ABSTRAK

DEDI BUDIAWAN: Pengaruh Senam Taebo *High Impact* dan *Low Impact* terhadap Daya Tahan Otot dan Persentase Lemak Tubuh Ditinjau dari Volume Oksigen Maksimum. **Tesis. Yogyakarta: Program Pascasarjana, Universitas Negeri Yogyakarta, 2014.**

Penelitian ini bertujuan untuk mengetahui (1) perbedaan tingkat keefektifan pengaruh senam Taebo *high impact* dan *low impact* terhadap daya tahan otot dan persentase lemak tubuh ditinjau dari volume oksigen maksimum, (2) apakah VO_2Maks tinggi lebih baik/bagus daripada VO_2Maks rendah terhadap peningkatan daya tahan otot dan penurunan persentase lemak tubuh. (3) interaksi yang terjadi antara metode latihan senam taebo *high impact* dan *low impact* terhadap daya tahan otot dan persentase lemak tubuh ditinjau dari volume oksigen maksimum.

Penelitian ini merupakan penelitian eksperimen dengan rancangan faktorial 2 x 2, menggunakan tes awal dan tes akhir dengan dua kelompok yang diberi perlakuan berbeda. Populasi dalam penelitian ini adalah mahasiswa Prodi Ilmu Keolahragaan, Fakultas Ilmu Keolahragaan, Universitas Negeri Yogyakarta angkatan 2010, 2011 dan 2012. Sampel dalam penelitian berjumlah 20 mahasiswa laki-laki Prodi IKORA FIK UNY angkatan 2010, 2011 dan 2012 dipilih berdasarkan minat terhadap konsentrasi kebugaran jasmani serta minat mereka terhadap aktivitas senam aerobik. Pengumpulan data menggunakan tes dan pengukuran yang dilakukan sebelum dan sesudah perlakuan. Instrumen dalam penelitian ini adalah *multistage fitness test*, tes daya tahan otot dengan *exercise machine*, dan tes lemak tubuh dengan *skinfold fat caliper test*. Teknik analisis data menggunakan ANAVA dengan taraf signifikansi 5%. Uji prasyarat analisis data menggunakan uji normalitas *Kolmogorov Smirnov Test* dengan taraf signifikansi 5% dan uji homogenitas varians *Levene Test* dengan taraf signifikansi 5%.

Hasil penelitian adalah sebagai berikut: (1) Terdapat perbedaan peningkatan daya tahan otot antara metode latihan senam taebo *high impact* dan *low impact*, terbukti dari nilai p = 0,000 < 0,05. (2) Terdapat perbedaan penurunan persentase lemak tubuh antara metode latihan senam taebo *high impact* dan *low impact*, terbukti dari nilai p = 0,000 < 0,05. (3) Terdapat perbedaan antara peserta dengan VO_2Maks tinggi dan peserta dengan VO_2Maks rendah terhadap peningkatan daya tahan otot, terbukti dari nilai rata-rata kelompok dengan VO_2Maks tinggi 5,100 lebih besar dari kelompok dengan VO_2Maks rendah sebesar 3,700. (4) Terdapat perbedaan antara peserta dengan VO_2Maks tinggi dan peserta dengan VO_2Maks rendah terhadap penurunan persentase lemak tubuh, terbukti dari nilai rata-rata kelompok dengan VO_2Maks tinggi 4,239 lebih besar dari kelompok dengan VO_2Maks rendah sebesar 3,251. (5) Terdapat interaksi antara metode latihan senam taebo *high impact* dan *low impact* terhadap daya tahan otot ditinjau dari VO_2Maks, terbukti dari nilai p = 0,000 < 0.05. (6) Terdapat interaksi antara metode latihan senam taebo *high impact* dan *low impact* terhadap persentase lemak tubuh ditinjau dari VO_2Maks, terbukti dari nilai p = 0,000 < 0.05. Dari hasil analisis diatas dapat disimpulkan bahwa terdapat perbedaan tingkat efektifitas latihan senam *taebo high impact* dan *low impact* terhadap daya tahan otot dan persentase lemak tubuh, *taebo high impact* memiliki hasil lebih baik dibandingkan dengan *taebo low impact*, kelompok VO_2Maks tinggi memiliki daya tahan otot dan persentase lemak tubuh lebih baik dibandingkan dengan kelompok VO_2Maks rendah, terdapat interaksi yang signifikan antara latihan senam *taebo* dengan VO_2Maks terhadap daya tahan otot dan persentase lemak tubuh.

Kata Kunci: *Senam Taebo high impact, senam Taebo low impact, daya tahan otot, persentase lemak tubuh, VO_2maks.*

ABSTRACT

DEDI BUDIAWAN: *The Effect of High and Low Impact Gymnastics Taebo on Muscular Endurance and Body Fat Percentage Viewed from Oxygen Maximum Volume*. **Thesis. Yogyakarta: Graduate School, Yogyakarta State University, 2014.**

This study aims to determine (1) the difference of effectiveness level of high impact and low impact Taebo gymnastics on muscular endurance and body fat percentage in terms of the maximum volume of oxygen, (2) whether high VO_2Max is better than low VO_2Max to increase muscular endurance and decrease body fat percentage, and (3) the interaction that occurs between gymnastics training methods of high impact and low impact Taebo on muscular endurance and body fat percentage in terms of the maximum volume of oxygen.

This study is an experimental study with 2 x 2 factorial design, using pretest and the posttest by two groups that were given different treatments. The population was students of Sport Science Study Program, Faculty of Sport Science, Yogyakarta State University class 2010, 2011 and 2012. A sample of 20 male students of Sport Science Study Program class 2010, 2011 and 2012 was established based on students' interest in physical fitness and concentration on their interest in aerobic activity. The data collection used tests and measurements done before and after treatments. The instruments in this study were a multistage fitness test, a test of muscle endurance with exercise machine, and skinfold fat caliper test, a test of body fat percentage. The research data analysis used ANOVA with the significance level of 5%. The prerequisite test data analysis used Kolmogorov Smirnov normality test with the significance level of 5% and Levene's test of homogeneity of variance test with the significance level of 5%.

The results of the study are as follows: (1) There is a difference in the increase in muscle endurance exercises method between high impact and low impact Taebo, as shown by the value of $p = 0.000 < 0.05$. (2) There is a difference in the percentage of body fat difference between gymnastics training methods Taebo high impact and low impact, as shown by the value of $p = 0.000 < 0.05$. (3) There is a difference between the participants with high and low VO_2max to increased muscular endurance, as shown by the average value of 5.100 groups with high VO2max greater than the group with low VO2max at 3.700. (4) There is a difference between participants with high VO_2max and the participants with low VO_2max to decrease the percentage of body fat, which is indicated by the average value of the group with a high VO2max 4.239 greater than the group with low VO_2max at 3.251. (5) There is an interaction between high impact and low impact Taebo gymnastics methods on muscle endurance in terms of VO_2max, as proved by the value of $p = 0.000 < 0.05$. (6) There is an interaction between high impact and low impact Taebo gymnastics methods on the body fat percentage in terms of VO_2max, as proved by the value of $p = 0.000 < 0.05$. From the analysis above it can be concluded that there are differences in the effectiveness of exercises high impact and low impact taebo on muscular endurance and body fat percentage, high impact taebo have better outcomes compared with low impact taebo, the group with high VO_2max has muscle endurance percentage and body fat better than the groups with low VO2max, there is a significant interaction between exercises taebo with VO_2max to muscle endurance and body fat percentage.

Keywords: *high impact gymnastics Taebo, low impact gymnastics taebo, muscular endurance, body fat percentage, VO_2Max.*