athletes.

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