

## ABSTRAK

A. Fisviyanto, S.Pd. (2013). Pengaruh Tingkat Kesegaran Jasmani Dan Postur Ektremitas Bawah Terhadap Cidera Stres Fraktur Prajurit Siswa Wanita Selama Menjalani Program Latihan Dasar Militer 16 Minggu Di Pusdik Kowad. Program Studi Pendidikan Olahraga-Sekolah Pascasarjana-Universitas Pendidikan Indonesia.

Latihan fisik dan kejadian cidera stress fraktur secara umum banyak dialami oleh tentara wanita yang sedang menjalani latihan dasar militer pada sebuah instalasi pelatihan militer. Tingginya angka kejadian berhubungan dengan faktor-faktor resiko seperti; tingkat kesegaran jasmani dan keadaan postur ektremitas bawah (kelainan struktur anatomi ekstremitas bawah). Tujuan penelitian adalah ingin mengungkap dan mengidentifikasi sejauh mana kesegaran jasmani dan postur ektremitas bawah berpengaruh terhadap peningkatan resiko cidera stres fraktur. Penelitian menggunakan metode penelitian *ex post facto* dengan desain *factorial*. Teknik pengambilan sampel menggunakan teknik *total sampling*. Analisis data yang dilakukan dengan teknik kualitatif menggunakan *Two-way analysis of variance* (ANOVA). Instrumen penelitian meliputi; (1) Tingkat kesegaran jasmani menggunakan indikator *Diagnostic Army Physical Training Test*; lari 12 menit, *chining ups, modified sit ups, modified push ups* masing-masing 1 menit dan *shuttle runs 3x10 m*. (2) Postur ektremitas bawah menggunakan *Anthropometric Measurements The Postural of Lower Extremities* yaitu pengukuran pada struktur anatomi kaki; *X been, O been, CV been, Knee thrust* dan *Flat Foot*. (3) Stres fraktur dengan diagnosa dokter dan pembuktian *Radioisotope-scanning/X-ray*. (4) Angket tentang riwayat aktifitas fisik dan cidera *musculoskeletal* sebelumnya. Hasil penelitian dari 162 orang siswa prajurit wanita selama 16 minggu latihan dasar militer memperlihatkan kejadian cidera stres fraktur 52 (32%) orang dengan lokasi cidera (*site anatomical*); *femur 18 (34,6%), tibia 8 (15,3%), pelvis 5 (9,6%), knee 13 (25%)* dan *ankle 8 (4,9%)*. Tingkat kesegaran jasmani tinggi dan rendah memiliki pengaruh yang signifikan terhadap terjadinya cidera pada siswa prajurit wanita dengan nilai *symp sig. 0,000 < 0,05* dengan nilai cidera  $Z=4,28$ . Tidak terdapat interaksi antara kesegaran jasmani dengan postur ektremitas terhadap cidera stress fraktur, dimana diketahui *F* hitung Kesegaran Jasmani \* Postur ektremitas bawah adalah 0,268 dengan nilai probabilitas (*Sig.*)  $0,605 > 0,05$ . Terdapat perbedaan cidera antara kelompok kesegaran jasmani tinggi dan rendah pada prajurit siswa yang memiliki postur ektremitas bawah normal dimana nilai *t*-hitung 2,986 dengan nilai *sig. 0,004 < 0,05*. Tidak terdapat perbedaan cidera antara kelompok kesegaran jasmani tinggi dan rendah pada prajurit siswa yang memiliki postur ektremitas bawah normal minus dengan nilai *t*-hitung 1,481 dengan nilai *sig. 0,150 > 0,05*. Terbukti bahwa faktor resiko tingkat kesegaran jasmani lebih dominan berpengaruh terhadap kejadian cidera dibandingkan postur ektremitas bawah.

**Key word :** Stres fraktur, kesegaran jasmani, postur ektremitas bawah dan latihan dasar militer.

## ABSTRACT

A. Fisviyanto (2012). Effect of Physical Fitness and Lower Extremity Posture Against Stress Fracture Injury Student Female Soldiers During Undergoing Basic Military Training Program In Women Military Training Installation. Sport Education Program. Graduate School of Education of Indonesia University.

Physical exercise and the incidence of stress fractures are common injuries experienced by many female soldiers who are undergoing basic military training at a military training installation. The high incidence of associated with risk factors such as level of physical fitness and lower extremity posture state (abnormality of anatomical structures ektermitas below). The research objective to want to uncover and identify the extent of physical fitness and lower extremity posture affect the increased risk of stress fracture injury. Research studies using ex post facto by factorial design. Sampling technique using total sampling technique. Data analysis was conducted by using qualitative techniques Two-way analysis of variance (ANOVA). Research instruments include: (1) physical fitness level indicator using the Diagnostic Army Physical Training Test ; run 12 minutes, chining ups, modified sit-ups, modified push-ups each 1 minute and 3x10 m shuttle runs. (2) lower extremity posture using Anthropometric Measurements of Lower Extremities, anatomical structure of the foot such as; X been, O been, CV been, Flat Foot and Knee thrust. (3) Stress fracture of the doctor's diagnosis and verification Radioisotope-scanning/X-ray. (4) questionnaire about physical activity and history of previous musculoskeletal injury. The results of 162 students as long as 16 week basic military training injury incidence of stress fractures showed 52 (32 %) with injury anatomical site; femur 18 ( 34.6 % ), tibia 8 (15.3 % ), pelvis 5 (9.6 % ), knee 13 (25 % ) and ankle 8 (4.9 % ) . Physical fitness level high and low have a significant effect on the occurrence of an injury to a woman soldier with symp value sig.  $0.000 < 0.05$  with injuries value  $Z = 4.28$ . There is no interaction between physical fitness with the injured extremity posture stress fracture , which is known  $F^*$  Physical Freshness count lower extremity posture is 0.268 with a probability value (Sig.)  $0.605 > 0.05$ . There are differences in injury between groups of high and low physical fitness on student soldiers who had normal lower extremity posture in which the t-value of 2.986 calculated with sig.  $0.004 < 0.05$ . There was no difference in injury between groups of high and low physical fitness on student soldiers who had normal lower extremity posture minus the t-value of 1.481 calculated with sig.  $0.150 > 0.05$ . Proven that physical fitness level risk factors are more dominant effect on the incidence stress fracture injury than posture of lower extremity.

**Key word:** Stress fracture, physical fitness, posture of lower extremity and basic military training.