

Cara Penentuan ukuran kursi ergonomis berdasarkan antropometri pelajar perempuan sekolah menengah umum terhadap nyeri punggung bawah non spesifik. Studi terhadap derajat nyeri, perubahan kinematika, dan tegangan otot. = Determining the size of the ergonomic chair based on the female students senior high school antropometric measurements on non specific low back pain. Highlights on the degree of pain, kinematics altered, and muscle tension.

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Abstrak

Pendahuluan: Data epidemiologi menunjukkan tingginya angka kejadian nyeri punggung bawah non spesifik akibat duduk pada kursi yang tidak sesuai ukuran antropometri tubuh. Tujuan: Penelitian ini bertujuan untuk memperoleh cara penentuan ukuran kursi ergonomis pelajar perempuan SMU. Metode: Penelitian ini menggunakan desain randomized controlled trial mengikutsertakan 80 pelajar perempuan di 3 SMU negeri di Jakarta Pusat. Hasil randomisasi terdapat 40 subjek kelompok kursi ergonomis dan 40 subjek kelompok kontrol. Kelompok kursi ergonomis mendapat kursi baru sesuai dengan antropometri tubuh yaitu kursi kecil, sedang dan besar, sedangkan kelompok kontrol mendapat kursi lama yang selama ini digunakan. Derajat nyeri, perubahan kinematika dan tegangan otot selama 12 minggu. Hasil: Prevalensi nyeri punggung bawah non spesifik sebanyak 68 %. Cara penentuan ukuran kursi ergonomis pelajar perempuan SMU yang menggunakan patokan Minimal 2 Sama. Pasca pemberian kursi ergonomis selama 12 minggu terdapat perbedaan derajat nyeri (VAS), perubahan kinematika (fleksi lutut, plantar fleksi pergelangan kaki) dan tegangan otot para lumbal (algotometer, EMG Biofeedback) yang bermakna antara kelompok kursi ergonomis dan kelompok kontrol. ( $p = 0,000$  untuk kelompok kursi ergonomis). Simpulan: Didapatkan cara penentuan ukuran kursi ergonomis pelajar perempuan SMU. Pemberian kursi ergonomis selama 12 minggu dapat menurunkan derajat nyeri, meningkatkan perubahan kinematika fleksi lutut, menurunkan perubahan kinematika pergelangan kaki dan tegangan otot para lumbal.

.....Background: Epidemiological evidence showed the higher insidens of non specific low back pain that is caused by sitting on the mismatch chair with junior high school antropometric. Objective: This study objective to obtain determining the size of the ergonomic chair on non specific low back pain in female student of junior high school. Methods: A randomized control trial was conducted on 80 female students of the 3 junior high schools in central of Jakarta. The subject were randomized to the ergonomic group receiving the ergonomic chair are small, medium and large, and the control group receiving the mismatch chair that used in everyday. The number of subjects in the ergonomic group were 40 subjects and the control group 40 subjects. The degree of pain, kinematics altered and para lumbal muscle tension were measured in 12th weeks. Results: The prevalence of the non specific low back pain is 68 %. Determining the size of an ergonomic chair high school female students who use the benchmark of at least 2 equal. After 12 weeks the degree of pain (VAS), kinematics altered (knee flexion, ankle plantar flexion) and para lumbal muscle tension (algotometer, EMG Biofeedback) were significantly difference between the ergonomic group and the control group ( $p = 0,000$  for the ergonomic group). Conclusion: This study demonstrates that using of the ergonomic chair for 12 weeks has an effects by reduction of the degree of pain, increasing knee flexion,

decreasing ankle plantar flexion and reduction of para lumbal muscle tension.