

UNIVERSITI TEKNOLOGI MARA

**THE EFFECTS OF 6-WEEK
PLYOMETRIC
TRAINING ON THE PHYSICAL
PERFORMANCE
OF SELANGOR SILAT OLAHRAGA
EXPONENTS**

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ABSTRACT

Plyometric training was referred to a dynamic exercise drill design to enhance power output and explosiveness by improving the drive of the nervous system purposely to enhance the sports performance. The effectiveness of plyometric training towards achieving certain goals in sports achievements is the reason why it was applied in the exercise training program in all sports. The effectiveness of plyometric training to improve power, agility, cardiovascular endurance and muscular strength have to be prove as a demand exercise training in combat sports, instead of normal conventional combat sports training alone. The aim of the present study was to investigate the effect the 6-week of plyometric training on the physical performance of Selangor *silat olahraga* exponents. **Protocol:** Thirty-four ($n=34$) male *silat olahraga* exponents who have less than 2-years' experience (mean age 14 ± 3.22 years), mean weights (42 ± 10.89 kg), mean heights (148 ± 8.792 cm) were randomly assigned into two group after underwent a pre-intervention test. Seventeen athletes ($n=17$) in the experimental group performed the conventional *silat* workout routine 3 days a week for 1-hour session and plyometric training, 2 sessions per week for a 1-hour session. The control group ($n=17$) was only performed the conventional *silat* workout routine for 3 sessions per week, for 1 to 2 hours session. The physical fitness factors including power, agility, cardiovascular endurance and muscular strength were measured by vertical jump test, hexagon agility test, yo-yo intermittent endurance test level one and one repetition maximum test. The subjects were required to attend the pre-test on a week before the intervention for pre-test session, mid-test on the third week of the intervention training, and post-test session on the end of the intervention week. Repeated measure mixed between-within ANOVA was utilized to analyze the results. **Results:** End of the 6-week intervention, results revealed that the agility and muscular strength performance were statistically changed across the observation ($p < 0.05$) in the experimental group. While power and cardiovascular endurance performance reported a significant difference ($p < 0.05$) on all test except between pre-test and mid-test session for power, and between mid-test to the post-test session for cardiovascular endurance. The control group showed an improvement only on the cardiovascular endurance was likely due to conventional *silat olahraga* workout routine. Based on the results of the present study, the plyometric training program was determined very effective to enhance the power, agility, cardiovascular endurance and muscular strength performance of Selangor *silat olahraga* exponents.

Keywords: Plyometric training, *Silat olahraga*, Power, Agility, Cardiovascular Endurance and Muscular Strength.

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