

**UNIVERSITI TEKNOLOGI MARA**

**RELATIONSHIP BETWEEN LOWER BODY  
STRENGTH AND POWER ON SWIMMING  
PERFORMANCE IN MALE ADOLESCENT SWIMMERS**

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

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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.

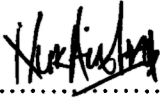
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### Abstract

The purpose of the present study was to investigate the relationship between lower body strength and power on swimming performance of male adolescent swimmers. The present study was also conducted to determine the main contributing factors between lower leg power and strength to swimming performance. Sixty six club swimmers age ranged between 17-18 years old participated in this study. Leg power was assessed using standing vertical jump while leg strength was assessed using wall squat test. Swimming performance was assessed by using 25m flutter kick. Data yielded significant relation between leg power and swimming performance ( $r = 0.301, p < 0.05$ ), leg strength and swimming performance ( $r = 0.294, p < 0.05$ ). Regression analysis further indicated that leg power and strength was significant contributor in swimming performance ( $p < 0.05$ ). Leg power contributed the most compared to leg strength with the value of 0.268 ( $p < 0.05$ ). In conclusion, result suggested that lower body strength and power contributed to swimming performance.

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