DESAIN KURSI ERGONOMIS BAGI GURU PEREMPUAN DI SMKN 45 JAKARTA BERDASARKAN UKURAN ANTROPOMETRI TUBUH TAHUN 2024

Mahalia Taranrini

Abstrak

Bias gender pada desain alat kerja seperti kursi sering ditemukan dimana pekerja perempuan harus bekerja dengan alat yang didesain berdasarkan model tubuh laki-laki. Adanya perbedaan fisiologis antara ukuran tubuh laki-laki dan perempuan bisa meningkatkan risiko pekerja perempuan untuk merasa tidak nyaman dan sakit jika duduk dengan kursi yang tidak didesain berdasarkan antropomoteri tubuh mereka. Guru merupakan profesi tenaga pendidik yang banyak bekerja dalam posisi duduk sehingga perlu ditunjang dengan kursi yang ergonomis. Penelitian ini bertujuan untuk merancang desain kursi ergonomis berdasarkan ukuran antropometri guru perempuan di SMKN 45 Jakarta. Penelitian ini menggunakan desain studi deskriptif observasional dengan subjek guru perempuan. Penelitian berlokasi di SMKN 45 Jakarta dengan sampel seluruh populasi guru perempuan di SMKN 45 Jakarta yang berjumlah 42 orang. Penelitian mengukur sembilan antropometri tubuh duduk yaitu tinggi poplitiel, jarak =bokong-poplitiel, lebar bahu, lebar panggul, tinggi bahu duduk, tinggi mata duduk, tinggi duduk tegak, jarak bokong-lutut, dan tinggi siku, yang dijadikan sebagai referensi dalam merancang desain. Data selanjutnya diolah dengan menggunakan *Microsoft Excel* untuk mencari nilai mean, median, standar deviasi, dan nilai persentil ke-5, ke-50, serta ke-95. Dari data yang sudah diolah, dirancang kursi dengan tinggi kursi 40 cm, tinggi sandaran lengan 29 cm, kedalaman kursi 40 cm, lebar sandaran punggung 59 cm, tinggi sandaran punggung 60 cm, lebar alas kursi 57 cm, dan sudut sandaran kursi 100° dengan pedoman kursi ergonomis BIFMA. Desain kursi ergonomis dirancang menggunakan aplikasi Blender 4.3.2. Disarankan bagi SMKN 45 Jakarta untuk menyediakan kursi ergonomis dengan ukuran yang mampu mengakomodasi tubuh guru di sana.

Kata Kunci: Antropometri, Desain kursi, Ergonomi, Guru perempuan

DESIGN OF ERGONOMIC CHAIR FOR FEMALE TEACHERS AT SMKN 45 JAKARTA BASED ON BODY ANTHROPOMETRIC SIZES IN 2024

Mahalia Taranrini

Abstract

Gender bias in the work tool design such as chairs is often found where female workers have to work with tools designed based on the male body model. The physiological differences between male and female body sizes can increase the risk of female workers feeling uncomfortable and sick if they sit in chairs that are not designed based on their body anthropometry. Teachers are an educational profession that works a lot in a sitting position so they need to be supported by ergonomic chairs. This study aims to design an ergonomic chair design based on the anthropometric measurements of female teachers at SMKN 45 Jakarta. This study uses a descriptive observational study design with female teachers as subjects. The study was located at SMKN 45 Jakarta with a sample of the entire population of female teachers at SMKN 45 Jakarta totaling 42 people. The study measured nine sitting body anthropometry, those are popliteal height, buttocks-popliteal distance, shoulder width, hip width, sitting shoulder height, sitting eye height, sitting upright height, buttocks-knee distance, and elbow height, which were used as references in designing the design. The data was then processed using Microsoft Excel to find the mean, median, standard deviation, and 5th, 50th, and 95th percentile values. From the processed data, the design dimensions of the chair are found to be 40 cm seat height, 29 cm arms rest height, 40 cm seat depth, 59 cm backrest width, 60 cm backrest height, 57 cm seat width, and 100° backrest angle with BIFMA ergonomic chair guidelines. The ergonomic chair design was designed using the Blender 4.3.2 application. It is recommended for SMKN 45 Jakarta to provide ergonomic chairs with sizes that can accommodate the bodies of the teachers there.

***Keyword**: Anthropometry, Chair design, Ergonomic, Female teachers*