VALIDATING AND DEVELOPING A NEW AGILITY TEST FOR KARATE

By

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Thesis Submitted to the School of Graduate Studies, Universiti Putra Malaysia, in Fulfilment of the Requirements for the Degree of Doctor of Philosophy

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DEDICATIONS

Dedicated to my late father's immortal soul and to my beloved mother

and to my best companion in life, Ashraf

and my wonderful sons to whom I owe much

Abstract of thesis presented to the Senate of Universiti Putra Malaysia in fulfillment of the requirements for the degree of Doctor of Philosophy

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Karate is one of the most popular martial art styles in the world as well as a popular sport in Iran. Successful performance in karate requires high level of agility that enables the karateka (karate player) to avoid the opponent's attacks, and to assume optimal position for efficient performance of karate techniques. In order to measure agility, karate coaches make use of general and available agility tests. However, there are many agility tests and coaches need to know which one is the best test for karate. Hence, the purpose of this study is to find the best and most appropriate validated agility test and to develop a new agility test for karate using Analytic Network Process (ANP). Data was collected from twenty one karate experts' opinion with mean of age and standard deviation 40.3 ± 7.0 and years of coaching 13.05 ± 5.80. Results for the ANP analyses in reported that speed is the highest priority in agility and the best valid agility test for karate is *SEMO* test. Based on karate-specific

movement patterns and components of ranked agility tests, a new test- Marjani

Agility Test for karate is developed.

Abstrak tesis yang dikemukakan kepada Senat Universiti Putra Malaysia sebagai memenuhi keperluan untuk ijazah Doktor Falsafah

VALIDASI DAN PEMBANGUNAN UJIAN KETANGKASAN BAHARU KARATE

Oleh

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Karate adalah salah satu gaya seni mempertahankan diri paling popular di dunia serta sukan yang popular di Iran. Prestasi cemerlang dalam karate memerlukan tahap ketangkasan yang tinggi untuk membolehkan karate (pemain karate) mengelak serangan lawan, dan mengambil posisi yang terbaik untuk melaksanakan teknik-teknik karate dengan cekap. Dalam usaha untuk mengukur ketangkasan, jurulatih karate menggunakan ujian ketangkasan umum yang sedia ada. Walau bagaimanapun, terdapat banyak ujian ketangkasan dan jurulatih perlu mengetahui ujian yang terbaik untuk karate. Justeru, tujuan kajian ini adalah untuk membentuk ujian ketangkasan yang terbaik dan paling sesuai dengan menggunakan *Analytic Network Process* (ANP). Data telah dikumpulkan dari dua puluh satu pendapat pakar karate dengan min umur dan sisihan piawai 40.3 ± 7.0 dan tahun kejurulatihan 13.05 ± 5.80.

Keputusan kajian berdasarkan analisis ANP melaporkan bahawa kelajuan merupakan keutamaan tertinggi dalam ujian ketangkasan, dan ujian ketangkasan SEMO dilaporkan sebagai ujian ketangkasan sah yang terbaik. Berdasarkan keputusan kajian, satu ujian ketangkasan spesifik untuk karate iaitu Marjani Agility Test telah dibentuk.

Kata kunci: Ujian ketangkasan (Agility test), Karate, Analytic Network Process.