PENGARUH PENGGUNAAN *ELEVATION TRAINING MASK (ETM)* TERHADAP PERUBAHAN NILAI VO2MAX, KAPASITAS VITAL PARU, DAN HEMOGLOBIN

TESIS

Diajukan Untuk Memenuhi Sebagian Syarat Untuk Memperoleh
Gelar Magister Pendidikan Olahraga Pada Program Studi
Pendidikan Olahraga

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Sebuah Tesis Yang Disusun Untuk Memenuhi Salah Satu Syarat
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Abstrak

ETM (*Elevation Training Mask*) merupakan masker yang dibuat untuk menghambat pernapasan dengan membuat mekanisme tekanan parsial oksigen berkurang seperti di ketinggian. Tujuan dari penelitian ini adalah untuk menguji pengaruh penggunaan *ETM* terhadap perubahan nilai VO2max, hemoglobin, dan kapasitas vital paru. Metode penelitian ini menggunakan *quasi eksperiment*, *nonrandomized control group pretest-posttest design*. Sampel dalam penelitian adalah seluruh atlet softball PON putra Banten U23. Pengukuran VO2max, Hemoglobin dan kapasitas vital paru dilakukan sebelum dan sesudah dilakukan intervensi. Program latihan dimulai dengan latihan *interval training* (*jogging* lambat 60 detik diikuti oleh *sprint* 10 detik dengan jarak 2 mil), *slow continuous run* (lari dengan jarak 4 mil), dan *circuit training* (*own body weight*) 3x seminggu. Penggunaan *ETM* diatur secara bertahap dengan pengaturan ketinggian yang meningkat selama 6 minggu. Hasil penelitian menunjukan nilai VO2max, hemoglobin dan kapasitas vital paru tidak mengalami perubahan yang signifikan dengan latihan yang menggunakan *ETM*. Perlu dilakukan penelitian lebih lanjut dengan memberikan modifikasi latihan ditinjau dari durasi, frekuensi dan waktu penggunaan *ETM*.

Kata kunci: *elevation training mask,* VO2max, hemoglobin, kapasitas vital paru.

Abstract

ETM (Elevation Training Mask) constitute mask which are made to hinder breathing by making mechanism oxygen partial pressure reduce like at high altitude. The purpose of this study was to tes for influence utilization ETM against changes in value VO2Max, hemoglobin and lung vital capacity. This research method use quasi experiment, nonrandomized control group pretest-posttest design. Sample on this research is all over male softball athlete PON Banten U23. Measurement VO2Max, hemoglobin and lung vital capacity performed before and after intervention. Training programs begins with interval training (60 seconds Slow jog followed by 10 seconds Sprint with a distance 2 mile), Slow Continous Run (Run with a distance 4 mile), and Circuit Training (Own Body Weight) 3 times a week. Utilization ETM arranged gradually with the height setting which increased during 6 weeks. Research results show that VO2Max score, hemoglobin and lung vital capacity has not changed much significant with exercises using ETM. Further research necessary by giving training modification in terms of duration, frequency and ETM usage time.

Keywords: Elevation Training Mask, VO2max, Hemoglobin, Lung Vital Capacity.

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