

**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**

**Faculty of Sports Science & Recreation**

May 2012

**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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### **Acknowledgement**

The pursuit of a master degree can be a long and onerous journey. It is a journey that has many highs and lows. Remembering and acknowledging those individuals who were supportive during the good times and bad times of the journey is very important.

Therefore, I would like to take this opportunity to express my gratitude and appreciation for the people who contributed the efforts in giving guidance and contribution in preparing this study.

I would like to express my grateful thanks to my advisor Datin Dr. Hajah Sarina Md. Yusof for her guidance, tips and assistance during the completion of this dissertation. This study would not have been possible without her. I also would like to express my gratitude to all the lectures whom had helped me in my journey from undergraduate until I reached this stage.

Special thanks to Squalo Swimming Academy, all the coaches and team managers, and not forgetting to all the swimmers who took part in this study. Without co-operations from all of these parties, it was hard for me to finish all the works in time.

I took this opportunity to express my special gratitude to my mother, Selamiah binti Hashim, my husband, Abdul Hai bin Salleh and my mother in law, Suhaila binti Abdullah, whom never lost faith in me and countless help in boosting my morale whenever it went down. I really appreciate all of your sacrifices.

Finally, to each and every single individual who involved in this study either directly or indirectly, my greatest appreciation for everything and thank you.

### 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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