Pengaruh latihan dasar siswa dikbrevet TNI AL terhadap faal paru

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Abstrak

Latar belakang. Kegiatan penyelaman memerlukan kesiapan fisik dan mental yang tinggi karena lingkungan bawah air bukan merupakan lingkungan normal bagi manusia. Pengetahuan dan prosedur serta pelatihan penyelaman yang memadai merupakan kebutuhan mutlak yang dibutuhkan setiap peselam, Penelitian ini dilaksanakan di Seselam Kodikal Surabaya, untuk mengevaluasi faal paru (KV, KVP, VEP, dan VVM) siswa dikbrevet TNI AL.

Metodologi. Dilakukan studi eksperi mental pra dan post test tanpa kontrol pada 31 orang siswa pendidikan brevet di sekolah penyelaman TNI AL, yang telah melalui seleksi, dengan umur antara 20 - 30 tahun. Pengumpulan data dilakukan dengan pengukuran tinggi badan, berat badan, lingkaran dada inspirasi, lingkaran dada ekspirasi dan status gizi serta pengukuran feat paru sebelum dan setelah pelatihan. Siswa menjalani pelatihan selam selama rentang waktu 12 minggu.

Hasil. Pada penelitian ini terlihat bahwa seluruh siswa pendidikan dalam kondisi sehat setelah pelatihan. Temuan penelitian adalah sebagai berikut.
1. Pengukuran TB, BB dan S.gizi sebelum dan setelah pelatihan didapatkan peningkatan yang sangat bermakna ($p < 0,01$), dan sesuai dengan hasil perhitungan deltanya.
2. Didapatkan penurunan LDE yang sangat bermakna ($p < 0,01$), dan didukung dengan hasil perhitungan deltanya.
3. Didapatkan penurunan rasio VEP,fKVP, tetapi masih di atas nilai normal (> 80%).
4. Didapatkan peningkatan VVM yang sangat bermakna ($p < 0,01$), tetapi tidak ditunjang dengan perhitungan CI 95%.
5. Analisis multivariat antara K.V setelah pelatihan dengan KVP ($p < 0,05$) sebelum pelatihan ternyata mempunyai hubungan yang positif bermakna.
6. Analisis multivariat antara KVP setelah pelatihan dengan KVP ($p < 0,05$) sebelum pelatihan ternyata mempunyai hubungan yang positif bermakna.
7. Analisis multivariat antara VVM setelah pelatihan dengan KV ($p < 0,05$), KVP (p 0,05) dan VVM ($p < 0,01$) sebelum pelatihan ternyata mempunyai hubungan yang positif bermakna.
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Background . Diving requires a high degree of physical and mental fitness, as the underwater world is not the natural habitat of human beings. Adequate knowledge of diving and diving procedures as well as driving training are an absolute must for every diver. This research was carried out at the Kodikal Diving School in Surabaya in order to evaluate the pulmonary physiology (VC, FVC, FEV1 and MVV) of students at the diving school which issues diving certificates (Dikbrevet) of the Indonesian Navy.

Methodology . An experimental study of pre-tests and post-tests without control was performed on 31

students at the diving school (Dikbrevet) of the Indonesian Navy, aged between 20 and 30, who had previously passed a selection. The data were collected by measuring body height, weight, girth of the chest on inspiration and expiration as well as the nutritional state, and by measuring the pulmonary physiology before and after the training. . Students underwent a diving training during a period of 12 weeks.

Results . In this study it appeared that all students were in a healthy condition after the training. The findings of the study are as follows:
1. There was a quite significant increase in body height, weight and the nutritional state after the training ($p < 0.01$) compared to the body height, weight and the nutritional state before the training, and this was in accordance with the delta calculation.
2. There was a quite significant reduction of the chest measurement on expiration (p 0.01), which was supported by the results of the delta calculation.
3. There was a reduction in the FEV11 FVC ratio, which, however, was still above the normal value (> 80 %).
4. There was a quite significant increase of the MVV ($p < 0.01$), however this was not supported by the Cl calculation 95 %.
5. A multivariate analysis showed that there was a significant positive correlation between the VC after the training and the FVC ($p < 0.05$) before the training.
6. A multivariate analysis showed that there was a significant positive correlation between the FVC ($p < 0.05$) before the training.
7. A multivariate analysis showed that there was a significant positive correlation between the MVV after the traing with the VC ($p < 0.05$), FVC ($p < 0.05$) and the MVV ($p < 0.01$) before the training.