

**UNIVERSITI TEKNOLOGI MARA**

**RELATIONSHIP BETWEEN TOE FLEXOR  
STRENGTH AND FOOT ARCH HEIGHT  
TOWARD LOWER LIMB PERFORMANCES**

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Research project submitted in partial fulfilment of the  
requirements for the degree of Bachelor of Sports Science  
(Hons)

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**AUTHOR'S DECLARATION**

I declare that the work in this research 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 acknowledge as referenced work. This research project has not been submitted to any other academic institution or non-academic institution for any degree or qualification.

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


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## ABSTRACT

Most of the sport nowadays required athletes to be good in all fitness components to improve their performance. Foot structure has been recognizing as one of the influential that contributing a better performance. Thus, the purpose of this study was to determine the relationship between toe flexor strength and foot arch index toward different lower limbs performance among football players. The totals of 22 football players were recruited in this study. The maximum strength of toe flexor was measured using toe grip dynamometer. Food arch index was represented by foot arch height relative with foot length. For lower limbs performance, power (standing broad jump), agility (repeated side step) and speed (50-m sprint) was measured. A significant relationship was noted between toe flexor strength and all lower limb performances. A large forces reacting on the ground were produce from combination of hip extensor, knee extensor, ankle plantar flexor as well as toe flexor. Therefore, it showed that toe flexor strength was related with enhancement of the performance.

**Keywords:** Toe flexor strength, foot arch index, foot arch height, lower limb performances

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